FACTORS INFLUENCING SUSTAINABILITY OF SMALL TEA ENTERPRISES IN KENYA AND SUGGESTED STRATEGIES

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DECLARATION

This research thesis is my original work and has not been presented to any other university for award of a degree.

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DEDICATION

I dedicate the research study to my late mum Mary Veronica Wairimu, who was the source of inspiration in fulfillment of my dream. A trusted anchor all the way.

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ABSTRACT

This study presents findings on factors that influence sustainability of small tea enterprises in Kenya. Specifically, the study sought to assess the influence of enterprise characteristics on sustainability of small tea enterprises, analyze the influence of the way of doing business on sustainability of the enterprises, explore the relationship between finance and sustainability, examine the relationship between resources and sustainability and analyzed how independent variables (enterprise characteristics, way of doing business, finance, resources, product and services) influence the dependent variable (sustainability) on small tea enterprises in Kenya. The population of the study is an estimated 420,000 small tea entrepreneurs who are members of Kenya Tea Development Agency spread in the seven tea-growing regions in Kenya. The study was a cross-sectional survey, and descriptive in design, carried out in the seven tea-growing regions. The study used a mixed method, which involved both qualitative and quantitative data analysis. Self-administered questionnaires were used for primary data collection while journals, books and the Internet were used for secondary data collection. Factor analysis was used to measure the variability among the variables. For test statistics, p-value less than 5% was considered significant. Cronbach's analysis was used to test the equality of means of all independent variables. A regression model was also developed to establish the strength of the relationship between the dependent variable and independent variables. Presentation of information was done using mean scores and percentages and standard deviation. The findings indicated that four out of five hypotheses of the study were supported. These findings, it is hoped, will bridge the gaps in literature, identify and articulate alternative models for assessing sustainability of small tea enterprises for adoption, and will be used in the academia, agribusiness and by policy makers to improve the tea sector in Kenya.

ABBREVIATIONS AND ACRONYMS

CBK - Central Bank of Kenya

CPDA - Christian Partners and Development Agency

GEM - Global Entrepreneurship Monitor

JMS - Journal Management of Sustainability

KTDA - Kenya Tea Development Agency

MDG - Millennium Development Goals

MTH - Mechanized Tea Harvesting

SMEs - Small and Micro Enterprises

STEs - Small Tea Enterprises

TBK - Tea Board of Kenya

TRFK - Tea Research Foundation of Kenya

TRI - Tea Research Institute

TABLE OF CONTENTS

Declaration ii
Dedication iii
Acknowledgement iv
Abstract… v
Abbreviations and acronyms vi
List of tables xiii
List of figures xvi
Definition of terms xvii
CHAPTER ONE: INTRODUCTION
1.1 Background of the Study 1
1.2 Statement of the Problem 5
1.3 Purpose of the Study 5
1.4 Research Objectives 5
1.4.1 General Objective 6
1.4.2 Specific Objectives 6
1.5 Hypotheses 6
1.6 Justification of the Study 7
1.7 Delimitations of the study 8
1.8 Limitations of the study 8
1.9 Assumption of the Study 9
1.10 Scope of the Study 10

CHAPTER TWO: LITERATURE REVIEW
2.1 Introduction 12
2.1.1 Theories Grounding the Study 12
2.1.2 Entrepreneurship concept: Historical development 13
2.1.2.1 Theory of opportunity cost 13
2.1.3 Classical Economic Approach 14
2.1.4 Trait Approach 15
2.1.5 Social Identity Approach 16
2.1.6 Psychological Entrepreneurship Theories 18
2.1.7 Resource-Based Entrepreneurship Theory 20
2.2 Small Enterprise 23

2.3 The Entrepreneur 24
2.4 Tea Production –Global Overview 25
2.4.1 Tea Production – Continental (African) Overview 30
2.4.2 Tea Production – Kenyan Overview 31
2.5 The Small-scale Tea Enterprises - Kenyan Situation 35
2.6 Strategies 40
2.7 Empirical Literature Review 41
2.7.1 Sustainability 41
2.7.2 Effects of Enterprise Characteristics on Sustainability 43
2.7.3 Effects of Size of the Enterprise 45
2.7.4 Effects of Years in Operation 47
2.7.5 Effects of Ownership 48
2.8.1 Effects of Networking, Communication and Co-operation 49
2.8.2 Effects of Knowledge Sharing 50
2.8.3 Effects of Use of Outside Professionals and Advisors 52
2.9 Effects of Finance 53
2.9.1 Effects of Ability to Mobilize Finance 54
2.9.2 Effects of Financial Record Management 55
2.10 Effects of Resources 55
2.10.1 Effects of Availability of Competent Labour Force 56
2.10.2 Effects of Support from Stakeholders 58
2.11 Effects of Products and Services 59
2.11.1 Effects of Quality of Tea (Products) 59
2.11.2 Effects of Reliability (Services) 60
2.12.1 Operational Framework 64
2.13 Conceptual and Operational Framework 67
2.13.1 Conceptual Framework 67
2.14 SUMMARY OF THE LITERATURE REVIEW 68
CHAPTER THREE: RESEARCH METHODOLOGY
3.1 Introduction 70
3.3 Research Design 71
3.4 Target Population 72
3.5 Sampling Design 73
3.5.1 Sampling Frame... 73
3.5.2 Sampling Technique 74

3.5.3 Sample Size 74
3.6 Data Collection Methods 75
3.7 Data Analysis 77
3.7.1 Regression Model 75
3.7.2 Expected Results 78
3.7.3 Expected Outcome 79
3.9 Summary of Methodology 79
CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION OF RESULTS
4.1 Introduction and Key Findings 81
4.1.1 Pilot Study Results 82
4.1.2 Key Findings 83
4.1.3 Data Return Rate 87
4.2 Respondents' Characteristics 87
4.2.1 Respondents' Characteristics by Age 87
4.2.2 Respondents' Characteristics by Gender 88
4.2.3 Respondents' Characteristics by Household Size 89
4.2.4 Respondents' Characteristics by Marital Status 89
4.2.5 Respondents' Frequency Statistics by Education Level 90
4.2.6 Respondents' Frequency Statistics by level of Income 91
4.3 Analysis of Descriptive Statistics 91
4.3.1 Results on the Small Tea Enterprises' Sustainability 91
4.3.2 Enterprise Characteristics as a Factor of Sustainability 92
4.3.2.1 Size of the Tea Enterprise (farm) as a Factor of Enterprise Characteristics 92
4.3.2.2 Years in Business as a Factor of Enterprise Characteristics 93
4.3.2.3 Location and Ownership of the Farm as a Factor of Enterprise characteristics 94
4.3.2.4 Tea Enterprise Ownership as a Factor of Enterprise Characteristics 96
4.3.3 Way of Doing Business as a Factor of Sustainability 97
4.3.3.1 Networking and Co-operation as a Factor of Way of Doing Business 98
4.3.3.2 Co-operation as a Factor of Way of Doing Business 98
4.3.3.3 Knowledge Sharing as a Factor of Way of Doing Business 99
4.3.3.4 Communication as a Factor of Way of Doing Business 100
4.3.3.5 Use of Outside Professionals and Advisors as a Factor of Way of Doing Business 103
4.3.4 Enterprise Finance (capital) as a Factor of Sustainability 104
4.3.5 Tea Enterprise Resources as a Factor of Sustainability 107

4.3.5.1 Competent Labour as a Factor of Resources 107
4.3.5.2 Support as a Factor of Resources 108
CHAPTER FIVE: DISCUSSIONS, CONCLUSION & RECOMMENDATIONS
5.0 Introduction 120
5.1 Discussion of Results 120
5.1.1 Introduction 120
5.1.2 Enterprise Characteristics in Sustainability of Small Tea Enterprises 121
5.1.3 Role of Way of Doing Business on Sustainability of Small Tea Enterprises. 123
5.1.4 Finance Role on Sustainability of Small Tea Enterprises 124
5.1.5 Role of Resources on Sustainability of Small Tea Enterprises 126
5.2 Conclusions 127
5.3 Contribution to Knowledge 128
5.4 Limitations of the Study 129
5.5 Recommendations 130
5.5.1 Recommendations for Policy and Practice 130
5.5.2 Recommendations for Further Research 131
5.6 Summary of the Chapter 131
References 136
Appendix 1 Reliability Analysis
Appendix 2 Number of Growers in each Factory – East of Rift
Appendix 3 KTDA 2012/2013 Bonus Payout
Appendix 4 Number of Active Growers

LIST OF TABLES

Table 2.1 World Black Tea Production from Main Producing Countries (2010) 28

Table 2.2 Top Five Tea Producing Countries in the World (2011) 30

Table 2.3 Tea Productions in Kenya between 2009 and 2012 32

Table 2.4 List of KTDA Managed Factories 35

Table 2.5 Analysis of Variables 66

Table 4.1 Cronbach's Alpha Results for Pilot Study 82

Table 4.2 Study's Data Return Rate 87

Table 4.3 Frequency Statistics of Respondents' Characteristics by Age 88

Table 4.4 Frequency Statistics of Respondents' Characteristics by Gender 88

Table 4.5 Frequency Statistics of Respondents' Characteristics by Household Size 89

Table 4.6 Frequency Statistics of Respondents' Characteristics by Marital Status 90

Table 4.7 Frequency Statistics of Respondents' Characteristics by Educational Level 90

Table 4.8 Frequency Statistics of Respondents' Characteristics by Level of Income 91

Table 4.9 Frequency Rank of Sustainability of Small Tea Enterprises 92

Table 4.10 Frequency Rank of Sustainability of Small Tea Enterprises 93

Table 4.11 Frequency Rank of Sustainability of Small Tea Enterprises Characteristics 94

Table 4.12 Frequency Rank of Sustainability of Small Tea Enterprises Location 95

Table 4.13 Frequency Rank of Sustainability of Small Tea Enterprises Ownership.... 96

Table 4.14 Frequency Rank of Sustainability of Small Tea Enterprise by Leaseholds..... 97

Table 4.15(a) Frequency Rank of Networking on Sustainability of Small Tea Enterprises..... 98

Table 4.15(b) Frequency Rank of Co-operation on Sustainability of Small Tea Enterprises..... 99

Table 4.16 Frequency Rank of Knowledge Sharing on Sustainability 100

Table 4.17(a) Frequency Ranking of Communication with Partners 101

Table 4.17(b) Frequency Ranking of Accessibility to Communication 101

Table 4.17(c) Frequency Ranking of Respondent's Planning Ability ..... .102

Table 4.18 Frequency Ranking of Use of Outside Professionals and Advisors .... .103

Table 4.19 Frequency Ranking of Financial Ability 104

Table 4.20 Frequency Ranking of Cost of Credit 104

Table 4.21 Frequency Ranking of Cost of Credit not a Challenge 105

Table 4.22 Frequency Ranking of Alternative Sources 106

Table 4.23 Frequency Ranking of Keeping of Financial Records 106

Table 4.24 Frequency Ranking of Competent Labour Force 107

Table 4.25 Frequency Ranking of Training for Improvement..... 108

Table 4.26 Pearson Correlations 109

Table 4.27 KMO and Bartlett's Test..... 1 11

Table 4.28(a) Communalities..... 112

Table 4.28 (b) Total variance..... 113

Table 4.29 Regression Statistics 114

Table 4.30(a) Analysis of Variance 115

Table 4.31 Regression Coefficients 116

Table 4.32 Summary of Results of Hypothesis Testing 119

LIST OF FIGURES

Figure 2.1 The Giessen – Amsterdam Model of Small Business Owner's Success..... 23

Figure 2.2 Pie Chart Showing Major Tea Producing Countries (2012) 29

Figure 2.12.1 Operational Framework..... 64

Figure 2.13.1 Conceptual Framework 67

Figure 4.1 A Scree Plot of Eigen Values and Component Numbers 113

Figure 5.1 Revised Conceptual Framework..... 133

Figure 5.2 Revised Operational Framework..... 134

DEFINITION OF TERMS

Advisors	These are people with technical, managerial and agronomical skills, who direct farmers on best farming practices
Black tea	Tea that is fully fermented
Communication	Passing of information, which may be internal or with external parties in the small tea holdings
Co-operation	Any form of connectivity (network) and teamwork in running of small tea enterprises in Kenya
Enterprise	Small tea holding for economic purposes
Fermentation	Process of oxidation and enzymatic changes in tea processing
Finance	Monetary resources required for the running of small tea enterprises.
Financial records	Primary monetary data and statistics relevant to smallholder tea farming in Kenya.
Green tea	Tea that is usually unfermented.
Networking	The social links tea farmers have with customers, suppliers and stakeholders and among themselves.
Oolong tea	Tea that is partially fermented
Products and services	Products - green leaf produced by the small tea enterprises

	Services – picking and delivering green tea to the buying centres.
Professionals	People with advanced knowledge on tea husbandry and management
Resources	Human capital with required skills in tea husbandry (Pruning and picking) and management
Small tea entrepreneurs	Farmers who own and manage less than two acres of tea bushes
Strategies	Roadmap for keeping the small tea entrepreneurs economically viable
Success	The attainment of economic profit from the tea bushes by small tea entrepreneurs
Sustainability	Continuous green leaf production of economic worth measured in sales turnover and costs
Way of doing business	Manner of communicating, sharing information, knowledge and networking by small tea entrepreneurs

CHAPTER ONE: INTRODUCTION

The study attempts to investigate factors thought to influence sustainability of small tea enterprises and suggested strategies to ensure sustainability of these key players in the tea sector in Kenya. The chapter presents the background of the study, statement of the problem, purpose, objectives, formulated study's hypotheses, justification, assumptions, scope and definition of terms.

1.1 Background of the Study

Studies such as done by Mueller, Klaunds, Mc Donald, & Schuerman (2007, pg.227) view 'Sustainability' as a term that implies a mode of managerial decision-making and action, which aids the enterprise with long-term value creation. They stated that in modern firms, "especially after some of the widely publicized failures of firms to become sustainable, the term ''Sustainability'' has been used in many ways, from financial reporting to gathering public relations support".

Unlike Demirdjian's (2005) traditional definition of sustainability as the act of exploiting natural resources without destroying the ecological balance of a particular area through global resource depletion and environmental pollution, this study adopts Mueller *et* al., (2007) contextualization of sustainability. The study's perspective is consistence with other earlier studies; for example, Springett's (2003) proposition that, rather than adopting the general notion that sustainability relates mainly to physical resources, the concept of sustainability is rooted in the management tradition, that is, emanation from the professional management paradigm.

Studies such as Nirza, Gonclaves, Charbel & Chiappetta (2011) posit that a large part of the economic system in many countries, whether developed or developing, is formed by micro and small-sized enterprises (MSEs). Various researchers for example (Beck, Demirguc-Kunt, & Levine(2005); Stel, Carree, & Thurik (2005); Van Praag & Versloot, (2007); Acs, Desai,& Hessels, (2008a) & Acs, Desai, & Leora,(2008b) have considered these enterprises as essential for the economic development of countries. These considerations are the reasons that these enterprises contribute sizeable revenue to the gross domestic production (GDP) in their respective countries, as well as through creating employment. The Agricultural Sector contributed 4 percent of the GDP out of which, small tea enterprises combined, earned about 1.2 billion Kenya shillings in foreign currency representing more than 60 percent (Nirza *et* al., (2011).

Small business enterprises have been studied for the last half decade but most of these studies have been undertaken in the manufacturing sectors and trading from both in developed and developing countries as demonstrated by Yusuf (1995), Wiklund (1999), Lutteken *et* al., (1999), Nurul (2005), Naude (2010), Berner & Gomez (2012) who highlighted that three out of five small businesses fail due to various problems. Berner & Gomez (2012) indicated that small business enterprises create more jobs than big enterprises and are key contributors to the economy as well as being instrumental in eradication of poverty. Yusuf (1995), while analyzing key success factors for small business enterprises stressed the key role they play but yet noted the high rate of failure of these enterprises.

Small tea enterprises as used in this study refer to tea farming activity in small acreage for economic purposes or for making profit as characterized by Kaberi (2013). It is

notable that despite these enterprises fitting the European Union's definition and characterization of a small enterprise either by sales turnover or number of employees, little is known about these important players of economy. The study, therefore, not only sought to operationalize this definition but also to point out the small tea enterprises in this perspective while at the same time investigating the critical sustainability issues that the enterprises can leverage on.

Apart from the significant role that these small tea enterprises play in the economy of the country, they generally continue to raise sustainability and long-term growth questions. For instance, it is notable that despite the small tea enterprises contributing over 60 percent green tea output in the country and subsequently earning 60 percent of the country's foreign exchange income, the majority of owners of these enterprises still continue to live on less than a dollar per day. While the rule of thumb would expect the volume of the revenue foreign exchange earned by these enterprises to translate into economic growth and prosperity for the small tea agro entrepreneurs (small scale farmers), the case is different. The study, therefore, sought to answer and come up with strategies to the question; what are the factors influencing sustainability of small tea enterprises in Kenya?

Previous studies (such as those by Baron & Shane (2007); Smith &Smith (2007); Shaw & Williams (2009); Krasniqi (2010); Olawale & Garwe (2010); sought to address barriers encountered by small enterprises from various countries all over the world. Though recent efforts have been made in Kenya to better understand sustainability of tea farming, little empirical studies exist that have focused on the subject from the small tea enterprises (entrepreneurs) context.

For example, studies by Owuor (2005) sought to investigate the sustainability of smallholder tea growers. Similarly, Mwaura (2007) carried out a situational analysis of small-scale tea growers and their contribution to the local auction market and highlighted challenges hindering sustainability of small and medium enterprises after exit of founders. Other studies, such as those by Onduru (2012): Kagira , Kimani & Githii (2012) focused on farmers' field schools in tea farms and the problems encountered by smallholder farmers in Kenya respectively. Evidently, therefore, little is known on factors influencing sustainability of small-scale tea enterprises, thus motivating this study.

Significant findings from a pilot study carried out between 15th October and 2nd November, 2012 amongst 100 small-scale tea enterprises in Othaya Sub-county, Kenya; selected through simple random probability sampling technique indicated that: though 80 per cent of the respondents were satisfied with their farms' green tea output (volume) only 10 per cent indicated that the income from the sales turnover was sufficient to sustain their enterprise's overheads. The rest (80 per cent) suggested that the income could not meet the day to day running of the enterprise. These findings are consistent with reviewed literature, for example; Wal (2008) suggested that the smallholder tea farmer has been ignored for long and recommended the need for future studies where strategies can be developed to include smallholders in decision making and profit sharing in the tea industry. Similarly, Mwaura, (2007) recommended further studies on how experience of doing business enhances productivity in the tea sector. The scholars recommended further studies that could generate information on causes of poverty among small tea holders and strategies to improve the situation and ensure that smallholder farmers stay in business profitably.

1.2 Statement of the Problem

Though there is general consensus that tea sector in Kenya is vibrant and economically rewarding, literature, Owuor (2005); Mwaura *et* al., (2005); Kagira *et* al., (2012); Kariuki (2012); (Kaberi (2013), Cheruiyot (2013); and pilot study (Mathenge, 2013) depicts the small-scale tea entrepreneur as one living on less than a dollar per day. This then poses the question "are these enterprises sustainable?" The study, therefore, sought to investigate sustainability of small tea enterprises using factors influencing sustainability of small tea enterprises in Kenya and to bridge this knowledge gap.

1.3 Purpose of the Study

The study sought to understand key factors that influence sustainability of small tea holdings and suggest appropriate strategies and alternative model for assessing sustainability of the enterprises in Kenya. This would assist the policy makers with empirical information about the state of affairs of small tea enterprises in Kenya. The study attempted to bridge the knowledge gap. This is useful to the academia. The study findings would inform the small scale tea entrepreneurs when making business decisions and planning.

1.4 Research Objectives

Research objectives are indicators that underline the purpose and the direction that the study will take. They are intentions of the study, which are specific, measurable, achievable, operational, realistic and time bound. They support the study by providing means by which goals of the study are met. Objectives clarify the variables in the study; guide decision on selection of respondents in data collection and limit the scope of literature review in the study Kombo (2006).

1.4.1 General Objective

To examine factors that influence sustainability of small tea enterprises in Kenya and suggest strategies that supports the same.

1.4.2 Specific Objectives

1. To assess the influence of enterprise characteristics on sustainability of small tea enterprises in Kenya.

2. To analyze the influence of the way of doing business on sustainability of small tea enterprises in Kenya.

3. To explore the relationship between finance and sustainability in small tea enterprises in Kenya.

4. To examine the relationship between resources and sustainability of small tea enterprises in Kenya.

5. To examine the influence of product and services on sustainability of small tea enterprises in Kenya.

1.5 Hypotheses

To attain the stated objectives, the study sought to test the following hypotheses:

H_0: There is no significant positive influence of enterprise characteristics on sustainability of small tea enterprises in Kenya.

H_1: There is a significant positive influence of enterprise characteristics on sustainability of small tea enterprises in Kenya.

H_0: There is no significant positive influence in the way of doing business on sustainability of small tea enterprises in Kenya.

H_2: There is a significant positive influence in the way of doing business on sustainability of small tea enterprises in Kenya.

H_0: There is no significant positive influence of finance on sustainability of small tea enterprises in Kenya.

H_3: There is a significant positive influence of finance on sustainability of small tea enterprises in Kenya.

H_0: There is no significant positive influence of resources (human capital) on sustainability of small tea enterprises in Kenya.

H_4: There is a significant positive influence of resources (human capital) on sustainability of small tea enterprises in Kenya.

$H_{0:}$ There is no significant positive influence of products and services on sustainability of small tea enterprises in Kenya.

$H_{5:}$ There is a significant positive influence of products and services on sustainability of small tea enterprises in Kenya.

1.6 Justification of the Study

In justifying this study, the researcher is promoted by the preceding literature such as Kagira *et* al., (2012); in their study "problems facing small-scale farmers" explained that farmers encounter a lot of problems that hinder them from maximizing their output, thereby, increasing the earnings from their enterprises. They suggested further research to develop strategies to alleviate the problems that the small tea enterprises encounter.

Further research has been suggested in the area of poverty eradication among tea growers in Kenya, which has not been fully explored to address the situation Mwaura *et* al., (2007). This study, therefore, will help the farmers with strategies to maximize returns from their enterprises in order to improve their livelihoods.

The study findings will be a tool for the Government of Kenya to take a step towards eradicating poverty as defined in the 1st Millennium Development Goal and towards the attainment of the Vision 2030. The Kenya Tea Development Agency(KTDA) can use the suggested strategies to alleviate the problem of land sub-division, which threatens green leaf production and sustainability of the small tea enterprises. In addition, researchers will benefit from the study, as it will help in identifying the research gaps, utilizing the sustainability strategies and carrying out further research on the study recommendations. Academicians will utilize the information recommended in the study to fill knowledge gaps.

1.7 Delimitations of the study

The study excluded plantation farmers and farmers with more than two acres of land who are members of KTDA in Kenya. In this study, tea was studied only in Kenya tea zones. The study was cross-sectional. The study excluded other factors outside the farmers' enterprise which he has no control over whatsoever.

1.8 Limitations of the study

Among the limitations encountered during the study was language barrier. Some farmers could only communicate using their mother tongue, necessitating an interpreter in some instances at a fee.

The area covered was also very sparse geographically, with poor infrastructure in some regions, which made the process tiresome and time consuming. In some cultures, women are not allowed to speak with strangers and the researcher often had to use village elders as intermediaries. This translated into spending on more time and money. Additionally, the study was carried out during the rainy season and accessing some areas was almost impossible and took a lot of effort. Some of the survey instruments returned did not meet the requirements of the study, as they were either faulty or incomplete, necessitating the study to drop them at the data cleaning stage.

1.9 Assumption of the Study

To begin with, the study assumes that the farmers or owners are the brains behind the enterprises and have adapted to varying climatic conditions successfully. It also makes the assumption that the smallholder tea farmers have been in operation for at least 15 years and that they operate their tea farms as enterprises or businesses with profit making motive. In addition, the study presupposes that the smallholder farmers will remain members of KTDA in the foreseeable future. Besides, the study presumes that the seven geographical regions recommended by KTDA for tea growing are adequate to serve the study. Another assumption is that the small tea entrepreneur can do nothing to factors beyond his farm that influence his income. Finally, the study assumes that the small tea entrepreneurs rely solely on earnings from tea. These assumptions are held within the context of the study and apply the principle of “ceteris peribus” in economics that we may hold some factors constant in order to establish influence of a given factor on another.

1.10 Scope of the Study

The study covered sustainability of small tea enterprises as a dependent variable while enterprise characteristics, way of doing business, finance, resources, product and services were taken as independent variables. The study only covered respondents from the small tea enterprises and members of the factories managed by KTDA in the seven tea growing regions of Kenya who are approximately 420,000 farmers. The study sampled entrepreneurs who had two or less acres of arable land. This means that the study only concentrated on the lower part of the tea supply chain namely; production of green leaf at the farm level by the small tea entrepreneurs. The study used Likert scale, with instruments designed specifically for this study, which applied to small tea entrepreneurs who have been producing green leaf for the last 15 years.

Chapter Summary

Tea farming is an old practice throughout the world. The tea plant is cultivated in tropical and semi-tropical climates. China, India, Sri Lanka and Kenya are the leading tea producers in the world. Tea is cultivated in large and small scale. In Kenya, tea is a major foreign exchange earner and provides employment to over four million people. Small-holder farmers are faced with many problems as Owuor (2000) noted, among them poor infrastructure, high cost of labour, weak bargaining power, old tea bushes, inaccessible financial services and inaccurate market information. Literature depicts the world tea volume as increasing amidst declining prices due to oversupply, and this phenomenon is hurting the small tea entrepreneur. The study sought to explore whether small tea enterprises are sustainable and suggest strategies to support this vital tea sector.

Earlier scholars had recommended further research in the smallholder tea sector. Nyangito (2001), Owuor, Kavoi, Wachira & Ogola (2008), Onduru (2012) had recommended further research into the causes of poverty among small tea farmers. The study sought to come out with current problems ailing the small tea farmers and offer strategies to solve the problems. The following Chapter Two covers empirical and theoretical review of literature focusing on the small tea holder.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter explores the theory of entrepreneurship and identifies the small tea holder as an entrepreneur with the motive of making economic profit. It presents the experiential data from other research undertakings that have been conducted in Kenya and over the world. Theoretical and empirical literature review will provide a knowledge base for the problem area focusing on sustainability of the small scale tea enterprises in Kenya.

2.1.1 Theories Grounding the Study

This section provides a critical look at the existing research that is significant in the study. It is an analysis of interrelated ideas based on theories about entrepreneurship and small business sustainability. The section provides a systematic analysis of theories that indicate relationship among the phenomena. Theoretical literature review provides theoretical answers to the research problem before confirmation by a research exercise. It provides a foundation for enquiries (Saunders, Lewis, & Thornhill, (2009). Different scholars have come up with diverse theories, which have helped to explore entrepreneurship. The theories are based on economics, anthropology, sociology, management and psychology (Simpeh, 2011). This study uses the psychological entrepreneurship theory and the resource-based entrepreneurship theory as key theories (Simpeh, 2011). This is mainly because the study focuses on small tea farms that depend wholly on the decisions and actions of the owner as an individual. Entrepreneurship being a relatively young discipline tries to borrow from various theories in economics,

sociology, strategic management and psychology as an attempt to come up with a comprehensive theory that captures it distinctively (Wernerfelt, 1984).

2.1.2 Entrepreneurship concept: Historical development

Literature provides very divergent and broad approaches and definitions of entrepreneurship borrowing from diverse disciplines. Rindova, Barry, and Ketchen (2009) identify different approaches in historical order, starting from classical economical approach, trait approach and social identity approach. The theoretical development of entrepreneurship in this study can not suffice without entrenching the theory of opportunity cost or comparative advantage borrowed from economics to acknowledge the fact that the farmer is an entrepreneur with choices to make on his use of factors of production with the motive of getting the best returns (profit) from his investment.

2.1.2.1 Theory of opportunity cost

From the times of Theen (1823); Mill (1848); Walras (1874); Von Wieser (1876); Von Bohmbawerk (1894); Wicksteed (1914); Knight (1921); & Rodan (1927); the theory of opportunity has been discussed and with time has become clear that it is an important element in entrepreneurial studies. The theory simply states that something worth of value is given up when options are made in favor of something else perceived to have a higher value. The next best alternative forgone is the opportunity cost; since resources are scarce, the choices would imply opportunity cost therein (what the farmer would have done with his land if he did not use it to grow tea) Prasch (1996).

What can be done best and at a lower opportunity cost gives room for specialization and enhances trade between individuals and countries. This is sometimes referred to as comparative advantage. The farmer who produces tea at a lower opportunity cost from the fact that his land is ideal for growing tea compared to other land use has comparative advantage. The very fact that land is scarce and to mobilize its use requires a farmer to make entrepreneurial decision on what best to produce on his land qualifies him to be an entrepreneur. If the land is diverted to other uses the farmer has to gauge whether it would be less suitable. In this study the farmer is better off in growing tea. Various theories have been advanced in the development of entrepreneurship as a discipline as depicted in the following paragraphs.

2.1.3 Classical Economic Approach

Cantillon (1755) defined an entrepreneur as speculator in search for profits from buying and selling of items with a profit. Smith (1776) depicted the entrepreneur as an adventurer searching for threats; projector anticipating the future; and an undertaker who takes wise risks and is accessible for investment if properly remunerated (Rindova *et* al., 2009). Many more scholars contributed in the early days to the debate but it was Schumpeter (1965) who identified the role of the entrepreneur in creating change and disequilibrium in the market through innovation and pro-activeness.

According to Rindova *et* al., (2009); Knight (1921) had already discerned the difference between risk and uncertainty in defining an entrepreneur. Kihlstrom & Laffont (1979) blend the idea of Cantillon and Knight to define the entrepreneur as one who is a risk taker. Say (1971) recognized the entrepreneur as one who supervises and administers in a business. He specified that risk is not the central function of the entrepreneur but also

managerial skills and other moral qualities such as judgment and perseverance were vital for an entrepreneur (Rindova *et al.,* 2009). Praag (1995) noted that Kirtze (1973) turned upside down Schumpeter, understanding and identifying entrepreneurship as a result of innovation intended to exploit the opportunities given by economic disequilibrium. He emphasized that entrepreneurs identify potential opportunities that are unexploited (Praag, 1995). Baumol (1993) identified the entrepreneur as a speculator trying to sell different products. In the economic approach, an entrepreneur is the one who coordinates different factors of production. An entrepreneur has no fixed pay earnings but must invest a known amount of money in production without prior knowledge of return on investment. The entrepreneur expects his income earning to surpass investment based on demand for the product.

2.1.4 Trait Approach

Researchers in the twentieth century started defining the entrepreneur by drawing up a set of traits a person needs to possess to become a successful entrepreneur. Already in 1934, Schumpeter had identified an entrepreneur as an extraordinary person who brings about extraordinary events and new technology, and as an innovator. In 1982, Casson identified the attributes of an entrepreneur as skills to judge and coordinate capital as the important for success (Rindova *et* al., 2009). Trait approach is limited in the sense that there are people who set up an enterprise yet do not fit the criteria listed in the definition. There are always exceptions. The approach cannot explain the regional variation where in some regions people have entrepreneurial acumen more than others from different regions.

Trait approach cannot explain why majority of start-up businesses fail. Four out of five business start-ups end up in failure as noted by Mazzarol, Volery, Doss &Thein, (1999)

and Morrison, Breen & Shameen (2003). In this regard who should be considered an entrepreneur? Is it the person who started a business and failed or the one who succeeded?

Rindova *et* al. (2009), note that there is more in entrepreneurship than a handful of person's traits. They combine the two approaches and identify an entrepreneur as one who starts a company (economic approach). Establishment of an enterprise is an essential economic activity and can also be considered as a single trait, one that is common to all entrepreneurs (Rindova *et* al., 2009).

Frese &Fay, (2001) had identified that there is a positive relationship between personal trait namely personal initiative and performance of small enterprises in terms of profit affirming that trait matters in successful performance of small enterprises. Kiggundu had already established a significant relationship between personal initiative and success in African small enterprises (Kiggundu, 2002).

2.1.5 Social Identity Approach

The entrepreneur's distinctiveness is not located in the personality of the individual but instead, is formed through interaction with society and culture. Elfring (2003) noted that the process of obtaining the identity is through social interaction with others. It is a mixture of social influences that have made an individual actor to become an entrepreneur. An entrepreneur is a person who combines resources (capital, knowledge and people) to create surplus value. Resources can be accessed through social networks. Locations are identified with creating competitive advantage and through the network; the entrepreneur discovers the opportunities, secures the resources and obtains legitimacy (Elfring *et* al., 2003).

Elfring, quoting Burt (2005) noted that society consists of networks of tightly related individuals, who can be linked by brokers or people who have ties within different networks. The different approaches to entrepreneurship generate a definition that takes an entrepreneur as a person with a strong capability to create value from his/her social capital by linking his/her social networks in various ways (Elfring *et* al., 2003). Several scholars attempted to define entrepreneurship from varying perspectives. Drucker (1985) defined entrepreneurship as an act of innovation that involves endowing existing resources with new wealth-producing capacity. He envisioned a shift from managerial to an entrepreneurial economy while, interestingly, Gartner (1988) understood entrepreneurship as a process by which individuals pursue opportunities without considering the resources they currently control or the traits inherent in the entrepreneur.

He emphasized that the entrepreneur is created by the organization with specific purpose of carrying out activities or roles that enables the organization to function. This shifted the focus from who an entrepreneur is to what he does. Stevenson & Jarillo (1990), on the other hand, defined entrepreneurship as the process through which individuals and teams create value by bringing together unique packages of resource inputs to exploit opportunities in the environment. Entrepreneurship involves how, by whom, and with what effects opportunities to create future goods and services are discovered, assessed and exploited. They noted that an entrepreneur accesses other people's resources. The emphasis was on span of activities that happen in every stage of organizational development; namely, creation, growth and rebirth through strategic transformation.

The social identity approach theory still had a gap because the social make-up of an organization may make an entrepreneur but this does not guarantee success of the

enterprise. Other factors outside the scope of the social theory like psychological attributes and resource availability may affect the success of an entrepreneur and the enterprise. This necessitated the development of psychological entrepreneurship theories.

2.1.6 Psychological Entrepreneurship Theories

These theories are individual-centered and stress personal characteristics that define entrepreneurship (Landstrom, 1998). The theories highlight the need for achievement and locus of control as the key drivers of entrepreneurship. The need for achievement implies the drive of business founders to quest for new and better answers than those given in the definite environment and their capacity to get the solutions through their own performance. If a person is capable of achieving such goals, it is presumed that his achievement motivation tallies with the pre-condition of becoming a successful entrepreneur. The difference between successful and unsuccessful entrepreneurs is put into consideration (McClelland, 1987). The locus of control refers to people who believe that they determine their future development through their own actions. These entrepreneurs are assumed to be successful.

The other trait is problem-solving orientation, which is an expression of the cognitive capability to act in an intricate environment and to be attracted to non-routine tasks. Individuals should be able to solve existing problems by transfer of knowledge expression into specific actions (Lumpkin & Dess, 1996).

Interpersonal reactivity is the capacity to place oneself in others' shoes; for instance, the capability to approach other people and cultivate rewarding relationships with them. An adequate level of interpersonal reactivity should better enable the entrepreneur to create client-focused products (Baron, 2008). This was in line with what Mc Cormick (1996),

noted that capability to cultivate relationships gives the entrepreneur the chance to network and especially to access resources. Assertiveness is a trait in a person that manifests the ability to achieve one's interest in a socially acceptable way. It relates to total performance of an entrepreneur towards clients. The traits theory makes the assumption that if the ability to assert oneself is satisfactorily high, the entrepreneur will be better able to attain the planned goals. Entrepreneurship is disposed to risk-taking, innovativeness and tolerance for ambiguity characteristics. This brought about the Personality Traits Theory.

Simpeh (2009) noted that Davidson & Honing (2003) describe personality traits as "stable qualities that a person shows in most situations". According to the traits theorists, an individual possesses inborn qualities and potential that makes them entrepreneurs. The psychology of the owner matches with organizational conditions to determine economic success and entrepreneurs are understood as persons with particular skills involved in entrepreneurial activity.

The theories put forward that the traits in a person dictate the behaviour of the individual entrepreneur. Personality, though not related to, mediates success. The character of the entrepreneur has a strong influence on the achievement of a firm particularly if an entrepreneur runs it alone. The theories assume that the personality or character of human beings consists of given traits that are stable over time. These traits are shaped by know-how to work as entrepreneurs thus the small tea entrepreneur would mediate the success of his enterprise (Simpeh, 2011). The recent findings on risk-taking add weight to the earlier empirical studies, which suggested that as wealth increases, inclination to risk rises. The small tea entrepreneur becomes a risk taker with inclination to increase wealth.

This theory does not explain the high failure rate of the nascent small business enterprises. The entrepreneur may have the psychological factors necessary for successful performance of the enterprises, but without access to the necessary resources, it may prove very hard to perform successfully. This necessitates the resource based entrepreneurship theory that attempts to fill the gap.

2.1.7 Resource-Based Entrepreneurship Theory

The arguments presented in this theory put into focus the notion that access to finance, social and human capital gives rise to opportunity-based entrepreneurship and new venture growth (Davidson *et* al., 2003). The concept of human capital was originally developed to approximate employers' income from their investment in human capital. This was adapted to entrepreneurship research by Utsch & Rauch (2005) in which they highlighted that formal education, training, employment or experience, start-up experiences, owner's experience, parents' background, skills and knowledge constitute enterprise success.

Individuals with more or higher human capital achieve higher performance when executing tasks as proposed by Dimov & Shepherd (2005). They demonstrated that human capital variables are positively related to nascent entrepreneurs, a view supported by Davidson & Honing (2005). Human capital theory assumes that people endeavor to receive rewards for their investment in human capital, which leads to enterprise success (Utsch & Rauch, 2005). The enterprise's success depends on the owner's capability to perform entrepreneurial tasks of discovering and exploiting business opportunities (Shane & Venkataraman, 2000). They further indicated that prior knowledge adds to the owner's alertness to discover particular opportunities not visible to others that are used in

planning and venture strategy. This becomes a determining factor on the success of the enterprise. The success is equated with survival in the sense that the enterprises that keep running and make economic profit are perceived as successful (Bruederl, Preisendoerfer & Ziegler (1992).

Firms' success is dependent on their resource endowment and lack of resources though a challenge to success can be mitigated through diversification (Wernerfelt, 1984).

According to Shane & Venkataraman (2000) environmental scanning, making decisions on the opportunities and coming up with strategies of utilizing these opportunities, management and leadership are all means to success. In summary, the resource-based entrepreneurship theory emphasizes that entrepreneurs make every effort to obtain financial returns from their venturing activities equivalent to their human capital investment. The missing point was about management of these resources or governance which if not well coordinated, success could be hard to come by.

The Giessen Amsterdam Model of Small Business Enterprises Success supports the resource-based theory as it considers human capital combined with personality and defined goals. When the three factors are combined with strategies in the right environment, they give success to the small business enterprises. The model argues that personality and human capital (i.e. education and experience) factors have a function in goals and action strategies and determine the success of small business enterprise (Rauch & Frese, 2000).

Rauch and Frese noted that the Giessen Amsterdam Model of small business success had no direct arrows from personality, human capital, and environment through to success notwithstanding such relationship having been studied. He responds that this was under

assumption that there is no success without action, which is determined by goals and strategies.

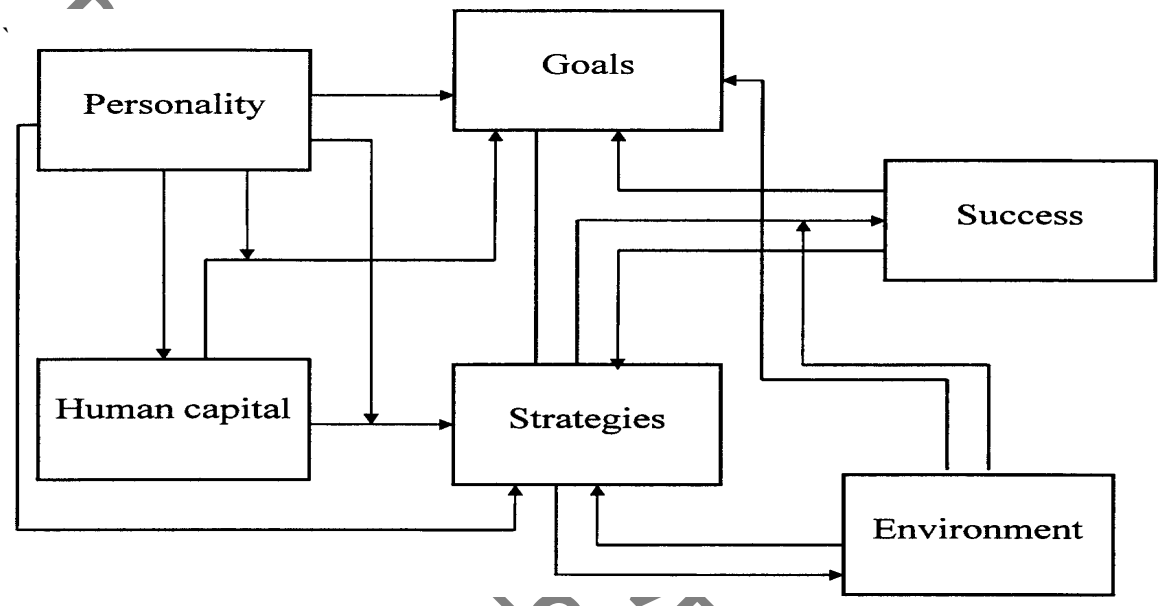
These theories looked at a wide range of factors that influence success in small business enterprises, especially key factors such as resources, the entrepreneur psychological capacity and economic factors. This research adapted this model as a convenient way of individual business analysis using human capital, goals and strategies to study success of small businesses. Taking it further, the study incorporated enterprise characteristics, way of doing business, finance, resources, products and services as the factors that affect the tea farmer within the context of his farm (enterprise) which the farmer has control of, in determining the sustainability of small tea enterprises.

Literature is short of information on a combined theory that serves all factors that influence sustainability in small tea enterprises. However, Rauch & Frese (2000) highlight that the Giessen Amsterdam Model of entrepreneurship success best represents goals as the factor that mainly determines the success of small enterprises, though not without limitations. Goals and objectives are not often separated from strategies as Venkataraman (1989), noted which often makes it hard for evaluation of success. Frese (1995) had tried to draw a line by equating strategy to action; for instance, he stated that a strategy implies action and entrepreneurs try to translate goals into action. Other scholars like Davidson (1998) indicated that goals are related to growth experience. Baum, Calobrese, & Silverman (2000) stressed that goals and visions have an effect on the performance of small enterprises. Jennings & Beaver (1997) equated small enterprises success with attainment of objectives mainly economic profit. In this study success is equated with sustainability which is a holistic approach to continuous exploitation of

available resources with due consideration to environment and future generation and ensuring stable quality and increases in farmers' tea yields and revenue.

The Giessen Amsterdam Model of small business enterprises success is presented below depicting the inter-relationship of key variables with success. It is a good attempt, in view of this study, of amalgamating the drivers of success and their connectedness.

Figure 2.1: The Giessen Amsterdam Model of Small Business Enterprises Success



Source: Rauch and Frese (2000)

2.2 Small Enterprise

Small enterprises exist along with big enterprises and are ubiquitous throughout the world. Literature presents the small enterprises as important in the sectors they exist and contribute significantly to the economy of the country. The Intergovernmental Group on Tea (2012) defines smallholder farmer in terms of size of the land under cultivation and at times by the number of employees engaged by the holder and one who does not own a processing plant.

Small business enterprises have been studied for the last half-decade but most of these studies have been undertaken in the manufacturing sectors of developed countries as demonstrated by Yusuf (1995), Wiklund (1999), Lutteken *et al.,* (1999), Nurul (2005), Naude (2010) and Berner &Gomez (2012) who highlighted that three out of five small businesses fail due to various problems. Berner & Gomez (2012) indicated that small business enterprises create more jobs than big enterprises and are key contributors to the economy as well as being instrumental in eradication of poverty.

Yusuf (1995) while analyzing key success factors for small business enterprises stressed the key role they play but yet noted the high rate of failure of these enterprises. McMahon (2001) studied the financial performance of small business enterprises and stressed the need for financial management for the small-scale businesses. Mazzarol *et* al., (1999) studied the small businesses and highlighted the spirit behind the start-ups but noted the high rate of failure. Losing these key business enterprises would be detrimental to the economic well being of small-scale business holders hence the need to develop sustainability strategies.

2.3 The Entrepreneur

The idea of an entrepreneur is normally used to signify an individual leading a business firm and a manufacturing industrial concern. It is rarely applied to a farmer, for no good reason. An entrepreneur is considered as an individual talented with capitalistic drive and associated with successful economic performance; implying that decline in productivity is attributed to failure in entrepreneurship. Hoseltz & Kirzner (1997) consider entrepreneurs as allocators of resources and mobilizers of capital who are always alert to profitable opportunities. Exploring the terms entrepreneur and entrepreneurship seems to

suggest that a clear-cut meaning of these terms, free from controversy, is nowhere within reach (McCormick 1999).

These attempts, in addition, failed to recognize agricultural entrepreneurs. The argument that entrepreneurs are innovators, managers and allocators of capital, therefore, confirms that entrepreneurship cannot be limited to any one particular area or pursuit. An entrepreneur is likewise found in agriculture where primary production, processing and storage entail substantial measure of entrepreneurial acumen.

A definition closer to be all-inclusive is a mix of earlier attempts stressing that an entrepreneur is a person who specializes in decision making and takes responsibility for the things his decision affects (Mc Cormick, 1996). In agribusiness, a major entrepreneurial behaviour of a small farmer is to maximize production even at worst times. Ambiguities surrounding the notion of entrepreneurship are still largely unresolved and call for more research. Literature is silent on who a small farmer is: a person with what acreage of land or output or turnover. This study considers the small tea holder as an entrepreneur as he fits the adopted definition.

2.4 Tea Production – Global Overview

Tea is produced in tropical and semi-tropical countries and is grown in about 36 countries in the world. Tea is processed from the leaves of the *Camellia Sinensis Var assamica* plant, which grows best in regions with warm humid climate. Leaves are picked by hand on daily basis and collected in a basket or a bag on the picker's back then taken to the buying centre for weighing and delivery to the factory for processing (Wal, 2008). All tea is grown from the same tree but processed differently at the factory to produce black, green, white, yellow or oolong tea. Wilting, cutting or crushing and fully oxidizing the

leaves produces black tea while white tea is made from wilted and unoxidized leaves. Steaming unoxidized leaves produces green tea and a popular method of processing known as crush, tear and cut (CTC) is used worldwide.

Three processing methods (crush, tear and cut) are used to convert green leaf into made tea throughout the world to produce three varieties of made tea; Black, Green and Oolong teas (Onduru, 2012). Tea is a very perishable commodity that for the best quality to be obtained needs to be processed immediately after picking (Basu, Bera, & Rajan, 2010). Tea farming is labor-intensive with wages taking approximately 60 per cent of cultivation costs. Farmers produce green leaf that is processed into made tea at tea factories. The conversion factor between green leaf and made tea is approximately 4.8kg to 1kg. Tea is the cheapest and most popular beverage after water and is an important commodity in terms of job creation and export earnings for a number of tropical developing countries. Literature notes that despite tea being produced in more than 36 countries, China, India, Kenya and Sri Lanka are responsible for almost three-quarters of world production (Wal, 2008).

According to Global Tea Statistics (2012), world tea output in the last two decades has been on an upward trend due to such factors such as: increase in area under plantation, improved planting materials, advanced technology, irrigation and good crop husbandry. Global Tea Statistics (2012) further indicates that the tea plant is cultivated on 3,691,938 hectares. Worldwide yields stand at 4.1 million tonnes annually.

There are many varieties of tea cultivated throughout the world. The most prevalent varieties are China variety, which grows to a height of three metres and is hardy with useful life of 100 years, and Assam, or India, and Cambodia varieties, which are tall,

single-stem trees with a commercial life of 40 years. Best teas are grown at altitudes between 900-2000 metres above sea level (Basu *et* al., 2010).

Asia accounts for about 75 per cent of global tea production, which is at four million tonnes. About 45 per cent of total tea produced globally is internationally traded: Sri Lanka accounts for 22 per cent; China 18 per cent; Kenya 16 percent and India 16 percent of the internationally traded tea; thus accounting for 72 per cent of the world tea exports. Approximately 40 per cent of the world tea output is traded at auctions in the tea-producing countries.

Other countries that cultivate tea include Japan, Bangladesh, Indonesia, Argentina, Bolivia, Brazil, Costa Rica, Ecuador, Guatemala, Taiwan, Iran, Malaysia, Nepal, Russia, South Korea, Tibet, Thailand, Vietnam, Australia, Georgia, New Zealand, New Guinea, Turkey, United Kingdom and United States of America (World Tea Statistics, 2012). The largest auctions in the world are in Colombo, Sri Lanka and Mombasa in Kenya. The prices in these two auctions are considered the worlds' tea price indicators. Other auctions are held in Chittagong, Bangladesh, Jakarta, Indonesia and Limbe in Malawi. Literature indicates that global tea production has been on the increase and supply has surpassed demand, depressing tea world prices further (Basu *et* al., 2010).

Table 2.1 below shows the output from the main countries producing black tea in the world.

Table 2.1: World Black Tea Production from Main Producing Countries (2010)

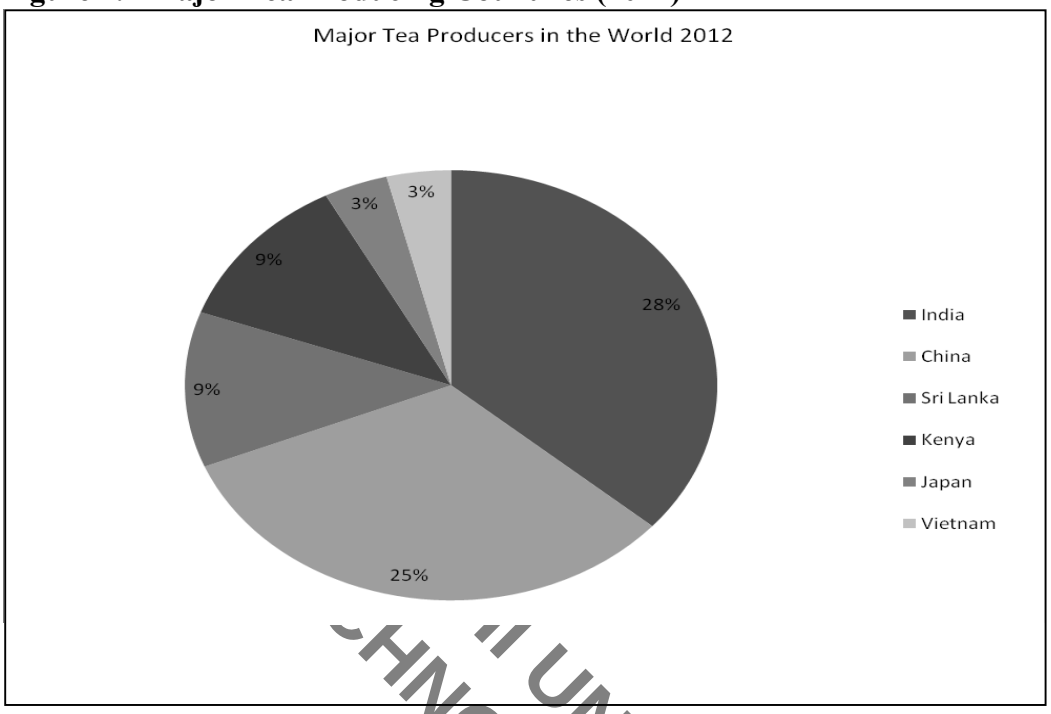
Country	2009 (tonnes)	2010 (tonnes)	Change (%)
Indonesia	77,600	72,200	-6.96
India(North)	734,800	722,800	-1.63
India (South)	230,600	243,400	5.55
Sri Lanka	278,800	3,280	17.65
Kenya	314,200	399,000	26.99
Uganda	48,500	52,800	8.86
Tanzania	31,600	31,600	0.00
Malawi	52,700	51,700	-1.90
Zimbabwe	12,100	13,800	1.40
TOTAL	1,780,900	1,915,300	7.54

Source: Tea Brokers East Africa Limited Report (2011).

Table 2.1 details the fluctuation of black tea production between the years 2009 and 2010. It is noteworthy that Kenya and Sri Lanka were the only countries with significant increase in the period under reference with both countries gaining 74% of the total increase.

Figure 2.1 below shows the percentage share of tea output in major tea-producing countries in the world.

Figure 2.1 Major Tea Producing Countries (2012)



Source: Global Tea Statistics 2012

The pie chart shows the percentage share of tea output in major tea producing countries in the world. India, Kenya and Sri Lanka are the largest black tea producers while China leads in green tea production worldwide.

Table 2.2 below shows the tea output from the top five tea-producing countries in the world

Table 2.2: Table Showing the Top Five Tea-Producing Countries in the World

Country	**Production in 2011 (Metric Tonnes)**	**Percentage Total**
China	1,640,310	35.13%
India	966,733	20.7%
Kenya	377,500	8.09%
Sri Lanka	327,500	7.01%
Turkey	221,600	4.7%

Source: Central Bureau of Statistics (2012)

Table 2.2 shows the tea output from the top five producing countries in the world. Comparatively, China takes the lead followed closely by India with Kenya settling for the third place in the global tea production. It is important to note that China produces green tea that is consumed mainly in the country (World Tea Statistics,2012)

2.4.1 Tea Production – Continental (African) Overview

In Africa, tea-growing countries include Burundi, Cameroon, DRC, Ethiopia, Madagascar, Malawi, Mauritius, South Africa, Tanzania, Uganda, Zimbabwe and Kenya. Tea farming in Africa comprises both plantation farmers and small-scale farmers accounting for 15 per cent of the global tea output. The bulk of tea production in Africa is by small-scale farmers. The sector is relatively young compared to other countries in other continents (World Tea Statistics, 2012).

Small enterprises have been studied extensively; Wiklund (1999), Ratnayake (2002), Mwaura (2007), Ireland (2010), Naude (2010), Kaberi (2013), and Onduru (2012) various studies depict the sector as a significant contributor to the economy, especially in

developing economies. Small-scale agriculture continues to be the backbone of the economy for most of the world's developing nations.

In Africa, smallholders account for 75 per cent of production, creating 75 per cent of the employment opportunities in the continent (Kariuki, 2012). According to Kariuki, data by Kenya Tea Development Agency shows the East African region is gradually increasing tea production with Uganda, Tanzania and Kenya recording growth in output. In Tanzania, output by small-scale farmers increased by 2.9 per cent from 25,000 tonnes in 2008 to 31,400 tonnes in 2012. This was due to rehabilitation of tea farms and improved management practices.

2.4.2 Tea Production – Kenyan Overview

Mr. W.G. Cain, a colonialist who planted the tea crop in the Limuru area of Central Kenya, introduced tea farming in Kenya in 1903. However, it was restricted to plantations or large-scale farmers since locals were not allowed to cultivate cash crops such as tea, coffee, sisal and pyrethrum (Wal, 2008). Kenya's attainment of independence in 1963 saw the passing of various Land Reform bills that have had far-reaching impact on agriculture and mostly to tea farming, which was then made open to the local farmers (Kagira *et* al., 2012).

Few Kenyans were involved in tea farming since they could not manage to buy the big plantations being sold by the white settlers who were returning to their motherland Kenya is the third-largest producer of tea after India and China and the largest exporter of black tea in the World. In 2011, smallholder production accounted for about 62 per cent of total tea production (378 million kilograms). Tea production in Kenya is limited to certain regions due to specific requirements such as red volcanic soils and tropical

climate with rainfall distribution between 1200 mm to 1400 mm (Kariuki, 2012). Kenya prides itself as being the best producer of black tea in the world due to ideal tea growing conditions and good agronomical and processing practices, among other factors (Mburu, 2008).

Table 1.1.3 below shows tea output for four years in Kenya between 2009 and 2012.

Table 2.3: Tea Production in Kenya between 2009 and 2012

Year	Production in Metric Tonnes
2009	314.1
2010	398.5
2011	377
2012	369.2

Source: Central Bureau of Statistics (2012)

Table 2.3 above shows the output for four years of tea production in Kenya between the years 2009 – 2012. It is evident from the table that Kenya tea output has been uneven with some years recording high production in volumes (2010 and 2011) while declining volumes are recorded in the other years (2009 and 2012).

The unique characteristic of Kenyan tea is that it is grown free of agrochemicals (KTDA, 2012). The Kenya Tea Act, Cap 343 and Kenya Agricultural Act Cap.318 guide the tea enterprises in Kenya (Kenya Gazette, 1999). Large and small-scale tea farmers produce tea in areas situated in the highlands east and west of the Great Rift Valley. These areas are rich in tropical volcanic red soils with well-distributed rainfall conducive for tea growing throughout the year. The major tea-growing regions include Mt. Kenya, the Aberdares, Nyambene Hills, Mau Escarpment, Kericho Highlands, Nandi Hills, Kisii Highlands and Cherangani Hills (KTDA, 2012).

The tea plant grown in Kenya has economic life of 50 years. Most tea bushes across the seven producing regions are thus old and are drawing close to the end of their economic life, which calls for replacement. This is a process that can take a minimum of three years, leaving the farmer with no income from the replanting period to maturity of the bushes. Tea harvesting is a labor-intensive activity and labour costs keep on rising, hence majority of smallholders rely on family members for labour. When there is need to employ workers, they are engaged on daily casual basis.

The cost of labour is very high, taking 60 per cent of the cost of production. This reduces the already low incomes and pushes the small tea entrepreneurs further into poverty. Current income levels are far much lower than they used to be 10 years ago (TRI, 2010). Action Aid (2005) looked in depth at the impact of lower income for small tea producers in Tamil Nadu, India, and found that workers were paid lower wages for the increased workload. Small tea producers were struggling to feed their families and many children were suffering from malnutrition. Chittithaworn, Aminul, & Dayang (2011) noted that poor infrastructure; weather vagaries and delayed payments make it very difficult for the smallholder tea farmer.

The farmer often lacks formal education and many have no strategic plan for their tea farms, as well as poor communication. This makes it hard for the farmers to fully understand their obligations, especially when seeking financial services, among others (Kagira *et* al., 2012). Ofunya (2012) in his study on drivers for adoption of green marketing by Kenya tea firms indicated that climate change generates unpredictable harvest, leaving many small tea entrepreneurs struggling to plan for the future. This poses a serious threat to families relying on tea as the source of their livelihood.

Many smallholder farmers also consider compliance with green marketing requirements expensive. Customers' pressure influences the smallholder to adapt to the standards. There is a looming pullout by smallholder farmers from tea growing to non-tea farm activities that have better returns as pilot study gathered. Would they hold on to poor income ventures or will they opt for better paying ventures? This is the question this study sought to answer. Alongside this; the small tea entrepreneurs are many in Kenya currently more than 420000 distributed throughout tea growing regions as demonstrated by table 2.4 below. The study will establish the determinants and strategies on sustainability of small tea enterprises in Kenya. It will bridge the knowledge gap and set precedence for further research in this key industry.

Table 2.4 below shows the list of tea factories managed by KTDA in Kenya on behalf of smallholder farmers from all over the country. A factory represents a group of small farmers from tea growing region; organized into a cooperative group who bring their green tea to be processed in a their communally owned factories.

Table 2.4: List of KTDA-Managed Factories

Chebut	Kapkoros	Mungawa
Chinga	Kapsara	Mununga
Gacharage	Kapset	Ndima
Gachege	Kathangariri	Nduti
Gathuthi	Kebirigo	Ngere
Gatunguru	Kiamokama	Njunu
Gianchore	Kiegoi	Nyamache
Githambo	Kimunye	Nyankoba
Githongo	Kinoro	Nyansiongo
Gitugi	Kionyo	Ogembo
Ikumbi	Kiru	Ragati
Imenti	Litein	Rukunini
Iriaini	Makomboki	Sanganyi
Kagwe	Mataara	Tegat
Kambaa	Machimikuru	Theta
Kangaita	Mogogosiek	Thumaita
Kanyenyaini	Momul	Tombe
Kapkatet	Mudete	Weru

Source: KTDA List of Factories (2013)

2.5 The Small-scale Tea Enterprises - Kenyan Situation

Small-scale tea farming in Kenya has had a remarkable history and rapid growth. First introduced and endorsed legally in 1963, it has grown tremendously and now has more than 420,000 farmers (Kaberi, 2013). A comparison between the area under small-scale tea farming and that under large-scale farming portrays a huge difference. The reason as to why the small-scale enterprises have increased production is expansion in acreage rather than better agronomic and husbandry skills or technology (Onduru, 2012). Kenya's tea output continues to increase against declining world tea prices due to oversupply, causing further decline to the earnings, therefore, aggravating the situation of the small tea entrepreneur (KTDA, 2013).

Studies on small business enterprises, especially on tea, undertaken in Kenya include Owuor (2000) who undertook a study on factors impeding tea production in the smallholder subsector; Mwaura *et* al., (2005), who carried out a situational analysis of small-scale tea growers and their contribution to the local auction market; Cheruiyot (2013), who highlighted challenges hindering sustainability of small and medium enterprises after exit of founders in the supply chain; Owuor (2010) who studied the sustainability of smallholder tea growers; Ofunya (2012), who looked at the driver for adoption of green marketing by tea firms; Onduru (2012) who studied farmers' field schools in tea firms and Kagira *et* al., (2012) who studied the problems encountered by smallholder farmers in Kenya. They all highlighted that the smallholder has a significant part in the tea sector and in the economy of the country.

The Central Bank of Kenya monthly report (2013) indicates that small-scale tea enterprises account for 62 per cent of the total tea output while plantation farmers' account for the remaining 38 per cent. Kenya's total tea output in the June 2012 – May 2013 production year was 434,459 tonnes valued at Ksh117.3 billion, a record high in the history of tea. Small-scale farmers accounted for 269,364.58 (57%) tonnes (KTDA, 2012). Wal (2008) indicates that the acreage of land under tea in the small-scale enterprises is between one and ten acres. Farmers subdivide these small enterprises to give to their children, who then subdivide to give to their children, and the cycle continues leaving small strips of land, which are very costly to manage as they yield low quantities. Farmers continue subdividing their land for cultural reasons without due regard to the negative impact this has on the quantity of tea produced and the earnings of the small-scale farmer (Wal, 2008).

The small-scale farmers use family labour or hired labour to pick the tea on their smallholdings. Wages depend on the weight of leaves picked, with the tea pickers often charging between Ksh10 and Ksh12 per kilograms. KTDA, however, advocates for the picking of two leaves and a bud to ensure good quality (Kagira *et al.,* 2012). According to Wal (2008), the cost of tea production in Kenya is USD1.33 per Kg, which compares poorly to other tea-producing countries in the world such as Vietnam (USD0.81 per Kg) as well as its neighbors in the East Africa Community e.g. Rwanda (USD1.32 per Kg), Uganda (USD1.20per Kg) and Tanzania (USD1.16 per Kg). The total cost of producing tea is borne fully by the farmer. The net income, less capital employed and cost of capital, dictates what the farmer takes home as income from his small tea enterprise. Thus, the high cost of production without resultant increase in income pushes the tea entrepreneur deeper into poverty (Kariuki, 2012).

The smallholder farmer faces external and internal challenges expected in any business. Some problems are beyond his influence such as climate, demand, prices, markets and legal forms that exploit instead of protecting the farmer. The small tea entrepreneurs are price takers that they never make decision on the price of their commodity, but it's done by the buyers. They lack technical inputs such as fertilizers, irrigation and crop improvement methods, which are important for maximum production of tea. They also lack accurate market information, which is important for the holder in order to meet the buyers' set standards carried out through certifications which are usually very expensive exercises for the smallholders. Most of the smallholders are usually price takers and rarely get a chance to bargain for their commodities since they use agents to handle

marketing, but who seldom consult the farmer. The farmers are left vulnerable with very weak bargaining power.

Small-scale tea farmers contributed 61.6 per cent of total output in 2011, compared to large estates, which contributed 38.4 per cent in the same period. However, it is interesting to note that the same statistics are not being realized in terms of revenue share to the smallholder farmers. This may be attributed to lack of proper labour practices, lack of the required resources and finance, enterprise and entrepreneurial characteristics, management and technical know-how, products and services, failure to embrace agronomy and unfavorable external environment (Kaberi, 2013). Onduru, Jager, Hiller, &Bosch (2012) in their study on sustainability of smallholder tea producers in developing countries, found that small-scale tea farmers also grow food crops for their daily sustenance. Their research work revealed that the low wages paid to temporary workers who work in the small sector have negatively affected production.

Onduru highlighted that the average returns to the farmer have remained miserable with tea factories paying an average of USD 0.21 per Kg of green leaf collected in spite of Kenyan tea fetching an average of USD 1.72 per Kg on world markets during the past eight years.

An analysis of labour carried out by Unilever Management in 2008 indicated that one of the key challenges in the tea sector is the rising cost of labour, which constituted about 55 per cent of total costs by 2006. In 2012, it consisted about 60 per cent of green leaf production costs (Onduru *et* al., 2012). KTDA (2013) report painted a dim picture of depressed returns for tea farmers in Kenya due to tea glut experienced in 2013 where Kenya produced a record 432 million kilograms of tea. The major culprit is the inflating

costs of production and a proposal to use machines to harvest tea could make the situation better for tea farmers. Some farmers are opting out of tea farming to other non-tea agricultural activities perceived to be better in returns. This illustrates that small tea farmers do the farming at an opportunity cost. Many studies have been done on smallholder businesses but a lot needs to be done on small tea enterprises, especially on factors that affect their sustainability in regard to environment and society benefits (Onduru *et* al., 2012).

Justification of the need of attention to the small-scale tea enterprises is the theory of opportunity cost which is derived from the concept that resources are scarce and one type of use will rule out the other. In other words, use of resources in one way will not permit the use of these resources in other ways. The next best alternative foregone in choosing one use over the other is the opportunity cost.

Although this opportunity cost is not considered in accounting, it is important for the entrepreneur who is making managerial decision (Palmer & Raftery, 1999). In small tea enterprises, the choice of use of land, which is a scarce resource in one way or the other entails opportunity cost. An entrepreneur who opts to use the land for leisure farming foregoes income that could have been generated in alternative use of the same piece of land; in this case, production of tea leaf at a cost. The farmer is not in tea farming because he has no other way of using his piece of land but because he has opted to grow tea due to perceived returns of tea farming compared to other non-tea farming activities. This makes the farmer a seeker of best returns in his investment. If the farmer did not plant tea, what else would he have done on his piece of land? Whatever farming activity he foregoes in order to farm tea entails an opportunity cost.

2.6 Strategies

The main objective of the entrepreneur is growth and creation of wealth. Effective advantage seeking (strategy) and effective opportunity seeking (entrepreneurship) are the foundation of an edge in wealth creation. A firm's ability to manage its resource portfolio affects its success (Kuratko, 2003). Porter (1980) emphasized that strategies are of particular importance to small business success, a view supported by Frese (2000). He distinguishes two important dimensions of strategy namely; strategic content incorporating the decision the owner of the business makes and strategic process entailing the formulation and implementation of the strategies. Frese defined strategies as an entrepreneurial process, practice and decision-making activities that lead to new entry or approach in business.

Sustainability strategies will ensure improved tea output that translates to better income for the household. These strategies ensure sustainability of green leaf production more effectively and efficiently (Thurik &Winnowers, 2012). This agreed with Ireland *et* al., (2003) who understand strategic entrepreneurship as concurrent opportunity seeking and advantage-pursuing behaviour, which has consequence in growth and creation of wealth, hence better firms' performance. These writers suggest that small firms succeed in detecting opportunities but get challenged in developing the competitive advantage desired in order to tap value from those opportunities. Simpson *et* al., (2012) share this view and stress that what is required for the small firms to create wealth is to have entrepreneurial brains, culture, leadership and strategic management of resources or opportunities. Choosing the right strategic tool would determine the extent the firm takes towards realizing the competitive advantage. The small tea entrepreneur will need to

employ these strategies to maximize output with less cost. The entrepreneur must get information in time to influence output decisions. Proper planning of finances or capital to spur production and manage labour requirements in the small enterprises is vital. The enterprise's competitive advantage must be retained now and in future in order to remain afloat in its profit-making goal (Simpson *et* al., 2012)

2.7 Empirical Literature Review

This section entails critical assessment of literature in the small tea enterprises where we compare and contrast views of various authors in areas connected with the study. Both will help to capture information and theories currently available concerning the study (Kombo, 2006).

2.7.1 Sustainability

Brundtland Commission (2007) defined sustainability as a course of development that serves the needs of the present without compromising the ability of future generations to meet their own needs. It is exploitation of natural resources, distribution of investments, and the course of technological development and organizational change that are in agreement with each other for both present and future generation. This is a departure from the neoclassical definition that sustainability is about economic management of different types of capital; namely, natural capital, human or social capital, manufacturing capital and maintaining these to the long run (Cohen & Winn, 2007).

The commission further stresses that sustainability is constant commitment of the business to behave justly and contribute towards financial development while improving the quality of life of the workforce, the families and local community. A wider

consideration in the area of sustainability in entrepreneurship is articulated by Cohen & Winn (2007); that sustainability entails a process where the entrepreneur strives for profit and for developing the local or international environmental and social well being. This requires that the process of entrepreneurship create contributory and restorative interaction with human ecological systems. This perspective takes into consideration the aspect of continuing commitment an enterprise makes to behave ethically and contribute to economic development while improving the quality of life of the owners, workforce and community at large (Cohen & Winn, 2007).

The above definition agrees with what Shane & Venkataraman (2003), suggested that sustainability in entrepreneurship is about identifying new opportunities for creating value for customers or users of products and services and commercially developing those opportunities to establish a profitable venture. Three things that emerge from their definition are that sustainability takes meaningful care in people, planet and profit. Small tea entrepreneurs' sustainability will depend on how well farmers adopt technologies and practices that do not harm the environment, are easily accessible to be used to improve output and the well being of the entrepreneurs and their households (Kaberi, 2013). It would mean that sustainability could be measured in terms of sales turnover against cost.

In the case of small tea holders, it can be measured by the sales turnover or green leaf delivered for sale less costs of it (Urban & Naidoo, 2012). Literature provides many definitions of business growth and ways of measuring success. The definitions provided by literature consider measuring business success with total or comparative change in sales, assets productivity and profit, among others (Olawale & Garwe, 2010). Sustainability in the small tea enterprises is measured by sales turnover and costs as

indicator of performance in this study. The high sales of green tea mean sustainable performance of small tea enterprises.

2.7.2 Effects of Enterprise Characteristics on Sustainability

Blackburn, Hart, & Wainwright (2013), in their study of factors that influence small business success, found that characteristics of the business, namely size and age, influence performance significantly. Chilaya (2012) also found that characteristics of entrepreneurs especially in level of education and experience contributed to profitability of small grocery shops in South Africa and considered it as key components in analyzing the success of SMEs. Chilaya found that enterprise characteristics had positive influence on the profitability of SMEs.

Yusuf (1995), explored critical success factors for small firms in several industry sectors based on the perceptions of 220 South Pacific entrepreneurs. His key findings were that individual aspects like certain expertise and good character and environmental factors such as government backing, political and enterprise commitment are critical to the success of small enterprises. Wijewardena, & Cooray (1996), explored the importance of a set of success factors by studying a sample of 300 small manufacturing firms in Japan. They distinguished six factors that were deemed major contributors to the success of small manufacturing firms. They found customer orientation; product quality, efficient management, supportive environment, capital accessibility and marketing strategy, to have significant influence on the success of small enterprises.

Gadenne (1998), studied 369 small businesses in the retail, service, and manufacturing

industry in Australia where he explored the effects of various management practices on small firm performance. He found that common management practices throughout different industries; owners' personal characteristics and enterprise objectives contribute significantly to the successful financial performance of small businesses. Similarly, Kristiansen, Furuholt & Wahid (2003) in their study on factors influencing success of small firms in Indonesia found that financial flexibility was considerably correlated to business success. They noted that SMEs that took benefit of family or third party investment achieved high level of success.

Further, Simpson *et* al., (2004) found out that education and training had significant positive influence on the success of small business enterprises. They later did a study "Towards a new model of success and performance in SMEs" and found that enterprise characteristics, characteristics of business environment, and owner or manager's characteristics are critical for the success of an enterprise (Simpson *et* al., 2012). Kauranen (1996), on the other hand, studied the determinants of success of the small firm in the short and long term in Finland, and carried out a follow up study of 37 new manufacturing firms on the startup characteristics of new small firms. He found that market orientation and new products idea distinguished the successful and unsuccessful small firms. He noted that good availability of labour did not lead to success of the small firms.

Baker & Sinkula (1993), studied the complementary effects of market orientation and entrepreneurial orientation on profitability in small firms and found that growth objectives driven by identification of untapped market opportunities influence a firm's profitability. They further noted that innovation has an indirect effect on the profitability

of the small firms. According to the Tea Research Foundation of Kenya (2010 – 2015) Strategic Plan, the quality of decision-making among farmers determines the success of policies meant to raise agricultural productivity in low-income countries. This is because the efficiency of farmer decision-making influences the design of development strategy in a country. The factors that contribute to stagnating tea productivity need to be identified and understood to facilitate appropriate decision making at all levels (TRFK, Strategic Plan 2010-2015).

Overall, literature provides sparse information on the influence of enterprise characteristics on the success of small enterprises and little or no information specific to small tea enterprises. This study examined enterprise characteristics such as size of the small tea enterprises, number of years the enterprise has been operating and ownership as influences on the sustainability of small tea enterprises.

2.7.3 Effects of Size of the Enterprise

According to Kariuki (2012), smallholder tea farmers hold a 66 per cent share of the total acreage under the crop. This means that the smallholders have more acreage compared to the large estates. Onduru *et* al., (2012), points out that since 2008 there has been increased land use in Kenya leading to higher production in the tea sector. However, he was of the view that large growers produce higher yields compared to smallholders because of mismanagement by the smallholders. Another scholar found that division of tea bushes, shrinking global prices and rising costs of production are threatening the survival of Kenya's small-scale tea growers (Mburu, 2008). In the recent past, tea farms have been subdivided as a result of increase in population while there has not been a corresponding increase in available arable land. Spence (1999) had already stressed that

size does matter in determining the success of small business enterprises.

Kariuki (2008) said that, "the population volume ratio vis-à-vis land area cannot support viable economic land use for the smallholder growers." Kagira *et* al., (2012) also noted that traditional methods of land inheritance have played a great role in deteriorating the already alarming situation. Kariuki (2008) further added that the only solution to this problem is to educate the smallholder farmers on the need to embrace consolidated group farming and discourage sub-division into uneconomical units. His study found that farmers with quarter-acre units were harvesting an average of 1,300 kilograms of tea and earned Ksh 34 daily from tea picked. On the other hand, an acre produced 5,250 kilograms of tea, which in return gave farmers a daily income of Ksh 150.

He recommended that consolidation would help to increase the farmers' earnings and would, therefore, reduce the production costs, as that would help them take advantage of economies of scale.

Mwaura, (2007) also argued that small-scale tea growers in Kenya have subdivided their land as a result of their cultural background where parents have to give a share of land to their children, which made it difficult for these farmers to produce economic output. He retaliated that this problem is worsened by lack of policies and good governance on the corporate level. The scale of business operations indicates profitability and growth thus the size of the enterprise matters (Frese, Krauss, Keith, Escher, Grabarkiewiz, Luneng, Friedrich, 2007). This study sought to analyze the influence of size of enterprise or acreage on sustainability of small tea enterprises because previous literature only dwelt on size of SMEs based on capital invested and workers employed in business category. This study focused on the cultural practice of land subdivision, which renders the tea

farm sizes smaller, impacting greatly on output in the absence of economies of scale.

This is a key area important to this study in particular though the previous study did not concentrate on this factor.

2.7.4 Effects of Years in Operation

Most of the tea farms owned by smallholder farmers in Kenya have over 30 year-old tea bushes that are past their most productive age (Huque, 2007). This may be as a result of lack of sufficient finances to replace the old tea bushes or lack of information on the existence of new varieties that can be more productive. If smallholder farmers could consider replacement of the old tea bushes, this could bring about a considerable gain in output. It would be advantageous to the farmers if they continuously considered replacing the old plants with young bushes, as the latter are more productive.

Huque (2007) further noted that although the Tea Research Foundation on Kenya has developed 45 tea varieties, they have not yet been adopted by farmers, either due to lack of information or due to the high costs involved.

In his study, Bhowmik (1990) found that production had almost reached saturation with the existing bushes since one third of the bushes had aged, thus making it uneconomical to retain them. This was echoed by what Chiranjeen (1994), in his study on supply-demand analysis of the India tea industry pointed out that there is a significant relationship between age of the tea bushes and yield. He stated that by the eleventh year, the yield per bush starts increasing but at around 20 to 30 years, the yields start declining because it reaches its peak. Ratnayake (2012), reported that the Government of Sri Lanka had already seen the importance of quality and production increase in the smallholder tea

enterprises and thus required three per cent of the tea crop to be replanted annually. However, the majority of tea smallholders were not ready to go with this decision due to financial constraints. According to Ratnayake, the high cost of replanting made the farmers feel they would be left without an income for about three to five years when the new tea bushes could be harvested.

According to a study carried out by Mwaura *et* al., (2007) there was an indication that small tea farmers have varied experience in tea farming ranging from one to 50 years. They found that the experience the entrepreneur has contributes greatly to the output and eventual earning. While it is true that the age of the tea bushes gets to the point of diminishing returns if very old, the many years of farming experience would be advantageous on output (Mwaura *et* al., 2007).

Earlier researches dwelt on the aspect of age of tea bushes in reference to productivity, output, cost and quality, a fact supported by this study. In addition this study sought to establish the influence that age of tea bushes will have on sustainability of small tea enterprise in Kenya.

2.7.5 Effects of Ownership

Africa has a typical background of using women primarily in subsistence farming while men are engaged in commercial crops like tea and coffee. In addition, women do not own land. However, women are the ones who are engaged in the labour supply in the tea farms while men, as landowners, take the income (Kagira *et* al., 2012). They further argued that with the empowerment of women, instigated in a campaign worldwide, it is

essential that the marginalization of women in distribution of the income in the tea sector be inverted. This will help to ensure sustainability of the micro-holder tea sector in Kenya since women's rights will be regarded as a decisive factor for trade.

Further, Mwaura *et* al., (2007), argued that due to small-scale tea growers in Kenya having further sub-divided their land among their children, it has become difficult for the new owners of the subdivided land to own title deeds. They argued that this made it hard for these farmers or women to make decisions or to obtain loans from banks since they did not have collateral. This is a critical factor, which the study agrees with. Earlier research had revealed that gender discrimination on ownership impacts negatively on labour supply and output in tea enterprises but failed to assess the current trend of leasing of tea farms (Cheruiyot, 2013). This study, however, sought to establish how ownership issues could be worked out to solve the problem of labour supply that affects tea output in the small tea enterprises.

2.8 Effects of Way of Doing Business on Sustainability

Way of doing business entails the entrepreneur's capacity to network and share business information with peer farmers, working with outside professionals and communicating with partners, suppliers, stakeholders and buyers (Chittithaworn *et* al., 2011).

2.8.1 Effects of Networking, Communication and Co-operation

According to Ireland *et* al., (2001) the sustainability of an enterprise is usually determined by the consequences of the ways of doing business and co-operation. The research further found that inter-firm cooperation, consultation, performance measurement and flexibility might play an important role in business success. Ireland *et*

al., (2001) had found out that networking seemed to be important both between and within firms. They argued that successful firms were likely to spend more time communicating with partners, customers, suppliers and employees. They further added that cooperation would also enable firms to improve their strategic positions, focus on their core business, enter international markets, reduce transaction costs, learn new skills and cope positively with rapid technological changes. Cheruiyot (2013), also studied the impact of integrated tea supply chain and role played by KTDA and noted that networking is essential for accessing markets.

Earlier research had generally looked at the impact of ways of doing business and networks in regard to business success, strategic positioning, and focus on core business, entering international markets, reducing transaction costs, learning new skills and coping positively with rapid technological changes (Chittithaworn *et* al., 2011). Previous empirical literature looked at networks in the upper part of the tea supply chain, which is important, but equally important in this case, is the lower part of tea supply chain.

This study, however, looked into fundamentals of social networks in the lower part of tea supply chain (green leaf production) and the impact they have on continuous improvement in output of small tea enterprises with regard to getting required information, alternative finance and access to credit.

2.8.2 Effects of Knowledge Sharing

Clarke (2006) argued that small enterprises not only require relevant advice on methods to increase profitability or productivity, but need extension on a varied range of management options which may include information on markets, value addition and other income opportunities. According to Cheruiyot (2013), due to lack of training, the

smallholder tea farmers lack general farm management practices. This was in line with what Owuor (2005) had indicated; that the smallholder tea farmers' varied experience ranging from one to 50 years sometimes contributes in affecting the output. The two scholars further noted that some of the farmers did not use fertilizer on their farms while others used more quantity than the recommended, 150 kilograms of nitrogen per hectare per year, and used 494 kilograms per hectare. The extension services reaching the farmers and educating them on ways to improve their production determined the success and sustainability of the smallholder tea enterprises because this enabled them to know and adopt the recommended tea production technologies (Owuor, 2005).

Gharakhani & Mousakhani, (2012) in research titled 'Effective Training and Knowledge' found that for any smallholder sector to be successful, it required implementation of competitive strategies by the human assets of the tea sector. He further argued that for effective competitive strategies, farmers had to understand the dynamics of tea production and to have the ability to use the information-based tools.

This would only be achieved through training. The smallholder farmers agreed that they significantly benefited from the training and awareness programmes that were initiated by the Tea Board and other agencies (India Tea Research, 2012). Previous research looked at awareness and the use of technology based on increasing farm productivity, better tea management practices and sustainability of the small tea enterprises. However, these studies failed to assess the impact of technology use and strategic management in small tea enterprises especially on smaller holdings owned by the farmer. This study explored the strategies that may be adopted by the small tea enterprises through use of information tools and technology to enhance their sustainability.

2.8.3 Effects of Use of Outside Professionals and Advisors

Ireland *et* al., (2003) argued that for any enterprise to succeed use of outside professionals and advisors and the advice and information provided by customers and suppliers are important. According to the TRFK Strategic Plan (2010-2015), in order to achieve improved production, technologies such as development of elite clones, soil fertility and nutrition management have to be in place. The results of the TRFK research found that the farm fertilizer demonstrations that were both within the estate and smallholder sub-sectors resulted in significant yield increases. TRFK further reiterated that in view of the rising costs of tea production, strategies aimed at reducing such costs need to be formulated. Such strategies included mechanization of farm preparation and pruning, integrated soil fertility and adoption of clones suitable for mechanized tea harvesting (MTH). The research concluded that evaluation and adoption of such cost-saving technologies would improve the competitiveness of the Kenyan tea industry.

According to the TRFK Strategic Plan (2010-2015), for the Kenyan small tea enterprises to be sustainable and for the sector to meet the varied needs of the farmers, there was need to use integrated breeding strategies to develop elite and high value tea varieties that combined various desirable qualities, and which used both ordinary and non-conventional methods. Literature reveals that research has been done on the effects of clones on greater production, production technology and its impact on production cost in large estates but lacks information on small tea enterprises. However, this study analyses the effects of adoption of use of outside professionals and advisors as a strategy to improve the high yielding life span of the tea bushes, hence resulting in continuous improvement on output, production and quality of tea in the small tea enterprises.

2.9 Effects of Finance

According to TRFK Strategic Plan (2010 – 2015), due to the increasing costs of major inputs such as fertilizer, farmers are finding it increasingly difficult to use such inputs to boost their output. Banerjee & Duflo (2011), argued that financial constraints affect the small sector more than the larger ones and this retarded the growth of the small farms. If these farms were granted the required financing this would be a major boost to their output. He noted that the Investment Climate Surveys of the World Bank had shown that access to finance enhances a firm's outcome. It not only facilitates market entry, growth of companies and risk reduction but also promotes originality and entrepreneurial activity. Besides, firms with greater advantage of availability of capital are able to exploit growth and investment opportunities. In other words, aggregate economic performance will be improved by increasing the access to capital. Financial constraints are greatest in low-income countries, Banerjee found.

From the findings of Kristiansen *et* al., (2003), access to finance enables firms to grow and become sustainable by creating an enabling economic environment. They further added that financial constraints in SMEs are particularly occasioned by gaps in the financial system such as high collateral requirements, high administrative costs and lack of experience within financial intermediaries that are alarming in developing countries. Other studies have revealed that lack of start-up capital deters growth and prosperity of the small enterprises, but lacked specific focus on small tea enterprises. However, this study looks at how provision of funds specifically to small tea enterprises would ensure continuous growth and improvement of output on these enterprises for their survival.

2.9.1 Effects of Ability to Mobilize Finance

Mburu (2008), argued that the cost of production borne by the small tea holder includes hidden family costs, and the fact that they do not bear social costs makes them higher than those of plantations. He noted that Fair Trade teas were benefiting farmers financially from the premium price derived from the organization. Equally, the loans advanced were farmer-friendly. Wal (2008), indicated that the other factor that may have led to the low earnings of the smallholder farmers is the high costs of inputs and other operational costs. The cost of fertilizer is increasing day by day, as are other costs such as of picking, pruning and weeding. The rising costs of tea production need formulation of strategies that would be aimed at reducing them. These include mechanization of farm and factory operations, such as mechanized tea harvesting and pruning, factory automation, integrated soil fertility management and rationalized fertilizer use and adoption of clones suitable for MTH. Development, evaluation and adoption of such cost-saving technologies will improve the competitiveness of the Kenya tea industry.

Previous studies have revealed that strategies such as mechanized tea harvesting and pruning, factory automation, integrated soil fertility management, rationalized fertilizer use and adoption of clones suitable for mechanized tea harvesting would improve competitiveness of the Kenya tea industry in general. However, this study sought to specifically establish how ability to mobilize funds affects the continuous improvement of the small tea enterprises to ensure their sustainability. If the loans are obtained when they are required this would help the small enterprises purchase the required inputs in time (Madiha *et* al., 2013). Banerjee (2008), argues that production technologies follow a step function and that for the SMEs to go to the next level, for example from manual to

automatic production, credit might be needed. Technology would help the small farmer especially with weather forecast and output prediction for better planning and caution.

Mwaura *et* al., (2007), argue that small-scale tea growers in Kenya have subdivided their land as a result of their cultural background where parents have to give a share of land to their children, which has made it difficult for these farmers to have title deeds. They argue that this makes it hard for these farmers to obtain loans from banks since they do not have collateral. Earlier research had looked at how lack of access to loans has hindered the growth of the small enterprises, but little was done on small tea enterprises. This study sought to establish the strategies that the small tea enterprises should adopt to ensure easy access to continuous loans to help them boost their output hence enhance sustainability like table banking and local Sacco movements.

2.9.2 Effects of Financial Record Management

According to the Tea Research Foundation of Kenya Strategic Plan (2010 – 2015), though the tea industry in Kenya has had enviable growth record, returns from the enterprise have declined due to stagnating unit prices of processed tea and increasing production costs. This study attempts to establish the strategies of ensuring that small tea enterprises improve their ability to maintain and manage their financial records, thus to track the small tea enterprise's financial performance in order to make informed decisions. Available empirical literature had little information on financial record keeping by small tea entrepreneurs.

2.10 Effects of Resources

According to Owuor (2000), Mc Mahon (2001), Mwaura (2007), Wal (2008), Kagira (2012) and Kaberi (2013); resources that were at the disposal of the small tea farmers

were limited such that they could not enable them to get information on the market and change the progression of the enterprise. They argued that estates were able to exit from some of their business areas if the environment was not favorable but this was not usually possible for the SMEs. These studies have looked at the effects of resources in terms of limitation to better options, barrier to exit from unfavorable enterprises and lack of information. Though this is important a look into the strategies to equip the small tea entrepreneur would be necessary. This study sought to establish the strategies of making the required resources available to the small tea enterprises in order to ensure sustainability especially of increased quality output of green tea. This is the only area the farmer can manipulate in the whole of tea supply chain.

2.10.1 Effects of Availability of Competent Labour Force

Tea Research Institute (2010), pointed out that small-scale tea holders mostly use family members as the source of their labour but noted that a number of small-scale tea farmers with more than 10 acres do experience the challenge of labour shortage. They further found that when these farmers cannot get labour to pick their tea, the bushes overgrow, leading to losses. TRI (2009), further noted that tea pickers have even gone to an extent of forcing the small tea holders to pay Ksh12 per Kg of green leaf picked, making it very difficult for these farmers to sustain these payments. According to Owuor *et* al., (2008) there is a great contrast between tea growing and other businesses as tea farming requires little investment to start but its labour intensity greatly affects the cost of production. Ratnayake (2012), mentioned that the farmers had complained of the high costs of production, driven mainly by the high costs of labour, thus making the tea sector in Sri Lanka unsustainable.

The cost of producing a kilo of tea in Kenya, though, is higher than in India and Sri Lanka (Ratnayake, 2012).

The smallholder tea farmers use family labour to plant, pick and deliver the green leaf to the collection or buying centres. The smallholder production has been seen as increasingly viable compared to that of large estates because of their lower production costs as a result of using family members to provide labour (Aminul *et* al., 2008). Lack of available and competent labour force in the smallholder tea enterprises has pushed the tea picker's average payment per kilograms from Ksh5 in 2008 to Ksh12 in 2012. This trend of labour shortage had, however, been predicted in 2002 when it was stated that despite the projected tea production expansion in Africa and Far East, Africa was likely to face labour shortage due to the high prevalence of the HIV/AIDS pandemic. The other reason that may have led to labour shortage is the negative perception by young people that being employed in the agricultural sector is not lucrative (Aminul *et* al., 2008).

Other studies such as Mwaura (2007) Kagira *et* al., (2012) and Kariuki (2012) dwelt on unskilled labour in terms of readily available family labour, which reduced production costs and survived on the perception that it would always be there.

Empirical literature suggests that this has not come out so well as a result of urbanization, which has attracted many young people to the cities and towns. This is also due to the negative attitude these young people have towards working in the rural small tea enterprises (Kaberi, 2013). This study sought to assess the current situation and influence of the use of competent labour on the sustainability of small tea enterprises.

2.10.2 Effects of Support from Stakeholders

Thuku, Gachanja, & Obere (2013) noted that when the government used to control the coffee and tea sector through the Ministry of Agriculture, farmers used to be trained on better tea farming practices. He further stated that nowadays, farmers are required to pay for these services which most cannot afford or find no need to. The smallholder tea farmers lack exposure to general farm management practices as well. This agreed with what M'Imwere (1997) noted, that labour costs were very high and substitution of labour with machinery was one way of reducing the costs. He suggested that the small-scale holders should be amalgamated with the larger ones so as to enable them enjoy economies of scale.

Earlier research looked at this parameter in terms of improved output, general farm management, use of machinery and improved quality and technology in tea production generally. They focused mainly on the upper part of the supply chain where stakeholders play a major role in marketing of tea and little empirical literature is available on the lower part of tea supply chain. It is true enough that lowering the cost of production may translate to increased income though often times not necessary so. Green tea production requires intensive labour input and cutting cost on labour could translate into better surplus for the entrepreneur. This study sought to determine how the continuous availability of an affordable and competent labour force and option of use of machines would ensure sustainability of small tea enterprises.

2.11 Effects of Products and Services

Aminul, Ejaz & Ali (2008), in their study of SMEs in Bangladesh, reported that products and services, the way of doing business, management know-how and external

environment are the most significant factors in determining the business success of SMEs. According to the Tea Research Foundation of Kenya Strategic Plan (2010 – 2015) though the tea industry in Kenya has had an enviable record of growth, returns from the enterprises have declined due to stagnating unit prices of processed tea coupled with increasing production costs. This study sought to determine the influence of products and services on sustainability of small tea enterprises.

2.11.1 Effects of Quality of Tea (Products)

Kimenyi (2002), argued that most of the agricultural products in Kenya are sold abroad in form of raw materials. He further added that investment opportunities such as processing and packaging of agricultural products have not been fully exploited, which would help increase profits and bring about employment opportunities beyond the farm. Nyangito (2001) noted that tea whose value has been added could fetch up to six times more income than unpacked tea. Kenyan tea is used to blend lower quality tea from other countries because it is sold in semi-processed form. The smallholders through their processors, KTDA, should shift from production of only black tea and diversify to produce a variety of branded tea products. This would improve farmers' revenue and reduce the poverty levels in the tea growing areas of Kenya (Cheruiyot, 2013). Previous research looked at the effects of value addition in regard to improvement of farmers' revenue, eradication of poverty, increased profit margins and creation of employment opportunities in the general tea industry.

This study sought to establish the strategies that would be adopted to improve the quality of tea in order to enhance sustainability of small-scale tea enterprises.

2.11.2 Effects of Reliability (Services)

Small-scale tea farmers generally sell their green leaf to collectors, plantations or a processor, which makes them price takers. According to Kimenyi (2002), poor information flow, inefficiency in KTDA, poor or compromised farmer representation, mismanagement along the supply chain, poor relationship between farmers and factory management are the key problematic areas in provision of reliable services. Previous empirical literature focused on plantations and the upper part of the tea supply chain and little information on the small tea enterprises is available. This study sought to assess the influence of services such as picking tea and delivering to the buying centres for collection by factories and how they impact on the eventual earnings of the small tea entrepreneur and on the sustainability of small tea enterprises in Kenya.

2.12 Summary of Research gaps

Kagira *et* al., (2012), in their study dealt with sustainable methods of addressing challenges facing the smallholders in the tea sector in Kenya from the whole supply chain perspective. They suggested further study into the sustainability strategies and ways of determining sustainability for the smallholder enterprises and stressed the need for further research in identifying major resources used in green tea production and assess their sustainability. This study sought to assess factors that influence sustainability of small tea enterprises from the lower supply chain (production of green leaf at farm level).

Nyangito (2001), in his contribution on problems ailing the small tea farmer cited the lack of value addition in tea as a commodity. It is sold mainly in its raw form and is used to blend other tea in the world. Here commended further research in the area of value addition for tea, noting that this would improve farmers' income and the product would

remain competitive for a long time. Wal (2008), suggested that the smallholder tea farmer has been ignored for long and recommended further studies where strategies can be developed to include smallholders in decision-making and profit sharing in the tea industry. The study also recommended supply chain analysis and development of strategic plan for KTDA, who are the managers of the smallholder farmers.

Mburu (2008), in his study on smallholder tea farmers recommended further studies in the area of land sub-division, which was threatening survival of smallholders in the tea industry. Kariuki (2012), supported this recommendation by proposing land consolidation and further research in the area. Along with this, Kagira *et* al., (2012), articulated the need for further research in the area of business ownership as a factor that enhances performance in the tea sector where women provide labour in the labour- intensive sector yet they do not own the business or access its income. Mwaura *et* al., (2007), recommended further studies on how experience of doing business enhances productivity in the tea sector. They recommended further studies in order to generate information on causes of poverty among small tea holders and strategies to improve the situation and ensure that smallholder farmers stay in business.

While a lot of empirical literature focused on the upper part of the tea supply chain, very little information exists on strategies focusing specifically on the lower part of the supply chain; namely, production of green leaves by the small tea enterprises. This study focused specifically on the production of green leaf by small tea enterprises and suggested strategies to make them sustainable.

The tea sector in Kenya is currently undergoing a form of crisis with farmers threatening to uproot the crop and move on to other better- paying farm activities. For instance, the

KTDA 2014 mini bonus payout was not realized in many producing regions due to depressed world prices and overproduction of green tea, a situation that leaves the small-scale tea holder vulnerable with very little income that is hardly enough to meet his basic needs. The government, through the county governments, is trying to have a stake in marketing and tea production, which might see the smallholder farmer benefit more. The issue of value addition is also being introduced by the government as witnessed by this researcher while collecting data at Iria-ini Tea Factory in Nyeri County.

Literature reveals a gap that needs to be bridged in the area of small tea enterprises. This study attempts to fill the gaps by assessing the strategies and sustainability of small tea enterprises in Kenya. The study came up with a conceptual framework reflecting the relationship of factors influencing sustainability of small tea enterprises. The sustainability of small tea enterprises is a function of enterprise characteristics, way of doing business, finance, human resource, product and services.

Figure 2.5 depicts the relationship or the association between the dependent variable (sustainability of small tea enterprises) and independent variables (enterprise characteristics, way of doing business, finance, human capital, product and services).

The operational framework (Figure 2.12.1) depicts the association of the independent variables with parameters of measure and their influence on the dependent variable, sustainability of small tea enterprises.

Enterprise characteristics are influenced and measured by years in operation, determined by the age of tea bushes, location of the enterprise and ownership. The way of doing business is influenced and measured by networking and cooperation. Resource (finance) is influenced and measured by ability to mobilize finance from credit institutions and

other financial sources; and keeping of financial records. Resource (human capital) is influenced and measured by availability of competent labour with support from stakeholders. Product and services is influenced and measured by the quality standard set for the tea farmers and the reliable provision of services by the farmers of picking and delivering the green leaf to the factories' buying centres.

It is important to note that the study concentrated on the lower part of tea supply chain mainly because other factors being constant, it remains the only part of the supply chain the farmer or the small tea entrepreneur can manipulate or control to his advantage.

2.12.1 Operational Framework

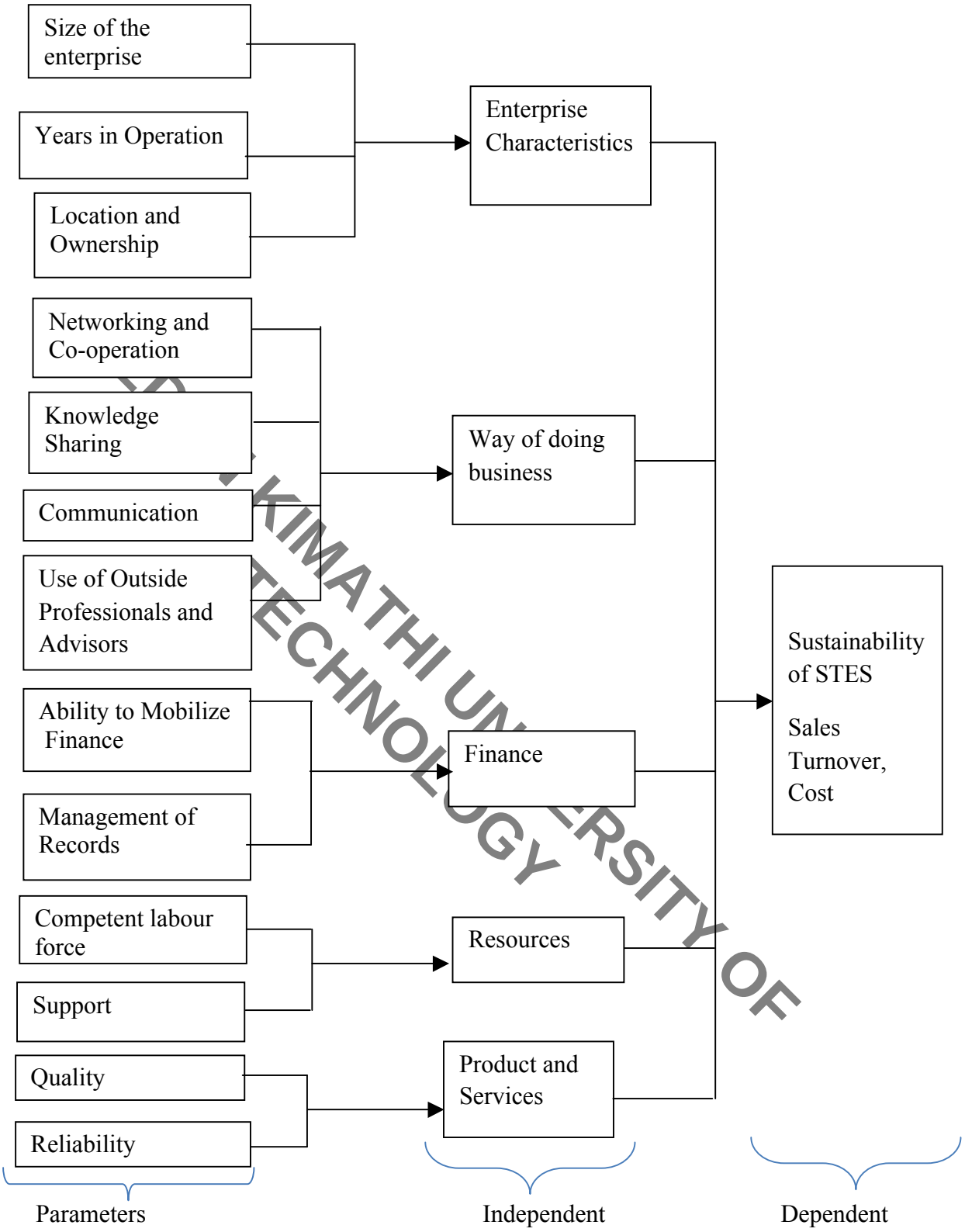


Figure 2.12.1: Operational Framework

Operational framework (Fig. 2.12.1) depicts the association of independent variables with parameters of measure and their influence on the dependent variable; sustainability of small tea enterprises. Enterprise characteristics are influenced and measured by years in operation, which is determined by age of tea bushes, location of the enterprise and ownership. The way of doing business is influenced and measured by networking and cooperation. Resource (finance) is influenced and measured by the ability to mobilize finance from the credit institutions and other financial sources as well as keeping financial records. Resource (human capital) is influenced and measured by availability of competent labour with support from stakeholders. Production and services is influenced and measured by the quality standard set for the tea farmers and the reliable provision of services by the farmers of picking and delivering the green leaf to the factories (buying centres).

Table 2.5 Measurement of the Study's Variables

	Variable Name	Scale and Measurements	Source	Operationalization
Dependent Variable	SMEs Sustainability	Interval	Urban and Naidoo (2012)	Growth in sales turnover, cost.
Independent Variable	Enterprise Characteristics	Interval	Kristiansen, Furuholt and Wahid (2003)	Size of the enterprise Number of years in operation Location Ownership
	Way of doing Business	Interval	Jarillo (1988) and Ireland and Ireland (2001)	Networking Co-operation Knowledge sharing Communicating with partners, Suppliers, employees Use of outside professionals and advisors
	Finance	Interval	Swierczek and Ha (2003) and Kristiansen, Furuholt and Wahid (2003)	Ability to mobilize finance and Management Records
	Resources	Interval	Swierczek and Ha (2003) and Kristiansen, Furuholt and Wahid (2003)	Availability of competent labour force Support
	Product and services	Interval	Wiklund (1998), and Ireland et al., (2001)	Quality and Reliability

2.13 Conceptual and Operational Framework

2.13.1 Conceptual Framework

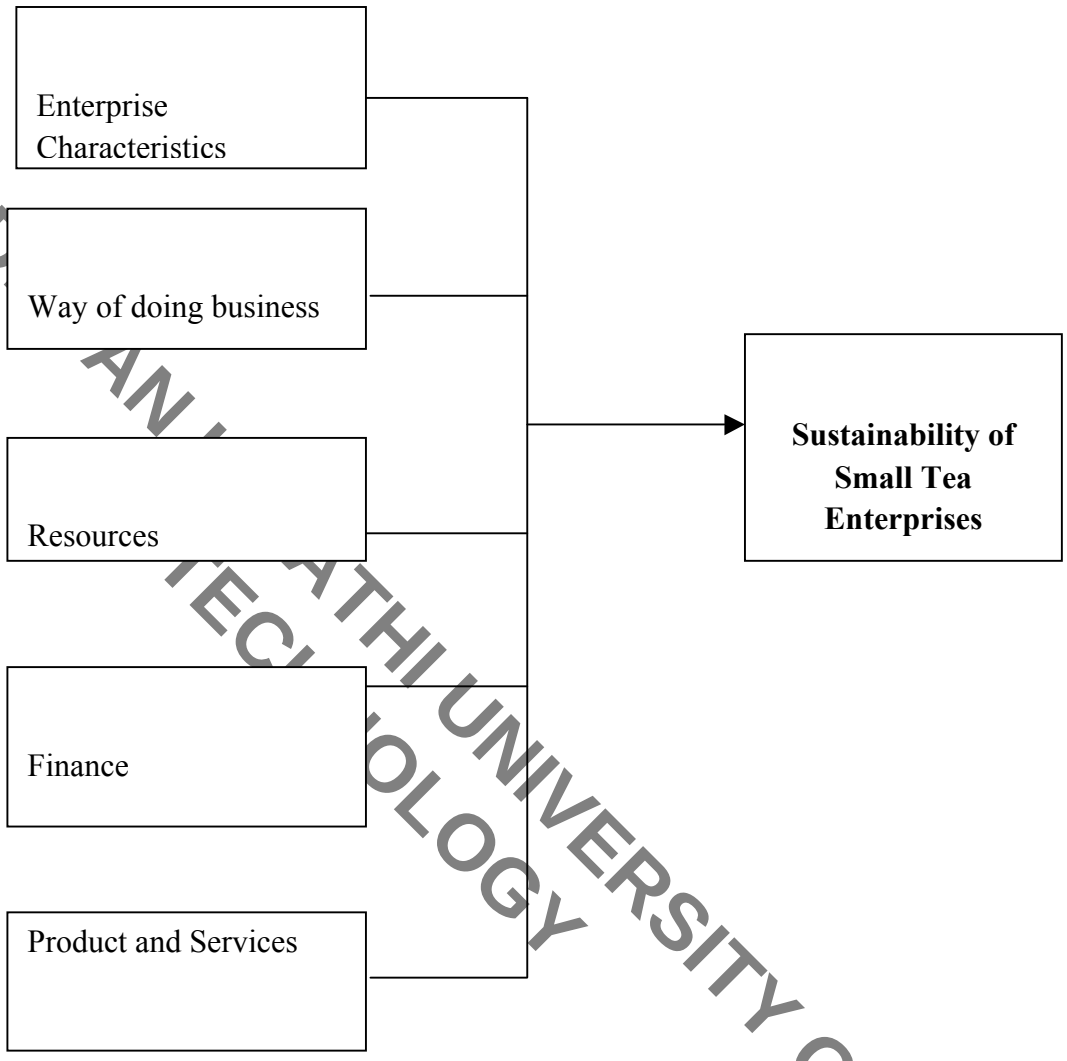


Figure 2.13.1: The Conceptual Framework

The Figure 2.13.1 (conceptual framework) above depicts the relationship or the association between the dependent variable (sustainability of small tea enterprises) and the dependent variables (enterprise characteristics, way of doing business, finance, human capital and products and services).

2.14 Summary of the Literature Review

From the research findings, the factors affecting SME business success used the following categories: SMEs characteristics, management and know-how, products and services, customers and markets, way of doing business and co-operation, resources and finance, strategy and external environment (Chittithaworn *et* al., 2011). However, the researcher decided to dwell on only five factors, namely; characteristics of enterprise (STEs), way of doing business, finance, resource, and products and services. These factors were considered for the theoretical framework of this study based on their suitability within the Kenyan context. The study considered sustainability of STEs to be the dependent variable while the independent variables are; characteristics of enterprise (STEs), way of doing business, finance, resource and products and services (Chittithaworn *et* al., 2011).

Mwaura *et* al., (2007), recommended further studies in order to generate information on causes of poverty among small tea holders, and strategies to improve the situation in ensuring that smallholder farmers stay in business. Literature revealed gaps that needed to be bridged in the area of small tea enterprises. The study attempted to fill the gaps by suggesting the strategies for sustainability of small tea enterprises. Previous research including Wal (2008), Chittithaworn *et* al., (2011), Onduru (2012) and Kagira *et* al., (2012) had looked at the effects of value addition in regard to improvement of farmers' revenue, eradication of poverty, increased profit margins and creation of employment opportunities both in the smallholder sector and plantations in the tea industry. This study, however, suggested the strategies that would be adopted to improve the quality of tea in order to enhance sustainability of small tea enterprises.

Other studies done by Evans and Leighton (1990), Mwaura (2007), Berner *et* al., (2008), Wal (2008) Mburu (2008) and Kariuki (2012), dwelt on unskilled labour in reference to readily available family labour, which reduced production costs and survived on the perception that it would always be there. Literature reveals that this is not sustainable as a result of rural-urban migration, which has attracted many young people to the cities (Kagira *et* al., 2012). Earlier research looked at this parameter in terms of improved output, general farm management, mechanization, improved quality and technology in tea production. This study sought to determine how the continuous provision of affordable competent labour force to small tea enterprises would ensure sustainability of these enterprises.

Earlier research by Wal (2008); Sylvie & Agndal (2008); Chittithaworn (2011); Onduru (2012); Kagira *et* al., (2012); Cheruiyot (2013); and had looked at the impact of ways of doing business and networks in regard to business success, strategic positioning, focus on core business, entering international markets, reducing transaction costs, learning new skills and coping positively with rapid technological changes in the tea sector. However, this study sought to incorporate all these fundamental areas and their impact to continuous improvement of small tea enterprises and especially managing them as businesses.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter entails the philosophy of the study, research design, generation of target population, sampling design, data collection methods, data analysis, limitations of study and ethical considerations.

3.2 Philosophy of the Study

Observation from daily encounter with tea farmers, raised the researcher curiosity as to why they hold on to enterprises that seemed not to support them meet their daily sustenance. Their household goods and food needs had indications that they were living in poverty contrary the popular believe that those in tea enterprises earn a decent life from the earnings they get from their tea enterprises. The researcher looked for theories to explain the above phenomenon and found out that they were several theories that explained entrepreneurship but to the situation at hand. The theories already presented in literature had a bare focus on small tea entrepreneur and testing these theories in the Kenyan context was paramount. Fundamental question was why would people hold on to businesses that do not make profit and continually drains whatever wealth of the person? Would the theories in question fit in our Kenyan context here and now? Why do most of the start- ups enterprises fail at such a high rate? Could it be that we do not the same meaning for small and medium enterprises with the rest of the developed world?

There were no sufficient answers to these questions and an inquiry into the state of affairs of small tea enterprises in Kenya necessitated a research that could contribute to finding

answers to these grey areas. There was no theory from literature that explained small tea farming in Kenya.

3.3 Research Design

The study was a cross-sectional survey, quantitative and descriptive in design. The three main purposes of the study are to describe, explain and validate findings. Description emerges following creative exploration and serves to organise the findings in order to fit them with explanations, and then test or validate those explanations (Krathwohl, 1993). The survey was carried out in nine Counties (Kisii, Kericho, Bomet, Kiambu, Muranga, Nyeri, Meru, Kirinyaga and Kakamega) in Kenya with high concentration of small tea entrepreneurs using the seven regions set by KTDA. The decision was based on the tea growing regions in Kenya. The study collected data from 14 selected factories from four tea-growing regions based on the KTDA cluster. Adopting KTDA high and low bonus pay list based on the factories from the seven tea growing zones explains how the study arrived at the 14 factories. This made the classification simple and less time-consuming. The fact that KTDA uses the same strata of factories strengthens the choice of the classification.

The study used a quantitative method to collect data, which was then quantified using statistical analysis in order to design the relationship between the variables of the study and to draw generalized association. Self-administered questionnaires were used for primary data collection. Journals, books and Internet were used for secondary data collection. A survey enabled the researcher to obtain data about practices, situations or views at one point in time through questionnaires.

The use of survey permitted the researcher to study more variables at one time than was typically possible in laboratory or field experiments, whilst data can be collected about real tea farming environments.

3.4 Target Population

The target population was 420,000 small-scale tea farmers who are members of Kenya Tea Development Agency spread throughout tea-growing regions in the country. This is the KTDA documented estimate of small tea holders in Kenya (KTDA, 2012). The population was thought to be rich in information and covered adequately the variables involved in the study. The study was selected on the strength that it involves a careful and complete analysis on entire activity to be studied and emphasizes depth rather than the breadth of a study Bartlett, Kotrik & Higgins (2001); Mugenda & Mugenda (2003); Saunders *et* al., (2009); Kelly, Clark, Brown, & Sitzia (2013), recommend that the study population should be fully representational as in census if possible. Often, constraints like time, finance and geographical spread of the population make it difficult to engage the whole population in the study hence a representational sample can be used. They recommended that the method used should enable the sample to be generalized about the population of the study. The study's target population constituted of small tea entrepreneurs in Kenya, managed by KTDA in their respective factories since they are organized in groups with common production, processing, marketing and management characteristics.

3.5 Sampling Design

The study collected data using a questionnaire instrument from a mix of stratified and simple random samples by involving small farmers from select factories following the KTDA regional classification.

The regions were stratified in order to have a better geographical representation.

3.5.1 Sampling Frame

A sample frame is a list that includes every member of the population from which subjects are to be taken. A sampling frame is also an objective list of the population from which the researcher can make a selection. The basic idea of sampling is selecting some of the elements in a population so that the researcher may draw conclusions about the entire population. A sampling frame should be a complete and correct list of population members only, bearing in mind that larger samples outperform small ones due to the strength of the sample. "The larger the sample size, the better" as one is assured of sufficient representation of the population as recommended and emphasized by Cooper and Schindler (2003).

Bartlett *et* al., (2001) argue that there is no defined sample frame and literature does not provide a definite framework. They suggest that the research should frame the sample in such a way that the sample frame achieves a representative character for the population of study. A fact supported by Kelly *et* al., (2013) that the sampling frame should not just be limited to time and financial constraints but the researcher should consider a frame that will give a sample good enough to strengthen the statistics during analysis phase and be representative of the population of the study.

Mugenda & Mugenda (2003) suggest that where resources are not a constraint a researcher should take as big a sample size as possible. This guides the sample framework.

The unit of this study constituted entrepreneurs with not more than two acres of land under tea or not more than six thousand tea bushes who are members of KTDA, as this defines the small tea entrepreneur in this study.

3.5.2 Sampling Technique

According to Cooper and Schindler (2003), sampling is done in order to lower costs, increase the speed of data collection, greater accuracy of results and availability of population elements. The study used stratified samples drawn from the seven regions using the KTDA high-low bonus payment in 2012/2013. The sampled factories based on bonus payment gives a list of farmers with two acres and below. Using randomized sampling, by the help of Excel software, the list was run to give the specific farmer with their membership numbers and names. A sample of 40 farmers from every factory was employed, with each farmer traced right to the farm.

3.5.3 Sample Size

The study adopted Yamane (1967) simplified formula to calculate sample size using the equation

$$n = \frac{N}{1+N\,(e)\,2}$$

A 95% confidence level and p= 0.05was assumed for Equation where n is the sample size, N is the population size and e is the level of precision.

$$n = \frac{420{,}000}{1+420000\ (.05)\ 2}$$

n = 399.99 = 400

Kish (1965), suggests that sample size is often increased by 30 per cent to compensate for non-response. He also posits that the number of administered surveys or planned interviews can be substantially larger than the number required for a desired level of confidence and precision.

Hence n = 399.99 = 400 +400(0.30)=400+120

n = 520(Sample Size for ±5% Precision level, where Confidence Level is 95% and p=0.05)

Barlett *et* al., (2001) argue that sample size depends on many factors, such as the number of variables in the study, the type of research design, the methods of data analysis and size of the accessible population. They go ahead to argue that "One of the very advantage of quantitative methods is the ability to use smaller groups of population to make inferences about larger groups that would be prohibitively expensive to study". When determining the sample size, it is vital to put measures to deal with non-response. Mugenda & Mugenda (2003) suggest that where time and resources allow, a researcher should take as big a sample size as possible. The study took advantage of available time and resources to interview a little more respondent above the minimum 520 as reflected above to a sample size of 680.

3.6 Data Collection Methods

A self-designed questionnaire was used to gather the research data. The questionnaire

consisted of two parts: The first comprised demographic characteristics and profile information of the respondents; the second consisted of questions which were intended to measure factors of small tea enterprises' sustainability using the five-point Likert scale; from "Strongly Agree" to "Strongly Disagree." The factors considered were enterprise characteristics, way of doing business, finance, resources, product and services. In the third part, the respondents were asked to score the importance of the perceived small enterprises' sustainability. A five-point Likert scale was used in this part, from "Strongly Agree" to "Strongly Disagree." This was used to generate quantitative data.

A questionnaire was used to collect primary data by way of interviews. The respondents targeted were farmers who have run small tea enterprises for the last 15years and are involved in day-to-day running of these businesses. The data collection instrument was developed and organized on the basis of the specific study variables to ensure relevance to the research problem. The structure of the questionnaire was clear, easy to understand and straight forward to ensure that the respondents answered the questions with ease.

The questionnaires were administered to randomly sampled farmers, from a sample size of 680 farmers. The study took due care to make sure the respondents understood the questions well enough to answer as correctly as possible. Random supervision was carried out among the assistants during the interview process. At data capture, the study had quality control measures to ensure data accuracy and effective process in handling. These included statistical checks to make sure that correct answers for open-ended questions were entered and that questionnaires were well structured.

3.7 Data Analysis

The data gathered was analyzed and presented using descriptive statistics. The checks also ensured that correct and accurate data was captured into its respective or designated design format. Preliminary statistical checks were carried out on frequencies on obligatory questions. Exportation of data was done using tables and data sheets to validate that all the entries were properly captured.

Pearson's correlation was used to assess the magnitude of relationship and associations. The study used the p-value statistic in test of alternative hypothesis and separation of mean. Descriptive statistics used included frequencies, measures of central tendencies and measures of dispersion (standard deviation, range or variance). Inferential statistics was used in measurement of significance of the relationships and differences between or among the variables. Multiple regression analysis was used as the study had multiple variables to determine whether the five independent variables have any significant effect towards sustainability of STEs in Kenya. Cronbach's alpha values were computed to assess the internal consistency aspect of reliability of the multi-item scales measuring the study's variables. The Statistical Package for Social Sciences (SPSS) version 16 was employed to analyze the data.

3.7.1 Regression Model

The study used multiple regression method of data analysis, which the study found to be appropriate whenever a quantitative variable (the dependent or criterion variable) is to be examined in relationship to any other factors (expressed as independent or predictor variables). The regression model sought to find out the relationship between the variables and predict future outcome.

$\check{y} = \beta_0 + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \beta_4 X_4 + \beta_5 X_5 \ldots\ldots\ldots \varepsilon$

Where: $\check{y}$ = Estimated value of STE's sustainability

β_0 = Intercept

X_1 = Enterprise Characteristics

β_1 = Gradient / Change in X_1

X_2= Way of Doing Business

β_2 = Gradient / Change in X_2

X_3 = Finance (Capital)

β_3 = Gradient / Change in X_3

X_4= Resources (Human Capital)

β_4 = Gradient / Change in X_4

X_5= Product and Services

β_5 = Gradient / Change in X_5

ε = error variable (factors outside the regression model)

The regression model sought to find out the relationship between the variables and predict future outcome at 95% confidence level ($\alpha = 0.05$)

3.7.2 Expected Results

The expected result will seek to indicate the type of relationships existing among the variables of the study and their significance in order to answer the research questions and thus meet the research objectives and address the research problem.

3.7.3 Expected Outcome

The study sought to answer the research questions and fill in the gaps identified in the study's problem statement. At the same time, the result of the study would form a platform upon which further study can be carried out and the results be used to predict future outcomes.

3.8 Ethical Consideration

The study took into consideration key ethical issues to protect the study participants. The principle of voluntary participation was put in place, related to the notion of informed consent where the participants were informed of the objectives of the research exercise with due politeness. Participants' privacy, dignity, well-being and freedom were well observed, especially ensuring participants' willingness to answer questions touching on private or family matters such as finance. The participants were not put in a situation where they might be at risk of harm (physical, emotional, stress) as a result of their participation. Care was taken not to probe the participants beyond their freedom. The principle of guaranteed confidentiality and anonymity was implemented, as participants remained anonymous throughout the study.

Data was kept safely and confidentially throughout the research process. The research involved only adults who are owners of the small tea enterprises.

3.9 Summary of Methodology

The study employed descriptive research design. Descriptive survey was carried out in collecting information. Self-administered questionnaires and in-depth interviews were carried out on small tea entrepreneurs sampled from the population of 420,000 farmers.

The main strategy used was stratified sampling. The research methods included use of self-administered questionnaires. The study took care of all ethical issues.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION OF RESULTS

4.1: Introduction and Key Findings

The chapter gives an analysis of the processed output from data collected in the field and articulates key findings from the study. Inferential and descriptive statistics have been used in the presentation of results. The results presented address the objective of the study, which was to assess the factors influencing the sustainability of small tea entrepreneurs in Kenya and suggest strategies to address them. The other objectives that the presentation addressed were more specific and include:

i) Assessing the influence of enterprise characteristics on sustainability of small tea enterprises in Kenya and test hypothesis.

ii) Analyzing the influence of way of doing business on sustainability of small tea enterprises in Kenya and test hypothesis.

iii) Exploring the relationship between finance and sustainability in small tea enterprises in Kenya and test hypothesis.

iv) Examining the relationship between resources and sustainability of small tea enterprises in Kenya and test hypothesis.

v) Examining the influence of product and services on sustainability in small tea enterprises in Kenya and test hypothesis.

Respondents' characteristics data is given. This is followed by data analysis on influence of enterprise characteristics on sustainability of small tea enterprises; effects of the way of doing business on sustainability of small tea enterprises; role of finance on the

sustainability of small tea enterprises; extent to which resources influence sustainability of small tea enterprises; and finally, the effects of products and services on sustainability of small tea enterprises. The results of Pearson correlation, interpretation of regression model and summary of the chapter is presented. Factor analysis was vital to reduce the non-significant variable.

4.1.1 Pilot Study Results

The pilot study objectives were to test whether the questionnaires were simple and unambiguous and to measure the reliability of scale. The result of the pilot where 40small-scalefarmers (85 per cent) participated indicated that the questions were clear and understandable. Upon being asked areas that needed improvement, the following were suggested:

i) Use of simple grammar.
ii) Utilization of straightforward questions.

These considerations were put in place in the final research tool. Test of reliability was conducted and the results indicated α coefficient of variables as shown below:

Table 4.1 Cronbach's Alpha Results for Pilot Study

Variable	1st Score	2nd Score
Enterprise Characteristics	0.85	0.87
Way of doing business	0.79	0.81
Finance	0.72	0.77
Resources	0.81	0.84
Products and services	0.69	0.74
External Environment	0.47	-

Source: Primary data (2013)

The first score indicates the first test with all variables in place while the second score indicates coefficient upon deleting the external environment variable.

When this was done, reliability values improved. The decision to drop the external environment variable was because it failed to meet the criteria as it had 0.47, which was below the acceptable level. Usually a value of 0.6 is a suggested minimum (Tabachnick & Fidel, 2001).

4.1.2 Key Findings

From the study findings, 46 per cent of tea farmers interviewed were over 38 years of age, which indicated that there was less participation of young farmers who are below 28 years (17 per cent). The study found that very few young people are interested in tea farming and this could affect its future trend in Kenya. This demonstrated a gap of mentorship and guidance for the youth. It also implied that the enterprise might be associated with elderly people hence affecting transfer of new technologies and practices. Male farmers remained in charge of decisions on doing business, resources and finances contributing to lower participation of women and other family members.

The cultural practice of land subdivision is affecting the small tea enterprises and threatens sustainability of small tea enterprises. The meager earnings from the little output after subdivision may not be enough to meet the costs of operations and production; hence farmers are opting out of the tea farming to alternative agri-business. Small tea enterprises are sustainable only at a given acreage level, which means that the smaller the acreage, the less the overall output. Farmers with 0.1 acres to 0.5 acres (52 per cent) had little income such that when distributed to the household, they live on less than a dollar a day.

Small farm size leads to low leaf picking, negatively affecting production and labour force. This implies that most of the small tea farmers have less than an acre piece of land under tea bushes. This negatively impacts on the tea outputs from the farm since it makes it very difficult for them to break even as they do not enjoy the economies of scale. This also makes the operational costs very high thus reducing the amount of disposable income. Leasing farms for growing tea is becoming a new trend among communities, with 32 per cent advocating for the trend against 210 farmers (60 per cent) who do not lease their farms. The owner of the small farm, upon leasing at a cheaper price, is left with no source of income, aggravating the problem of poverty. From these findings, it is evident that enterprise characteristics influence sustainability of small tea enterprises in Kenya.

From the study findings, 493 farmers (76 per cent) were involved in a high level of co-operation. It also found out that 534 farmers (82 per cent) have continued to communicate with partners, suppliers, customers and employees. Co-operation with other players in the tea sector is a major role in maximizing the output of the small tea farmers. It enhances growth, information sharing, expansion, innovation and research on the areas affecting small tea enterprises. The study noted that 72 per cent of the farmers shared information freely; mainly about labourers' pay, the time the truck collected the green leaf, factory meetings, farmers' field schools, pruning recommendations, picking rounds and fertilizer application (amount to apply and when).

The farmers had better green tea output compared to those who were undecided on network and knowledge sharing. Good planning, therefore, contributes to maximized profits and farmers' confidence in the enterprise.

The study found that 493 farmers (76 per cent) were able to improve their tea production as they accessed continuous training and improvement. This implies that way of doing business is a determining factor on sustainability of small tea enterprises in Kenya. The study findings also indicate that 57.2 per cent of the respondents interviewed were in agreement that capital is a necessity for the growth of the small tea sector. They argued that if they had enough capital they would be able to improve their tea farms through applying fertilizer and manure as required. From the findings, 500 farmers (76 per cent) were able to search for alternative sources of finance given the lower income and shortage of products friendly to their needs. The cost of credit has become very expensive. This is a challenge as noted by 259 farmers (40 per cent) in the study. This affects the timely tea inputs hence affecting the output and eventual earnings of the farmer. The results of these findings imply that finance is a key component in sustainability of small tea enterprises in Kenya.

From the findings, 38 per cent of the farmers interviewed were able to access competent labour for tea picking, which ensured that the tea picked is of the right quality so that less wastage is realized, especially from spoilt or rejected green leaf at the buying centres. It also found that 52.9 per cent had difficulties in accessing competent labour, or it was too expensive for them to afford. The study found that 312 farmers (48 per cent) who were interviewed had access to support from professionals.

This implies that farmers could increase tea output by sound management of their tea farms, good crop husbandry and cost management, especially on the labour component. From these findings, the implication is that there is a relationship between resources (human capital) and sustainability of small tea enterprises in Kenya. There is still a lot of unexploited potential in this key sector that provides many people with their livelihood, especially in maximizing production of tea in small tea enterprises. This chapter examines the output from the unprocessed data fed into SPSS and presents the results in frequency tables.

The implication of the study finding calls for a paradigm shift in the way farmers handle their tea holdings. It implies that they manage their tea holdings like business enterprises. The next best alternatives the farmers forego in order to grow tea must be considered if the farmer is still to remain with the option of growing it. It is economically justifiable to remain in tea growing as long as farming tea has low opportunity cost. The strategies suggested would need to be applied in order to observe their effect on a longitudinal dimension, an area suggested for further research. The policy makers and KTDA in particular would need to critically consider the economically viable size of small tea holdings and put a minimum limit. The model can help to predict the sustainability of small tea enterprises at 94 per cent. Other factors not included in the model could account for the remaining six per cent. This is the extent the model may not cover, or its limitation. The government needs to join hands and support the small tea entrepreneur with laws that promote their well being instead of eliminating the small tea holder. Most farmers would pull out of tea farming to other lucrative non-tea land use. This would be the end result if the situation remains the way it is currently.

4.1.3 Data Return Rate

The study distributed and administered six hundred and eighty (680) questionnaires. Out of these, a total of six hundred and sixty (660) questionnaires were returned and ten (10) were rejected for failing the inclusion criterion. This translated to a response rate of 97 per cent that was considered acceptable. Six hundred and fifty (650) questionnaires were used for data analysis. According to Mugenda & Mugenda (2003) a response rate of 50 per cent is considered adequate for research purposes. Table 4:1 depicts the return rate:

Table 4.2 Study's Data Return Rate

Target population	680
Returned	660
Rejected	10
Examined	650

Source: Primary data (2013)

4.2 Respondents' Characteristics

4.2.1: Respondents' Characteristics by Age

Table 4.3 below indicates that 45 per cent of participants were over 37 years. Notable findings indicated that, significantly, there was lower participation by young farmers (17.1 per cent) who were below 27 years, demonstrating a gap in regard to motivating the youth. This would be achieved by enhancing an enabling environment such as incentives, which would attract young people to the tea enterprises as a source of finance and employment. There is a strong perception that the enterprise may be associated with elderly people, affecting transfer of new technologies and practices.

Table 4.3 below represents the respondents who were interviewed disaggregated by age. It shows that only 17.1 per cent of the respondents were between 18 – 27 years of age.

Table 4.3: Frequency Statistics of Respondents' Characteristic by Age

	Frequency	%	Valid %	Cumulative %
	13	2.0	2.0	2.0
18-27	111	17.1	17.1	19.1
28-37	227	34.9	34.9	54.0
38-47	195	30.0	30.0	84.0
Over 47	104	16.0	16.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

4.2.2 Respondents' Characteristics by Gender

The findings in table 4.4below indicate that over the half of the respondents were male (58 per cent), while female respondents accounted for 42 per cent. This could imply that male farmers are in charge of decisions on doing business, resources and finances and ownership. A factor that was evident in financial details of the farmers as men mainly held tea accounts in the banks. In cases where the woman held account she consulted with the male head of the family before spending a cent of the income.

Table 4.4: Frequency Statistics of Respondents Characteristics' by Gender

	Frequency	%	Valid %	Cumulative %
Male	377	58.0	58.0	58.0
Female	273	42.0	42.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

4.2.3 Respondents' Characteristics by Household Size

The study findings summarized in Table 4.5 below suggest that on average most of the respondents' households were made of 6-10 members, which was 50 per cent. This implies that most of the small tea growers have more than four children.

Table 4.5: Frequency Statistics of Respondents' Characteristics by Household Size

	Frequency	%	Valid %	Cumulative %
1-5	267	41.1	41.1	41.1
6-10	331	50.9	50.9	92.0
11-15	52	8.0	8.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

The results imply that most of the households were made up of more than six members, which exacerbated the problem of getting enough to feed the family from the tea enterprises. It also negatively impacted on the level of education because most of the small tea farmers could not afford to educate their children beyond the level of high school.

4.2.4 Respondents' Characteristics by Marital Status

Study findings indicate that 78 per cent of the respondents interviewed were married. Those who were single were represented by 16 per cent while the remaining six per cent comprised of widowers and the widowed (Table 4.6).

Table 4.6 Frequency Statistics of Respondents' Characteristics by Marital Status

	Frequency	%	Valid %	Cumulative %
Single	104	16.0	16.0	16.0
Married	507	78.0	78.0	94.0
Widower	32	4.9	4.9	98.9
Widow	7	1.1	1.1	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

The results imply that most of the small tea farmers are people with families who depend on them and that the young people who are single have abandoned tea enterprises to other more beneficial avenues.

4.2.5 Respondents' Frequency Statistics by Education Level

Notable findings indicate that 58 per cent of the respondents had secondary school level of education. Respondents with non-formal education were 18 per cent (Table 4.7)

Table 4.7 Frequency Statistics of Respondents' Characteristics by Education Level

	Frequency	%	Valid %	Cumulative %
Non-formal	117	18.0	18.0	18.0
Primary	26	4.0	4.0	22.0
Secondary	377	58.0	58.0	80.0
Tertiary	91	14.0	14.0	94.0
University	39	6.0	6.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

From the respondents interviewed, only six per cent had university level education. It is even more critical to note that 18 per cent of the respondents had non-formal education. This implies that most of the small tea farmers could not afford to educate their children to the higher levels due to lack of adequate finances. As earlier indicated in Table 4.5, most of the households had more than six members making it more difficult to give the children quality education due to the cost burden.

4.2.6 Respondents' Frequency Statistics by level of Income

Majority of the respondents (54 per cent) had a monthly income of Ksh10, 000 compared to six per cent who were the highest monthly income earners with over Ksh40, 000 (Table 4.8).

Table 4.8: Frequency Ranking of Respondents' Characteristics by Level of Income

	Frequency	%	Valid %	Cumulative %
<10000	357	54.9	54.9	54.9
10001-20000	117	18.0	18.0	72.9
20001-30000	45	6.9	6.9	79.8
30001-40000	92	14.2	14.2	94.0
>40000	39	6.0	6.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

From these results, it is clear that 72.9 per cent of the farmers earned below Ksh20, 000 per year from the tea. If these returns were further subdivided into months, it clearly shows that these farmers are not able to meet the expenses incurred as a result of tea farming.

4.3 Analysis of Descriptive Statistics

4.3.1 Results on the Small Tea Enterprises' Sustainability

Tea enterprises have been generating a lot of revenue and changing livelihoods for communities. This ensures the farmers continue to farm tea by choice. The farmer employs every possible way to get maximum output from their farms (Table 4.9).

Table 4.9: Frequency Ranking of Sustainability of Small Tea Enterprises

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	169	26.0	26.0	26.0
Disagree	78	12.0	12.0	38.0
Neither	123	18.9	18.9	56.9
Agree	195	30.0	30.0	86.9
Strongly Agree	85	13.1	13.1	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

The study shows that 19 per cent of respondents are not sure whether their enterprises could support their income needs while38 percent do not agree that they have a sales turnover that can sustain them in their locality.

Coordinated effort is needed to safeguard 43 per cent of farmers who have achieved adequate sales turnover in their farms, against 57 per cent, who do not achieve the same, so as to provide them with adequate information and strengthen their capacity to improve their sales. Farmers need to be made aware of the opportunity cost of farming tea. They should be farmers by choice not circumstantial farmers.

4.3.2 Enterprise Characteristics as a Factor of Sustainability

The enterprise characteristics entail the size of the tea farm. The number of tea bushes is significant in determining the quantity of tea produced. The age of tea bushes equally is significant in the sense that old tea bushes are likely to produce fewer amounts of green leaves than young tea bushes. The years the farmers have been in business had influence on the quantity and quality of green tea produced mainly because of experience of the farmer.

4.3.2.1 Size of the Tea Enterprise (farm) as a Factor of Enterprise Characteristics

This study ascertained that 52 per cent of farmers owned between 0.1 to 0.5 acres of land. It also found that 19.1 per cent held 0.6 to 1 acres under tea while 22 per cent held 1.1 to 1.5 acres. The study confirms that only 6.9 per cent hold 1.6 to 2 acres (Table 4.10).

Table 4.10: Frequency Ranking of Sustainability of Small Tea Enterprises

	Frequency	%	Valid %	Cumulative %
0.1-0.5acres	338	52.0	52.0	52.0
0.6-1acres	124	19.1	19.1	71.1
1.1-1.5acres	143	22.0	22.0	93.1
1.6-2acres	45	6.9	6.9	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

This finding shows that most of the small tea farmers have less than an acre of land under tea. The finding also negatively impacts on the tea output from the farm since it makes it very difficult for them to break even as they do not enjoy the economies of scale. It makes the operational costs very high thus reducing the amount of disposable income.

4.3.2.2 Years in Business as a Factor of Enterprise Characteristics

Tea farming requires a considerable amount of experience. A total of 384 respondents (59 per cent) indicated that they had engaged in tea farming for the last 14 years. Only 19 farmers (2.9 per cent) have been in tea farming for 34 years. A total of 65 farmers (10 per cent) have been in tea farming for more than 35 years. The finding demonstrates a likelihood of enhancement of capacity among farmers to ensure they deal with emerging challenges as only 10 per cent have over 35 years' experience in tea farming.

Table 4.11 below depicts the number of years the farmers have been in tea farming:

Table 4.11: Frequency Ranking of Sustainability of Small Tea Enterprise Characteristic Attributes of Years in Business

	Frequency	Percent	Valid Percent	Cumulative Percent
5-14	384	59.1	59.1	59.1
15-24	182	28.0	28.0	87.1
25-34	19	2.9	2.9	90.0
>35	65	10.0	10.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

The implication from the above tabular representation is that 40 per cent of the interviewed respondents have been in tea farming for more than 15 years. This means that their tea bushes are old and this could be a contributing factor to the low output. The old tea bushes need to be replaced with young and mature tea bushes to maximize production.

4.3.2.3 Location and Ownership of the Farm as a Factor of Enterprise Characteristics

The study observed that some farmers whose farms were located near the factory could pick even three rounds per day (eight hours) while those located far from the factory had less time (four hours) to pick their tea. Nevertheless, the study appreciates that 403 farmers (62 per cent) believe that their location has been suitable for business and that they have a competitive advantage as a result of their location.

The Table 4.12 below illustrates the ranking of suitability of location in reference to sustainability of small tea enterprises.

Table 4.12: Frequency Ranking of Sustainability of Small Tea Enterprise Location

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	59	9.1	9.1	9.1
Disagree	175	26.9	26.9	36.0
Neither	13	2.0	2.0	38.0
Agree	318	48.9	48.9	86.9
Strongly Agree	85	13.1	13.1	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

These perceptions are imperative for sustainability of tea farming in the regions as they influence tea output and eventual earnings, access to resources, finance and even the way of doing business given that majority of farmers own farms with very low acreage (0.5 acres). Location plays a major role in sustaining activities of tea enterprises and will always influence costs and income. The study provides a unique finding that 36 per cent of farmers are disadvantaged in terms of the location of their farms.

Lack of transport could prevent harvested green leaf from arriving at the factory in time, contributing to losses and lower morale among farmers. In some cases, the collecting trucks come only once a day, which at times is very early before the farmers are through with picking tea. The Poor road network and hilly topography in some areas was an issue because farmers in these localities were charged more on transport due to high fuel consumption and maintenance costs of trucks collecting the green leaves. This leads to most of their tea getting overgrown hence wasted.

4.3.2.4 Tea Enterprise Ownership as a Factor of Enterprise Characteristics

It is quite encouraging that 513 farmers (79 per cent) wholly own their land and continue influencing proceeds from tea as most of the decisions on the smallholder tea farms are made by the owners. Ownership of land is key factor in determining the access to loans and credit facility. It is used as collateral. Table 4.13 below represents these findings:

Table 4.13: Frequency Ranking of Sustainability of Small Tea Enterprises Ownership

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	33	5.1	5.1	5.1
Disagree	78	12.0	12.0	17.1
Neither	26	4.0	4.0	21.1
Agree	234	36.0	36.0	57.1
Strongly Agree	279	42.9	42.9	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

Sustainability in the enterprise can only be achieved when farmers have the capacity and right to make informed and independent decisions over their farms. This is hugely supported by land ownership among tea enterprises. It is equally important to own land, which is considered as an asset and collateral in case of sourcing of funds from the finance institutions.

Lease of tea farm

The study found that leasing tea farms is slowly becoming a new trend among tea entrepreneurs, with 32 per cent of respondents advocating for the trend against 210 farmers (60 per cent) who do not lease their farms (Table 4.14).

Table 4.14 Frequency Ranking of Sustainability of Small Tea Enterprise by Leaseholds

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	319	49.1	49.1	49.1
Disagree	78	12.0	12.0	61.1
Neither	45	6.9	6.9	68.0
Agree	182	28.0	28.0	96.0
Strongly Agree	26	4.0	4.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

The perception emanates from the fact that many farmers who own small parcels of land have low levels of income or view tea farming as insurance against challenges arising from lack of decent income from other enterprises. Those who lease their farms find it convenient due to stable income from rent. The study notes that efforts need to be put in place to provide farmers with incentives so that they appreciate and safeguard their tea enterprise. This will improve the level of sustainability and development in the tea growing regions. It is imperative to have farmers by choice than circumstantial farmers, who can pull out of the venture with the slightest income attractive venture other than tea.

4.3.3 Way of Doing Business as a Factor of Sustainability

The Way of doing business entails how the farmer plans, coordinates and controls his business .The way he networks is critical in gathering current information on labour and market situation. Cooperating with workers and other farmers in the same business is crucial to the success of his enterprise.

4.3.3.1 Networking and Co-operation as a Factor of Way of Doing Business

From the study, 286 farmers (44 per cent) lacked sufficient capacity to network thereby hampering their bargaining power with financial institutions, tea factories and the

government. It is only 43 per cent of farmers who had the capacity to network with various partners within the tea farms (Table 4.15a).

Table 4.15a: Frequency Ranking of Networking on Sustainability of Small Tea Enterprises

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	208	32.0	32.0	32.0
Disagree	71	10.9	10.9	42.9
Neither	85	13.1	13.1	56.0
Agree	260	40.0	40.0	96.0
Strongly Agree	26	4.0	4.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

This implies that 44 per cent of the farmers embraced the fact that networking with the key players in the tea sector would help them improve their way of doing business. This would also help them to access vital information related to tea farming from the Internet, journals or articles. Networking is important in gathering information about farming activities and schedules of the factories where farmers delivers the green leaves.

Lack of this information may lead a farmer to pick their tea outside the scheduled dates which leads to green leaves wastage and loss. The farmer is left with the option of throwing away the green tea leaves since the factory cannot take in the leaves.

Net working was important as farmers got information of when to attend agricultural meetings or farmers field schools. Free exchange of information on farming schedules, weather updates, fertilizer availability and application, green tea delivery days among others, proved beneficial to the farmers and was highly ranked. The odd adage that information is power cannot be underscored in this regard.

4.3.3.2 Co-operation as a way of doing business

From the respondents interviewed, 76 per cent realize that co-operation with the stakeholders in the tea sector would help them improve their way of doing business (Table 4.15b).

Table 4.15b: Frequency Ranking of Co-operation on Sustainability of Small Tea Enterprises

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	33	5.1	5.1	5.1
Disagree	19	2.9	2.9	8.0
Neither	104	16.0	16.0	24.0
Agree	357	54.9	54.9	78.9
Strongly Agree	137	21.1	21.1	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

Co-operation with other players in the tea sector is a major role in maximizing the output of the small tea farmers. It enhances growth, information sharing, expansion, innovation and research on the areas affecting small tea enterprises. One area of importance was the certification programme going on. Buyers are insistent on traceability, which is done through certifications. Cooperating with tea buyers is vital for the tea to access the markets and fetch good prices.

4.3.3.3 Knowledge Sharing as a Factor of Way of Doing Business

The study noted that 72 per cent of the farmers shared information freely mainly about labourers' pay, the time the truck collected the green leaf, factory meetings, farmers' field schools, pruning recommendations, picking rounds and fertilizer application (amount to

apply and when). The farmers had better green tea output compared to those who were undecided on network and knowledge sharing (Table 4.16).

Table 4.16 Frequency Ranking of Knowledge Sharing on Sustainability of Small Tea Enterprises

	Frequency	%	Valid %	Cumulative Percent%
Disagree	59	9.1	9.1	9.1
Neither	123	18.9	18.9	28.0
Agree	416	64.0	64.0	92.0
Strongly Agree	52	8.0	8.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

Networking and sharing of knowledge help the small tea farmers to not only learn from each other in terms of improvement in skills, but also raises their bargaining power and voice. Sharing of knowledge also helps improve the output, especially knowledge on new superior varieties of tea and good crop husbandry. The study appreciated the fact that farmers' knowledge of when to apply what fertilizer was key to achieving good leaves.

4.3.3.4: Communication as a Factor of Way of Doing Business

The study found that 534 farmers (82.1 per cent) have continued to communicate with partners, suppliers, customers and employees and majority of them are involved in planning within their enterprises. It also noted that 10.9 per cent of the farmers interviewed did not have an idea on how the communication with partners and suppliers would help them to sustain their enterprises, whereas 6.9 per cent of the farmers interviewed disagreed that communication at all levels improves their way of doing business (Table 4.17a).

Table 4.17(a): Frequency Ranking of Communication with Partners

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	26	4.0	4.0	4.0
Disagree	19	2.9	2.9	6.9
Neither	71	10.9	10.9	17.8
Agree	515	79.2	79.2	97.1
Strongly Agree	19	2.9	2.9	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

From the study, 82.9 per cent of the farmers interviewed agreed that they had access to information from the centre managers and clerks which enabled them to act in a timely manner on the issues related to their products. It also noted that 16 per cent of the farmers had no access to any form of communication as a result of their location hence affecting timely actions on their products; for example, delivery (Table 4.17b).

Table 4.17 (b): Frequency Ranking of Accessibility to Communication

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	7	1.1	1.1	1.1
Neither	104	16.0	16.0	17.1
Agree	454	69.8	69.8	86.9
Strongly Agree	85	13.1	13.1	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

Table 4.17 (a) and Table 4.17 (b) above imply that communication with fellow tea farmers and their suppliers was adequate, although this was only applicable to the lower levels. This means that farmers and centre managers were able to communicate but it was very hard for information to flow from the top level; that is, from the directors to the farmers.

Rarely did farmers receive information from the top; for example, on issues to do with prices, bonus and factory expenses. Sometimes decisions are made without them being

involved and at times they get the news from the media. From the study findings, 76 per cent of the respondents agreed that planning is an important aspect in tea farming while 6.9 per cent of the farmers interviewed did not even have an idea of what planning would entail. It also found that 17.1 per cent of the respondents refuted the idea that tea farming would use the component of planning to maximize their outputs (Table 4.17 c).

Table 4.17 (c): Frequency Ranking of Respondent's Planning Ability

	Frequency	%	Valid %	Cumulative %
Disagree	111	17.1	17.1	17.1
Neither	45	6.9	6.9	24.0
Agree	449	69.1	69.1	93.1
Strongly Agree	45	6.9	6.9	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

Good planning contributes to maximized profits and farmers' confidence in the enterprise. Continuous training ensures the farmers keep pace with market requirements. They also learn new production techniques developed from research department. In this study, 493 farmers (76 per cent) will be able to sustain tea production as they access continuous training and improvement within their enterprises.

4.3.3.5: Use of Outside Professionals and Advisors as a Factor of Way of Doing Business

More than half of respondents in the study (58.9 per cent) agree that their capacity has been enhanced through use of field extension officers and other professionals and, as a result, guaranteed higher green leaf output.

The study exemplifies that a lot of effort needs to be employed in the sector as 268 farmers (41.1 per cent) have no access to training and improvement or cannot access professionals or advisors (Table 4.18).

Table 4.18: Frequency Ranking of the Use of Outside Professionals and Advisors

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	156	24.0	24.0	24.0
Disagree	33	5.1	5.1	29.1
Neither	78	12.0	12.0	41.1
Agree	338	52.0	52.0	93.1
Strongly Agree	45	6.9	6.9	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

Tea farming is designated as a potential agricultural venture, feasible enterprise and essential source of income to residents in the targeted regions. Where farmers had access to services of extension workers, soil analysts and weatherman reports, they had high green leaf output than those farmers who could not access these services. For a sustainable smallholder tea sector, it is necessary to have human resources that will enhance tea production through their skills.

4.3.4 Enterprise Finance (capital) as a Factor of Sustainability

From the study, 57.2 per cent of the respondents interviewed were in agreement that capital is a necessity for the growth of the smallholder tea sector. They argued that if they had enough capital they would be able to improve their tea farms through applying fertilizer and manure as required and on time. Out of the interviewed group, 39.8 per cent disagreed that capital would be an issue for sustainable growth in small tea farming. They argued that tea farms do not require management or much attention and that they

depended heavily on rain and weather, meaning that little can be done to improve the output (Table 4.19).

Table 4.19: Frequency Ranking of Financial Ability

	Frequency	%	Valid %	Cumulative
Strongly Disagree	136	20.9	20.9	20.9
Disagree	123	18.9	18.9	39.8
Neither	19	2.9	2.9	42.8
Agree	346	53.2	53.2	96.0
Strongly Agree	26	4.0	4.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

Despite the fact that tea production does not yield a lot of returns, the small-scale farmers are attached to the enterprise because it generates constant income throughout the year unlike the other competing non-tea farm activities. It is also a source of employment to most of them hence they might not mind whatever returns they generate from tea farming activities.

The cost of credit has become very expensive and is considered a challenge as noted by 259 farmers (40 per cent) (Table 4.20). Those farmers who do not own farms found it very difficult to access credit, as they had no collateral.

Table 4.20: Frequency Ranking of Cost of Credit

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	13	2.0	2.0	2.0
Disagree	91	14.0	14.0	16.0
Neither	26	4.0	4.0	20.0
Agree	390	60.0	60.0	80.0
Strongly Agree	130	20.0	20.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

From the study findings, 48 per cent of the farmers agreed that cost of credit was not a challenge to them and had access to funds on time. As a result, they managed their farm operations on time and this as well helped them to improve their production. The study also found out that 42 per cent of the farmers interviewed were in agreement that the cost of credit was a challenge to them hence they could not take loans to improve their farm operations. They equally could not acquire farm inputs on time (Table 4.21).

Table 4.21: Frequency Ranking of Cost of Credit not a Challenge

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	188	28.9	28.9	28.9
Disagree	85	13.1	13.1	42.0
Neither	65	10.0	10.0	52.0
Agree	260	40.0	40.0	92.0
Strongly Agree	52	8.0	8.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

The finding shows that some of the farmers did not have a problem with getting loans from the financial institutions, as cost of credit was not a challenge to them. Most of them never calculated the cost of credit out of ignorance. They could take loans to improve their tea farms without considering the costs of that credit. Some of the farmers were in agreement that the banks charged too much interest on loans hence they opted not to take loans. From the study, 500 (76 per cent) farmers search for alternative sources of finance, given the lower income and shortage of credit products friendly to their needs (Table 4.22)

Table 4.22: Frequency Ranking of Alternative Sources

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	39	6	6	6
Disagree	59	9	9	15
Neither	52	8	8	23
Agree	474	73	73	96
Strongly Agree	26	4	4	100
Total	650	100.0	100.0	

Source: Primary data (2013)

This shows that the smallholder tea farmers do not entirely depend on the earnings from the tea but they also look for other sources of income to enable them meet their daily needs. If these farmers relied on tea earnings only, they would not make ends meet. The study also found that majority (87 per cent) of the respondents kept their financial records (Table 4.23).

Table 4.23: Frequency Ranking of Keeping of Financial Records

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	0	0	0	0
Disagree	0	0	0	0
Neither	19	3	3	3
Agree	442	68	68	71
Strongly Agree	189	29	29	100
Total	650	100.0	100.0	

Source: Primary data (2013)

While it is true that most of the farmers kept their financial records, these were found to be records from the factory and financial institutions only. It was interesting to note that these farmers had retained very old records on their monthly income but did not keep any record on their daily expenditure as well as records of overhead expenses. This is what would have enabled the farmers to compare their income with the expenditure to be able

to calculate the returns from the tea. Record keeping is key when it comes to analyzing the financial performance of the tea enterprise.

4.3.5: Tea Enterprise Resources as a Factor of Sustainability

Resources in this enterprise are significant in achieving quality tea, which gives farmers' maximum benefits and income. Resources are classified as both labour and capital, which are necessary factors in successful green tea production. As noted earlier on, tea farming is an intensive labour activity. Labour was found to have significant influence on green tea production.

4.3.5.1: Competent Labour as a Factor of Resources

From the findings, 38 per cent of the farmers interviewed were able to access competent labour for tea picking, which ensured that the tea picked was of the right quality and there was less wastage especially from spoilt or rejected green leaf at the buying centres. It also found that 52.9 per cent had difficulties in accessing competent labour, or it was too expensive for them to afford (Table 4.24).

Table 4.24: Frequency Ranking of Competent Labour Force

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	208	32.0	32.0	32.0
Disagree	136	20.9	20.9	52.9
Neither	59	9.1	9.1	62.0
Agree	221	34.0	34.0	96.0
Strongly Agree	26	4.0	4.0	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

The finding indicates that there is need for more information to be shared on the importance of tea pickers as farmers complained that the pickers earned more than the owner of the enterprise. Given the limited income that most of the farmers earned, this

was not an incentive to farmers as many were contemplating exiting tea production and embracing horticultural farming that has better income.

4.3.5.2: Support as a Factor of Resources

The study illustrates that 312 farmers (48 per cent) who were interviewed had access to support from professionals. This was in form of training, field days and demonstrations (Table 4.25).

Table 4.25: Frequency Ranking of Training for Improvement

	Frequency	%	Valid %	Cumulative %
Strongly Disagree	78	12.0	12.0	12.0
Disagree	189	29.1	29.1	41.1
Neither	71	10.9	10.9	52.0
Agree	293	45.1	45.1	97.1
Strongly Agree	19	2.9	2.9	100.0
Total	650	100.0	100.0	

Source: Primary data (2013)

The study's finding shows that farmers had access to training through field schools and extension workers. Given that there is need for regular follow-up and capacity to deal with new challenges in the course of tea production, farmers were in agreement that training should be embraced to enable them employ best practices in their tea farms for maximum output and eventual good returns from tea.

Pearson Correlation

Pearson correlation measures the strength of relationships between the study's independent variables and dependent variable (Table 4.26).

Table 4.26: Pearson Correlation

	Y	*X1*	*X2*	*X3*	*X4*	*X5*	
Y	1						
X1	0.878444	1					
X2	0.744595	0.953925	1				
X3	0.692302	0.924958	0.972759	1			
X4	0.772096	0.948931	0.963818	0.913447	1		
X5	0.726487	0.867642	0.844851	0.842786	0.808192	1	

Source: Primary data (2013)

The findings of the study depicted on table 4.28 indicate strong positive relationship between enterprise characteristics (0.87), way of doing business (0.74), finance (0.69), resources or human capital (0.77) and products and services (0.72) and sustainability.

The relationship between enterprise characteristics and sustainability agreed with Frese *et* al., (2007); Wal (2008); Kariuki (2008); and Kagira *et* al., (2012) which the size of the enterprise matters.

The findings of this study agree with Bhowmik (1990); Chiranjeen (1994); and Huque (2007) that the more the years in operation, the lesser the production of the tea bushes, thus necessitating replanting. The findings are in agreement with Kagira et al., (2012); Mwaura *et* al., (2007) but added that the more the years of experience, the more advantageous this would be to the output. Kaberi (2013) found that small tea enterprises improved the well being of the people in India; a view that was contested by this study since in Kenya that might not necessarily be the case.

The findings also concurred with Bracker *et* al., (1986); Ireland et al., (2001); Owuor (2005); Mwaura *et* al., (2007); and Gharakhani et al., (2012) that networking, knowledge

sharing and communication with suppliers, customers and labourers contributed to the success of farms.

The study findings concur with Wahid *et al* (2003), Mwaura *et* al., (2007) Wal (2008), Aminul & Ali (2008) that access to finance through alternative sources and credit increased the output of the farm.

Owuor *et* al., (2012.) had already found that labour contributes to more than 60 per cent of the production cost of green leaf. Aminul & Ali (2008), Ratnayake (2012) had articulated the same where they noted that the cost of labour was more than half of the total cost of production.

The findings of this study agree with Wal (2008) and Kagira *et* al., (2012) that access to competent and affordable labour improves output and eventual earning of small tea enterprises. They noted that human labour costs are very high and recommended substitution with machines as a strategy to solve the problem.

According to Nyangito (2001); Kimenyi (2002); Aminul *et* al., (2008); Kagira *et* al., (2012) value addition would contribute greatly to the eventual earnings of the farmer since the produce would fetch higher income than when sold raw, a fact corroborated by this study's findings. In addition, Wal (2008) noted that poor relationship between farmers and factory management are key problematic areas in provision of reliable services, which results to wastage and loss especially in the process of picking, collection and delivery to the factories.

KMO and Bartlett's Test

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's test of Sphericity were important before factor analysis was carried out. Tabachnick & Fidel (2001) cite Comfrey &Lee's (1992) advice regarding sample size: 50 cases is very poor, 100 is poor, 200 is fair, 300 is good, 500 is very good, and 1,000 or more is excellent. The last one is what has been adopted in this study (Table 4.27).

Table 4.27: KMO and Bartlett's Tests

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.866
Bartlett's Test of Sphericity	Approx. Chi-Square	7.564E3
	Df	15
	Sig.	.000

Source: Primary data (2013)

The KMO measure of Sampling Adequacy varies between 0 and 1, and values closer to 1 are better. Usually a value of 0.6 is a suggested minimum. The KMO value for this study was approximately 0.9, which is above the suggested minimum of 0.6. This study sample was therefore very good for factor analysis procedure as recommended by Tabachnick *et* al., (2001). Bartlett's Test of Sphericity was used to test the null hypothesis that the correlation matrix upon which factor analysis is based is an identity matrix. It is a matrix in which all of the diagonal elements are 1 and all off diagonal elements are 0.

Table 4.29 above shows an approximate Chi-Square value of $7.56x10^3$ Sig =0.00 which led to rejection of the null hypothesis that the Correlation matrix is an identity matrix. The latter is the second requirement, which must be passed prior to carrying out any factor analysis procedure.

Table 4.28(a) below shows communalities:

Table 4.28(a): Communalities

	Initial	Extraction
Enterprise Characteristics	1.000	.992
Resources	1.000	.988
Finances	1.000	.989
Way of doing Business	1.000	.972
Product and service	1.000	.996
Sustainability	1.000	.964

Source: Primary data (2013)

Extraction Method: Principal Component Analysis.

Table 4.30 (a) shows the variation in a single variable with respect to all the other variables put together in the factor analysis. Those factors with higher extraction values mean that their variation is explained to a greater extent by all other factors lumped together. Enterprise characteristics, resources, finances, way of doing business, and product and service are, therefore, the variables whose individual variability is explained to a greater degree by all the others combined. They were suitable for Multiple Linear Regression models for further testing.

Table 4.28(b) Total Variance Explained

Extraction Method: Principal Component Analysis.

Total Variance Explained						
	Initial Eigen values			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.343	89.044	89.044	5.343	89.044	89.044
2	.295	4.924	93.968	.295	4.924	93.968
3	.263	4.386	98.354	.263	4.386	98.354
4	.061	1.022	99.375			
5	.024	.399	99.775			
6	.014	.225	100.000			

Source: Primary data (2013)

The Scree Plot is represented in Figure 4.1 below:

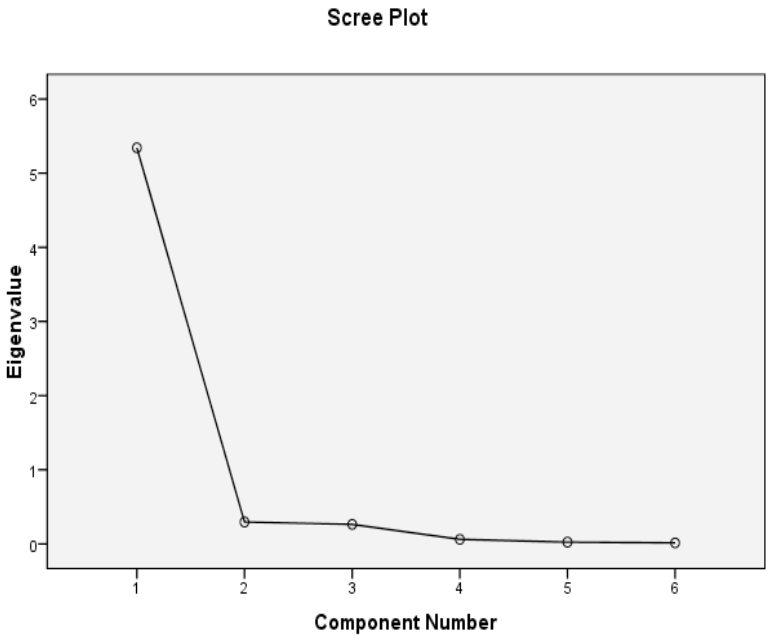


Figure 4.1: A Scree Plot of Eigen Values and Component Number

Source: Primary data (2013)

Factor analysis in this study helped in formulating the hypotheses. The scree plot above forms the decision criteria to drop the variable that had the least or no significance. Since the graph leveled out (became horizontal) at the 5th factor, it means that the fifth factor had little or no significance. This explains why only four variables were taken to regression for testing the power of the instruments used in the study.

Multiple Linear Regression and Hypothesis Testing

Table 4.31 below defines the fitness of the regression model extracted to explain the relationship between the dependent variable and the independent variables. The total number of 650 observations (n) was used in estimating the model.

The overall model fitness was found to be 94 per cent. This measure is given by the adjusted $R^2 = 0.94$ from the table below.

Table 4.29: Regression Statistics

Regression Statistics	
Multiple R	0.97
R Square	0.94
Adjusted R Square	0.94
Standard Error	0.35
Observations	650.00

Source: Primary data (2013)

The implication of the value of R^2 is that, with all other variables kept constant, 94% of the variation of Y (dependent variable around Y bar which is its mean) is explained by the predictors (independent variables). The adjusted R takes care of the error term. The predictors for this study were: Enterprise characteristics (X1), Way of doing business (X2), Finances (X3) and Resources (X4). The level of model fitness for this study, therefore, was good as evidenced by the high R^2 that was approaching to 1.

The column labeled F in Table 4.32 below gives the overall F-test of the hypothesis that;

H_0: $\beta_1=\beta_2=\beta_3=\beta_4=0$versus;**$H_a$:** at least one of β_1, β2, β3 and β4does not equal zero.

The β_1 to β_5 are coefficients of the predictors. From the table below, the F statistic (1939.14) has the associated P-value of 0.00. Since 0.00 is < 0.05, we reject H_0 at significance level 0.05.

Table 4.30: Analysis of Variance

	Df	*SS*	*MS*	*F*	*Significance F*
Regression	5	1204.96	240.99	1939.14	0.00
Residual	644	80.04	0.12		
Total	649	1285.00			

Source: Primary data (2013)

This means that at least none of the regressor coefficients are equal to zero and, therefore, the four independent variables (Enterprise characteristics (X1), Way of doing business (X2), Finances (X3) and Resources (X4) have an impact on sustainability of small scale tea enterprises in Kenya (Y), which was the main hypothesis of this study.

The regression coefficients are as shown in Table 4.31.

The fitted line for the regression model is as shown below;

Y= $-0.9+0.2X_1+0.7X_2+0.7X_3-0.5X_4$

Hypothesis Testing

(Rejection Rule)

Fail to accept to accept if p-value is >α 0.05

Fail to accept to Reject if p-value is <α 0.05

Table 4.31: Regression Coefficients

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-0.96	0.11	-8.98	0.00
Enterprise characteristics (X1)	0.20	0.01	21.17	0.00
Way of doing business (X2)	-0.54	0.08	-6.58	0.00
Finances (X3)	0.74	0.10	7.15	0.00
Resources (X4)	0.69	0.08	8.45	0.00

Source: Primary data (2013)

Hypothesis 1

H_0: There is no impact of enterprise characteristics on sustainability of small-scale tea enterprises in Kenya.

H_a: The enterprise characteristics of the firm have an impact on sustainability of small scale tea enterprises in Kenya.

The coefficient of the enterprise characteristics of the firm **(X_1)** has an estimated standard error of 0.10, t-statistic of -8.98 and p-value of 0.00. The impact of enterprise characteristics of the firm on sustainability of small scale tea enterprises is, therefore, statistically significant at significance level α=0.05 since p<0.05. The H_0 is, therefore,

rejected while H_a is accepted; that there is a statistically significant relationship between sustainability and size of the land.

These findings are in agreement with Mwaura *et* al., (2007); Frese *et* al., (2007); Wal (2008); Kariuki (2008) and Kagira *et* al., (2012) who found that there existed a relationship between enterprise characteristics and sustainability, concluding that the size of the enterprise matters.

Bhowmik (1990); Chiranjeen (1994) and Huque (2007), found that the more the years in operation the lesser the production of the tea bushes thus necessitating the need for strategy for replanting. In contrast, Mwaura *et* al., (2007) and Kagira *et* al., (2012) demonstrated just as in these study findings, that the more the years of experience the more advantageous this would be to the output.

Hypothesis 2

H_0: The way of doing business has no influence on sustainability of small scale tea enterprises in Kenya.

H_a: The way of doing business has influence on sustainability of small-scale tea enterprises in Kenya.

The coefficient of way of doing business **(X_2)** has an estimated standard error of 0.08, t-statistic of -6.58 and p-value of 0.00. The impact of way of doing business on sustainability of small scale tea enterprises is, therefore, statistically significant at significance level $\alpha=0.05$ since $p<0.05$. The H_0 is, therefore, rejected while H_a is accepted; that there is a statistically significant relationship between sustainability and the way small-scale tea enterprises conduct their businesses. This is consistent with Ireland *et*

al., (2001), Owuor (2005), Mwaura *et* al., (2007), Kagira *et* al., (2012) and Gharakhani *et* al., (2012) whose studies indicated that networking, knowledge sharing and communication with suppliers, customers and labourers improved contribution to the success of firms.

Hypothesis 3

H_0: The ability to mobilize finances has no significant relationship with sustainability of small tea enterprises.

H_a: The ability to mobilize finances has significant relationship with sustainability of small tea enterprises.

The coefficient of the enterprise's finances **(X_3)** has an estimated standard error of 0.01, t-statistic of 7.15 and p-value of 0.00. Thus, the influence of finances sustainability of small scale tea enterprises is statistically insignificant at significance level α=0.05 since p>0.05. The H_0 is consequentially rejected while H_a accepted since there is not enough evidence to accept the Null hypothesis. The study finding, therefore, concurs with Kristiansen *et* al., (2003), Mwaura *et* al., (2007), Wal (2008) and Aminul *et* al., (2008) who posited that access to finance through mobilization; alternative sources and credit improved the output of the farm.

Hypothesis 4

H_0: The resources (human capital) of the small-scale tea enterprises do not affect its sustainability.

H_a: The resources (human capital) of the small-scale tea enterprises affect its sustainability.

The coefficient of enterprise resources (human capital) **(X_4)** has an estimated standard error of 0.08, t-statistic of 8.45 and p-value of 0.00. The influence, therefore, of the enterprise's resources on its sustainability is statistically significant at significance level $\alpha=0.05$ since $p<0.05$. The H_0 is consequentially rejected while H_a is accepted.

The present study findings are in agreement with studies done by Davidson & Honing (2003) that human capital is a principal component in production in SMEs. Onduru *et* al., (2012) believed that labour contributed to more than 60 per cent of the production cost of green leaf. Similarly, the findings concur with Wal (2008); Aminul *et* al., (2008); Ratnayake (2012) and Kagira *et* al., (2012) that access to competent and affordable labour contributes to improved output and eventual earning of small tea enterprises.

In contrast, Sakar (1974) suggested that human labour costs are very high in tea farming and recommended substitution with machines as a strategy to solve the problem.

Table 4.32 below gives a summary of results of hypothesis testing:

Table 4.32 Summary of Results of Hypothesis Testing

Hypothesis	Description	Results
H1	The enterprise characteristics of the firm have an impact on sustainability of small tea enterprises in Kenya.	Supported
H2	The way of doing business has influence on sustainability of small tea enterprises in Kenya.	Supported
H3	The finances of small tea enterprises play a role in their sustainability.	Supported
H4	The resources of small tea enterprises affect its sustainability.	Supported

Source: Primary data (2013)

The next chapter focuses on discussions, conclusions and recommendations from the study findings.

CHAPTER FIVE: DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter comprises of the discussion of the results, contributions to the knowledge and limitations of the study, revised theoretical framework, revised operational framework, the revised regression model and recommendations for further studies.

5.1 Discussion of Results

5.1.1 Introduction

This study sought to understand key factors that influence sustainability of small tea enterprises and suggest appropriate strategies and alternative model for assessing sustainability of the small tea enterprises in Kenya.

The specific objectives of this study were as follows:

1. To assess the influence of enterprise characteristics on sustainability of small tea enterprises in Kenya.
2. To analyze the influence of the way of doing business on sustainability of small tea enterprises in Kenya.
3. To explore the relationship between finance and sustainability in small tea enterprises in Kenya.
4. To examine the relationship between resources and sustainability of small tea enterprises in Kenya.
5. To examine the influence of product and services on sustainability in small tea enterprises in Kenya.

5.1.2 Enterprise Characteristics in Sustainability of Small Tea Enterprises

Small tea enterprises contribute significantly to the economy of the country and are an important sector. These farmers are not shielded from factors that influence other small businesses.

The tested hypothesis of the study, "The Enterprise characteristics of the firm have an impact on sustainability of small scale tea enterprises in Kenya" was supported. This implies that the size of the enterprise, location, ownership and years in operation had a significant influence on sustainability of the small tea enterprises in this study.

From the study findings in Table 4.10, 71 per cent of the respondents had less than an acre of land under tea, which has greatly contributed, to their low income of less than Ksh20, 000 per year (Table 4.8). The low acreage has been due to land sub-divisions, which has negatively impacted on the volume of tea output in the area under cultivation.

The size of the tea enterprise was significant at 0.008 from the results of regression and agreed with Spence (1999); Mwaura *et* al., (2007); Frese *et* al., (2007) and Kagira *et* al., (2012) among other studies done that size matters and in this case the influence of land size on tea output. These studies emphasize that size of the enterprise matters. Keeping the same land size or at least increasing it is a big challenge to farmers and may hold the future sustainability of tea enterprises in the balance. The study found that majority of the smallholders had subdivided their land into small uneconomical land strips below one acre.

The finding did not support the findings of Kaberi (2013) that encouraging smallholder farming improves the well being of the household in India.

In Kenya, encouraging small tea holdings has a negative impact on the well being of households in the long run due to land subdivision. The assumption that the brain behind the business aims at making a profit while committing resources makes economic sense but the findings of the study that many small tea enterprises owner continue with the cultural practice of reducing the size of business through land subdivision which makes no economic sense in cases where the farms are so small. This supports the philosophy of the study that searched for a reason why people in small tea enterprises are living in poverty. This could explain part of this problem. An alternative way other than land subdivision could see small tea entrepreneurs stay in business profitably. Share holding concept can be introduced that can replace subdivision with amalgamated management of small tea farms.

The study established (Table 4.13) that 79 per cent of the farmers interviewed wholly owned their land hence continue to influence decisions on tea proceeds and leasing of the farm as supported by Table 4.14, which shows that 32 per cent supported the trend of leasing their farms, a new phenomenon. The study findings were in agreement with Huque (2007); Kagira *et* al., (2012) who found out that ownership of tea enterprises was a predominantly male affair but labour was provided by women who did not share in decision making on finance and expansion of the tea enterprise. Thus, from the study, enterprise characteristics significantly influence the sustainability of small tea enterprises in Kenya.

5.1.3 Role of Way of Doing Business on Sustainability of Small Tea Enterprises.

The way small tea entrepreneurs operate their business is key to their profit-making goal (an assumption that every person goes forth to start a business with intent of making

profit or earn some income) and determines whether they stay in business or fail. It is imperative to run Small tea enterprises as businesses. In any case there is an opportunity cost involved

The study findings supported the hypothesis that the way of doing business has influence on sustainability of small-scale tea enterprises in Kenya. Way of doing business incorporates networking and co-operation, knowledge sharing, communication and use of outside professionals. Networking and co-operation were considered significant by 44 per cent and 76 per cent of respondents respectively who use it to share information and knowledge, source finance and influence their bargaining power with tea factories and the government (Table 4.15a and Table 4.15b).

Ireland *et* al., (2000) noted that networking was important between and within firms, adding that co-operation would enable firms to improve their strategic position especially in entering international markets and use of new technology. This view is well supported by Wal (2008); Chittithaworn *et* al., (2011) and Cheruiyot (2013) that farmers need to share knowledge on best practices in their enterprises in order to meet market demands and improve their output.

Knowledge sharing is vital for sustainability of their small tea enterprises as seventy seven percent of the respondents indicated. (Table 4.16).

This view is similarly emphasized by Owuor (2005), Mwaura *et* al., (2007), Gharakhani *et* al., (2012) and Kagira *et* al., (2012) knowledge sharing is important for getting information on markets, value addition and best farm management practices to improve their output. Communicating with factory representatives, suppliers and buyers had high

ranking with 82 per cent of respondents agreeing that it is an important component in networking, knowledge sharing and in farmers' field schools. This helps in training and dissemination of vital information to the farmers by use of outside professionals and advisors (Table 4.17c).

The findings on continuous trainings and improvement were found to be significant and had a strong relationship in the regression output. This conformed to the findings of Wal (2008); Ofunya (2012); Onduru *et* al., (2012); Kagira *et* al., (2012) and Cheruiyot (2013) that tea farmers who received continuous trainings and shared knowledge through farmers' field schools improved their tea output significantly. Farmers must change their thinking on tea farming and consider it as business. This must go hand in hand with determining whether we understand small and medium business in the same way with the contemporary world because either there is a disconnect or small tea entrepreneurs understand business in their own way. This could be an area of further research. It was evident from the study findings that the way of doing business greatly influenced the sustainability of small tea enterprises in Kenya.

5.1.4 Finance Role on Sustainability of Small Tea Enterprises

The findings of the study support the hypothesis that the ability to mobilize finances has significant influence on sustainability of small tea enterprises in Kenya. Finance, in this study comprises of ability to mobilize funds and the management of financial records. The ability to mobilise finances in terms of access to credit when needed or alternative source, easy access to cash by the farmers and record - keeping are vital for the farmer to influence positively his output and eventual outcome. The farmer is able to intervene in a

timely way with regard to farm inputs and labour provision when finances are readily available (Table 4.19, Table 4.20, Table 4.21 and Table 4.22).

Keeping financial records was ranked the highest (Table 4.23) by 97 per cent of the respondents who kept financial records, though these were records from the factory and credit institutions only. Farmers did not keep records related with operational expenses such as labour and overhead expenses. Access to credit had 80 per cent of the respondents (Table 4.20) confirming that most of the farmers had easy access to credit facilities. Alternative source of finance had 77 per cent of the respondents who confirmed that it was not a challenge for them to get finance from other sources.

Studies by Kristiansen *et* al., (2003) and Banerjee (2008) emphasized on the importance of accessing finance by entrepreneurs which enables them to grow and be sustainable by enhancing and enabling economic environment. A study by Bracker & Pearson (1986) on "Determinant of success of small enterprises in Pakistan," found out that access to finance is the most important factor in the success of small business. Resource and finance are critical factors in the success of small business enterprises (Acs & Szerb 20 07).

The findings of this study showed that the ability to mobilize finances has significant relationship with sustainability of small tea enterprises. There is need to free the farmers from the constant burden of nonperforming loans due to the high interest charged by the commercial banks. There is no reason why farmers cannot have their bank that could offer financial services in an affordable way. Cost of finance could be contributing to the poverty status of the farmers as most of their income is used to service these very

expensive loans. The financial institutions heavily exploit the farmers. This area needs further research.

5.1.5 Role of Resources on Sustainability of Small Tea Enterprises

From the findings of this study, resources (human capital) in the small-scale tea enterprises affect its sustainability. There are two resources components namely; availability of competent labour and support from stakeholders.

The study findings confirmed that labour is such an important factor in tea production that when it is not available, harvesting is a challenge. Only 38 per cent of the farmers had access to competent labour force (Table 4.24). Competent labour in tea production ensures quality green leaf picked and this gives better returns to the enterprise.

From the findings, 59 per cent of the respondents use professionals, extension workers, soil analysts and climate change experts to run farmers' field schools and advise small tea entrepreneurs accordingly (Table 4.25). This enhances green tea output and eventual earnings of the entrepreneur. Training farmers is critical for success of their businesses. It confirms what Ireland *et* al., (2001) found in their study that resources in form of labour, land and expertise had significant influence on the success of small businesses. Kagira *et* al., (2012) in their study on sustainable methods of addressing challenges facing the small tea holder in Kenya, highlighted the importance of resources (land and competent labour) in expansion programmes in small tea holdings.

Availability of competent labour force and support from the stakeholders thus has significant influence on sustainability of small tea enterprises in Kenya as confirmed by this study.

5.2 Conclusions

From the findings, the following conclusions were made:

Enterprise characteristics had significant influence on sustainability of small tea enterprises. This was greatly influenced by land sub-divisions, age and ownership of the tea bushes. The way of doing business was found to have significant influence on sustainability of small tea enterprises. Poor channels of communication, minimal sharing of knowledge, lack of co-operation among stakeholders and inaccessibility of professional services also had great effect on the way of doing business in small tea enterprises. The study also found that smallholder tea farmers have limited information on credit services and facilities and the costs of such facilities. They only keep records from the factories and financial institutions but rarely track the records related to their expenses. Failure to keep these vital records makes it difficult for the tea farmers to evaluate the financial performance of their tea enterprises.

Most of the farmers did not have access to experienced or trained workforce hence paid highly for those who were available. The competent tea pickers end up earning more from tea than the owners. Lack of support from stakeholders made it difficult for the farmers to access timely and quality services due to poor infrastructure, inadequate communication and lack of involvement in key decisions affecting them such as price, factory expenses, bonus pay and sale of products.

From the variables tested the study concluded that sustainability of small tea enterprises is significantly influenced by four variables, namely: Enterprise characteristics, Way of doing business, Finance and Resources (human capital). The study findings agree with

Wal (2008); Chittithaworn (2011); Simpeh (2011); Kagira *et* al., (2012) and Koskei (2013) that enterprise characteristics, way of doing business, finance and resources positively influence success of small business enterprises, and that strategies to improve and manage the factors successfully will ensure sustainability of small tea enterprises in Kenya.

However, this study does not support earlier studies that found that products and services have significant influence on sustainability of small tea enterprises. This can be predicted by the use of the study regression model.

There are several things that could be done differently. The grading of tea should be based on taste and not the number of leaves to be picked, as is the case at the moment. The prices at the auction are set depending on the grading that solely is based on taste of the tealeaves. Farmers can be trained to weigh the opportunity cost of their small tea farming and where it is high be advised to make entrepreneurial decisions with the best returns at the lowest opportunity cost possible.

5.3 Contribution to Knowledge

The regression model in the study has a predictive capacity for sustainability of small tea enterprises in Kenya.

This means that holding other factors constant, the coefficients for ($X_1, X_2, X_3, X_4,$) would influence the dependent variable y in the magnitude depicted by the coefficients as shown below.

$\mathbf{Y}= -0.9+0.2X_1+0.7X_2+0.7X_3-0.5X_4$

The findings from the study will be used by farmers through adopting the suggested strategies to improve their outputs, manage their finances and improve communication and embrace search for knowledge to maximize their return on tea investments. The model has a predictive capacity and this would assist the tea farmer in knowing the areas that he must improve to maximize his output. More importantly, the model would help to predict whether the tea enterprise is sustainable or not. Farmers can take note from the model that linkages and networking, sourcing and managing finances, managing labour and area or size matters in running tea enterprises profitably.

Though literature provided the variables used in the study, no empirical data was available for anyone who used exactly the same variables as used in this study for small tea enterprises in Kenya. The theories grounding the study have been used in the study for the first time in Kenya in the tea sector and findings fill the knowledge gap. The findings from the study are also a contribution to knowledge to be used in learning institutions.

Policy makers will be able to use the strategies suggested in this study to make key decisions affecting the tea industry in Kenya. The grading could be done differently and this could see the small tea entrepreneurs take more tealeaves to the market instead of the current recommended two leaves and a bud.

5.4 Limitations of the Study

The study only considered regions that grew tea as grouped by KTDA and the owners of the small tea enterprises with less than two acres of land who have been in operation for the last 15 years. It used a cross-sectional survey only. Time and financial constraints were also major drawbacks in this study.

5.5 Recommendations

5.5.1 Recommendations for Policy and Practice

The study makes the following recommendations: The government and policy makers should develop policies to control land sub-division, especially to stipulate the minimum acreage that would guarantee economic gain to the farmers. Strategies should be put in place for replacement of the old tea bushes with better clones for maximum output. Policies should also be developed to ensure that anyone, regardless of gender, can own land in Kenya.

KTDA should be able to devise better and clear channels of communication, which would give every tea farmer the right to information and knowledge. They should also organize forums for field and extension services to farmers to improve on management of their tea enterprises. In addition, the tea industry should reconsider establishing a credit facility, which would serve the financial needs of tea enterprises with more farmer-friendly terms. This would enable the farmers to reduce the cost of credit and financial burden and help them improve their tea farms. Farmers should be trained on how to keep financial records and manage their finances.

A new way of grading tea should be encouraged based on taste instead of the number of leaves to be picked. The best tasting tea should fetch best prices and this should go to a specific farmer responsible in producing the tea.

KTDA should reconsider their decision on Mechanized Tea Harvesting for the small-scale farmers to improve efficiency, which would further cut the labour costs. KTDA should also bring on board all stakeholders in the tea supply chain to eliminate chances of exploitation especially at the bottom of the chain. The cost of running the factories is

borne by the farmers and reducing such costs would ensure that the farmer takes home a bigger share of income.

The factories should embark on value addition measures where they can pack the tea ready for retail and thus eliminating the costly process of middlemen. Direct sales should be encouraged where farmers have direct access to the buyer instead of middlemen who exploit the tea farmers.

5.5.2 Recommendations for Further Research

The model should be tested in a wider scope than in the current; for example, in East Africa and eventually Africa. The study carried out was cross-sectional; further research may be done on longitudinal time series. The study also recommends that more research should be based on other potential variables that may have an impact on sustainability of small tea enterprises. The regression model can only explain 94 per cent of variation in the dependent variable, creating ground for further research including factors not accounted for in the model. Further study can be extended to the large plantations or estates to ascertain their sustainability as this study only focused on small tea enterprises.

5.6 Summary of the Chapter

The study found that enterprise characteristics had significant influence on sustainability of the small tea enterprises in Kenya. The findings concurred with the results from Mwaura (2007); Frese *et* al., (2007) and Kagira *et* al., (2012) that enterprise characteristics influence performance of small enterprises.

The study findings, however, did not support the findings of Kaberi (2013) that encouraging smallholder tea farming improves the well being of the household in India.

In Kenya, smallholder tea enterprises have no significant positive influence on the farmers' income.

The study established that the way of doing business has a significant influence on sustainability of small tea enterprises in Kenya. This concurred with Wal (2008); Githii *et* al., (2011); Kagira *et* al., (2012); Onduru *et* al., (2012); Ofunya (2012) and Cheruiyot (2013) whose studies supported the view that way of doing business influences performance of small tea enterprises.

Finance had significant influence on the sustainability of small tea enterprises. This was supported by the studies done by Wal (2008) and Hujra (2011) tea farming is a labor-intensive activity. Access to competent labour is essential for successful management of tea production.

The study confirmed the findings of Ireland *et* al., (2001); Wal (2008) and Kagira *et* al., (2012) that the labour element greatly influences tea production. The variables tested (enterprise characteristics, ways of doing business, finance and resources) confirmed the studies by Chittithaworn (2011); Simpeh (2011); Kagira *et* al., (2012) and Koskei (2013) that the above variables had significant influence on sustainability of small tea enterprises. However, the study did not support their findings that product and services had considerable influence on sustainability of small tea enterprises. As a result of the findings, the decision to drop the variable (product and services) was consequently made, giving the study a revised theoretical framework, conceptual framework and regression model as shown in the following pages.

Revised Conceptual Framework

The following figure shows the revised conceptual framework:

Figure 5.1: Revised Conceptual Framework

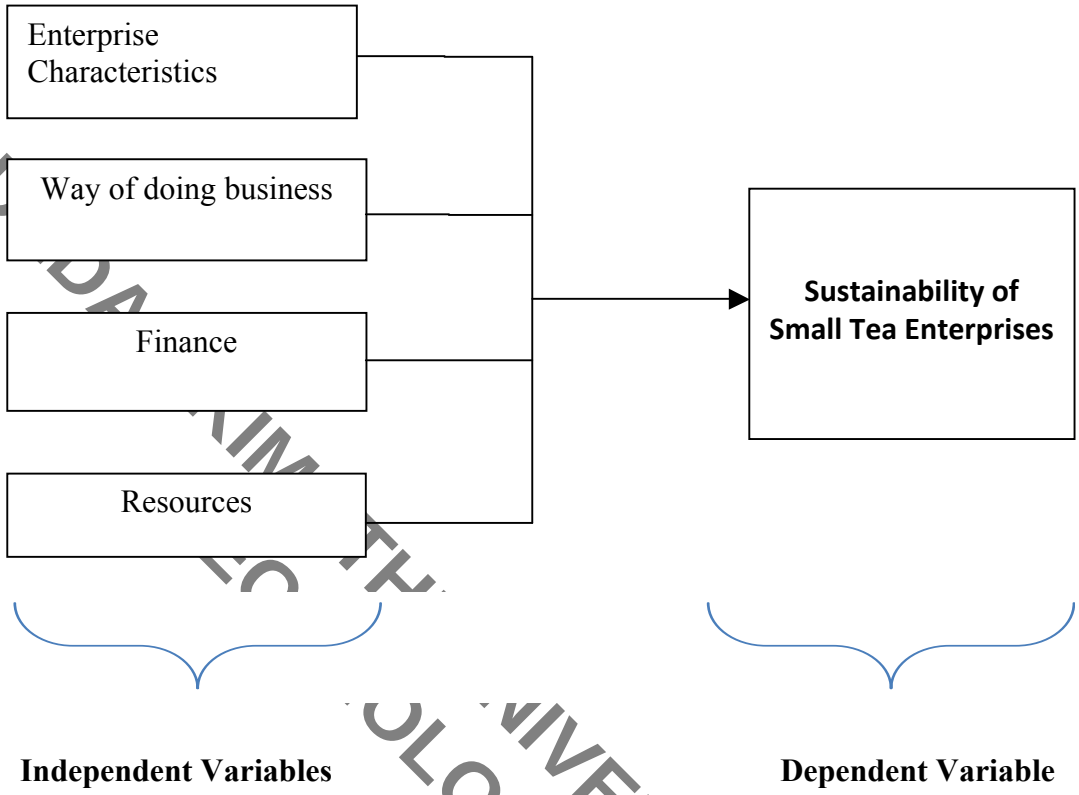
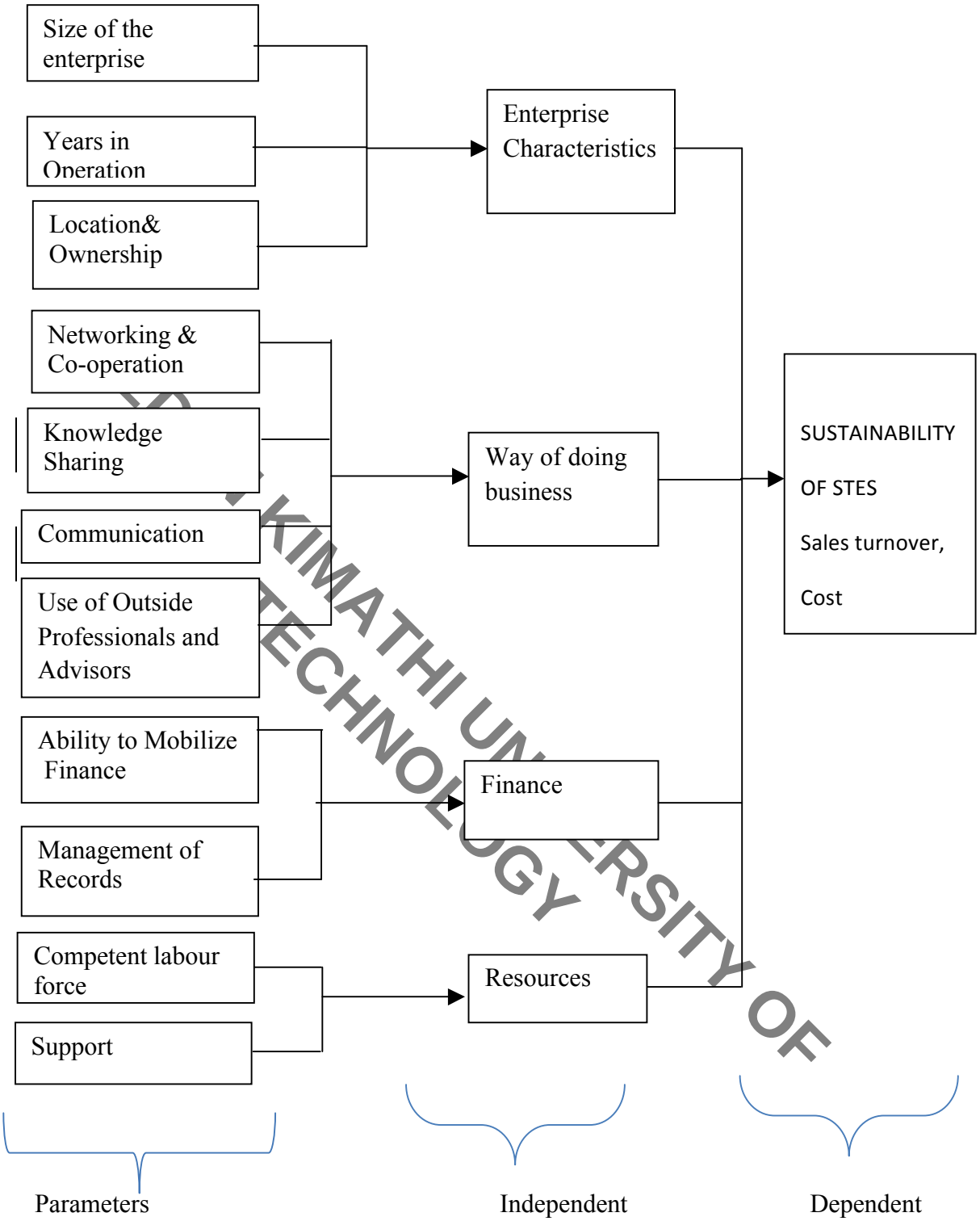


Figure 5.2 Revised Operational Frameworks



The Revised Regression Model

$\check{y} = \beta_0 + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \beta_4 X_4 \ldots\ldots\ldots \varepsilon$

Where: $\check{y}$ = Estimated value of STE's sustainability

β_0 = Intercept

X_1 = Enterprise Characteristics

β_1 = Gradient / Change in X_1

X_2= Way of Doing Business

β_2 = Gradient / Change in X_2

X_3 = Finance (Capital)

β_3 = Gradient / Change in X_3

X_4= Resources (Human Capital)

β_4 = Gradient / Change in X_4

ε = error variable (factors outside the regression model)

The revised regression model shows the relationship between the variables and predicted future outcome at 95% confidence level ($\alpha = 0.05$). This means that sustainability ($\check{y}$) will only be influenced by Independent variables; enterprise characteristics, way of doing business, finance and labour (human capital). Adjusted R is 0.94 which means that the model can explain 94% of sustainability if X_1, X2, X3, X4 are known.

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APPENDIX 1: RELIABILITY ANALYSIS

ANOVA with Cochran's Test

		Sum of Squares	df	Mean Square	Cochran's Q	Sig
Between People		4.679E+09	649	7.209E+06		
Within People	Between Items	1.135E+11	27	4.202E+09	8317.153	.000
	Residual	1.260E+11	17523	7.188E+06		
	Total	2.394E+11	17550	1.364E+07		
Total		2.441E+11	18199	1.341E+07		

Grand Mean = 483.64

APPENDIX 2: NUMBER OF GROWERS IN EACH FACTORY – EAST OF RIFT.

SR NO.	NAME OF FACTORY	No. OF GROWERS
1	KIEGOI/IGEMBE	9,655
2	MICHIMIKURU	7,400
3	GITHONGO	5,200
4	IMENTI	5,242
5	KIONYO	8,300
6	KIN0RO	7,638
7	WERU	8,867
8	RUKURIRI	8,800
9	MUNGANIA	8,694
10	KATHANGARIRI	7,920
11	THUMAITA	10,876
12	KIMUNYE	8,272
13	KANGAITA	6,495
14	MUNUNGA	9,500
15	NDIMA	8,076
16	RAGATI	7,018
17	GATHUTHI	7,426
18	GITUGI	5,350
19	IRIAINI	7,000

20	KIRU	7,372
21	CHINGA	7,200
22	GATUNGURU	7,304
23	KANYENYAINI	9,200
24	GITHAMBO	8,600
25	GACHARAGE	5,100
26	IKUMBI	6,050
27	NDUTI	5,672
28	MAKOMBOKI	6,500
29	NJUNU	3,861
30	NGERE	7,860
31	MATAARA	3,915
32	GACHEGE	4,408
33	THETA/KURI	7,742
34	KAGWE	6,610
35	KAMBAA	4,858

Source: K.T.D.A 2014

APPENDIX 3: KTDA 2012/2013 BONUS PAYOUT

FACTORIES	2012/2013 2ND BONUS PAYMENT
REGION 1:	
KAMBAA	35.50
KAGWE	36.20
THETA/KURI	30.05
GACHEGE	30.10
MATAARA	34.70
NJUNU	37.00
NGEERE	39.40
IKUMBI	38.10
GACHARAGE	35.60
NDUTI	35.70
MAKOMBOKI	37.10
REGION 2:	
GATUNGURU	32.00
KIRU	30.00
KANYENYA-INI	31.25
GITHAMBO	31.00
CHINGA	34.00
GITUGI	38.00
GATHUTHI	41.20
IRIA-INI	33.05

RAGATI	33.00
REGION 3:	
KANGAITA	38.80
NDIMA	35.35
KIMUNYE	40.20
MUNUNGA	40.21
THUMAITA	37.60
MUNGANIA	38.00
RUKURIRI	38.70
KATHANGARIRI	37.00
REGION 4:	
KINORO	37.00
WERU	31.00
IMENTI	41.00
KIONYO	35.20
GITHONGO	34.00
KIEGO/IGEMBE	30.50
MICHIMIKURU	33.25
REGION 5:	
TEGAT/TOROR	26.50
LITEIN/CHELAL	24.00
KAPKATET	28.20
MOMUL	28.30

KAPKOROS/TIRGAGA	28.15
KAPSET/ROROK	27.50
MOGOGOSIEK/KOBEL	26.00
REGION 6:	
NYANSIONGO	32.05
NYANKOBA	27.20
TOMBE	29.69
KEBIRIGO	26.10
GIANCHORE	27.00
SANGANYI	26.15
OGEMBO/EBEREGE	23.50
NYAMACHE/ITUMBE	28.00
KIAMOKAMA/RIANYAMWAMU	26.15
REGION 7:	
CHEBUT/KAPTUMO	23.00
MUDETE	24.00
KAPSARA	21.00

SOURCE: KTDA 2013

APPENDIX 4: NUMBER OF ACTIVE GROWERS

NO. OF ACTIVE GROWERS AS AT OCTOBER 2012

REGION 5 FACTORIES

NO.	FACTORY	ACTIVE GROWERS
1	MOMUL	13,220
2	TEGAT	10,147
3	TOROR	8,259
4	CHELAL	5,150
5	LITEIN	6,032
6	KAPKATET	13,192
7	MOGOGOSIEK	14,886
8	KOBEL	7,374
9	KAPKOROS	13,451
10	TIRGAGA	12,229
11	KAPSET	6,139
12	ROROK	5,257
13	OLENGURUONE	3,841
TOTAL		**119,177**

	REGION 6 FACTORIES	Active Growers
14	NYANSIONGO	11,933
15	NYANKOBA	14,593
16	NYAMACHE/ITUMBE	26,634
17	OGEMBO	15,376
18	EBEREGE	11,123
19	TOMBE	23,600
20	GIANCHORE	12,159
21	KEBIRIGO	12,652
22	SANGANYI	18,359
23	KIAMOKAMA/MWAMU	21,108
	REGION 7 FACTORIES	
24	CHEBUT/KAPTUMO	12,600
25	MUDETE	16,900
26	KAPSARA	2,563