DETERMINANTS OF SECOND PAYOUT DIFFERENTIALS OF GREEN TEA LEAVES AMONG KENYA TEA DEVELOPMENT AGENCY MANAGED FACTORIES IN ZONE 9, KENYA

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DECLARATION AND APPROVAL

Declaration

This thesis is my original work and has not been presented for the award of a diploma or conferment of a degree in this or any other university;

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Approval

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DEDICATION

I dedicated this thesis to my parents for their prayers, support, inspiration and encouragement during my academic journey and to my family whose love, patience, understanding and support I treasure.

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ABSTRACT

Tea growers in KTDA Zone 9 have been complaining with regards to green leaves payout differential received at the end of every year with majority blaming the factories for under payment. They also receive low payouts, poor extension services, limited market channels, limited credit facilities all of which are blamed on low green leaves payout. Therefore there was need to establish the determinants of second payout differentials of green tea leaves among Kenya Tea Development Agency Managed Factories in Zone 9, Kenya and specifically determine the effect of quality of green tea leaves; production cost; factory certification; and international market forces on green tea leaves payout differential. A cross sectional research design was used in this study and was guided by three theories namely; quality theory; theory of diminishing returns and dividend preference or bird-in-hand theory. The study was carried out in Zone 9 factories located in Bomet County and targeted 86 respondents who were 56 factory management staff, 19 directors and 11 Office staff. Census sampling method was used to sample all the 86 respondents. Primary data was collected using a structured questionnaire which was the main data collection instrument. The research instrument was pretested using 16 employees of KTDA Zone 8 managed factories and the results was analyzed using Cronbach Alpha where a coefficient of than 0.827 was achieved meaning that the instrument was reliable. Content validity of the research instrument was actualized by having marketing expert and the research supervisor scrutinizes the instrument and their comments included in the final data collection instrument. Data was statistically analyzed, with the aid of Statistical Package for Social Sciences software (SPSS) version 23, where descriptive and inferential statistics was generated. Descriptive statistics were expressed inform of frequencies and percentages while inferential statistics were expressed in form of regression coefficient. The determinants for green tea leaves had a joint significant effect on second payout differential as shown by R value of 0.845. The R squared of 0.814 shows that the independent variables accounted for 81.4% of the variance on second payout while 18.4% are explained by other variables outside the study. There was a strong positive relationship between quality of green tea and second payout since it had a Pearson Correlation of ($r=0.540$, $p < 0.001$), cost of production had a negative relationship with second payout since it had a Person Correlation of ($r = -0.415$, $p < 0.001$), factory certification had a positive relationship with second payout since it had a Person Correlation of ($r=0.328$, $P < 0.001$); Market forced had a positive relationship with second payout since it had a Person Correlation of ($r=0.329$, $P < 0.002$). The study recommends that green tea leaves delivered to KTDA Zone 9 should be of deep, dark green color with a glossy damp appearance; the tea need to be grown in the recommended soil areas and processed by Fair Trade Certified Factories. The made tea need to taste good; be of good flavor as well as tea leave being of bright leaves with equally sizes and of needle-like shaped. There is need for the KTDA managed factories to explore on other alternative sources of power for instance hydro power which is relatively cheaper. There is need also to procure their firewood land to reduce on the high rising cost of firewood fuel. Outsource transport services which are usually costly to the factories to maintain will go a long way in ensuring that KTDA managed factories reduces on tea production cost hence increase of payout to farmers.

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LIST OF ABBREVIATIONS AND ACRONYMS

BPR	Business process reengineering
COP	Cost of Production
EU	European Union
IFC	International Farmers Cooperation
ISO	International Standards organization
KTDA	Kenya Tea Development Agency
NGO	Non-Governmental Organization
ROA	Return on Assets
SPSS	Statistical Programme for Social Science
SPT	Sanitary and phytosanitary
TBK	Tea Board of Kenya
TBT	Technical Barriers to Trade
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

OPERATIONAL DEFINITION OF TERMS

Payout differentials refer to the amount of money received by the tea growers from selling green tea leaves at the end of a particular period. In the study it will refer to payment of green tea leaves to farmers in varying levels by KTDA Zone 9 factories.

Quality of Green leaves it is the distinctive attribute or characteristic of green tea which are deem to be ready for plucking. In the study it will refer to the standards set by KTDA Zone 9 factories as the right green tea leaves where two leaves and a bud are plucked.

Cost of Production it is the amount of money used in processing green tea leaves. In the study it refers to the amount of money used to manufacture a kilogram of made tea from green tea leaves by KTDA zone 9 factories.

Factory certification it is the regulatory requirement necessary for a manufacturing entity to operate. In the study is used to mean provision of the legal documents to prove compliance with various safety regulations and set standards by KTDA Zone 9 factories in green tea leaves processing.

International market refers to marketing activities of selling green tea leaves products and operations among the countries of the world following different political and economic systems by KTDA zone 9 factories.

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter introduces the background of the study, the statement of the problem, objectives of the study, research questions, and significance of the study, scope and limitations of the study.

1.2 Background to the Study

Globally agriculture continues to be a major economic block in achieving the Sustainable Development Goals (SDGs). Recent statistics indicate that agricultural production will increase by 70 percent by 2050 in order to feed the world, but demographic growth, climate change and urbanization put pressure on available cultivatable land (International Farmers Cooperation, 2011). In Kenya agriculture is the largest economic sector and remains the best opportunity for economic growth and poverty alleviation on the country.

Globally the trend has been the same and this calls for concerted efforts by the tea industry players to seek long term sustainable solutions to the problems that are making tea trade inequitable. The current challenges have brought the economic situation of tea producers to the forefront of media and policy discussions. Since 1980s, oversupply of tea in the international markets had resulted in nearly a 50 percent decline in nominal tea payouts, (International Tea Committee, 2012) hence the need for a research to understand the underlying determinants of green leave payout.

According to United Nations Conference on Trade and Development (UNCTAD) secretariat between 1999 and 2002, producing countries earned 19 billion less in

revenues compared to the 1998 levels. For small scale tea farmers that account for approximately 60 percent of tea production (TBK, 2012), declining payouts have a direct impact on overall household revenues and access to basic needs. Declining payouts are also associated with declining job opportunities and security for employees serving in the tea industry, many of whom represent the poorest section of the population serving supply tea chain. Although payouts on the world market are one of the most important determinants of economic sustainability in the tea sector at present and that they form part of a larger web of economic constraints generally facing tea producers.

A decade ago, developing countries captured 30% of the value of the tea market compared to only 10% of what they capture today. For instance, tea sector in Kenya, contributed on average 60 percent of the foreign earnings and did so until the year 2002 when its contribution fell to below 25% (TBK, 2012). This rapid fall, brought down the social and economic welfare of more than 3,000,000 smallholder Kenyan tea farmers. For many of these tea farmers, tea means only money in their pockets but it also translated into ability to afford education, health care, food security and improved household standards of living. While measures have been taken to improve the sector, still there are challenges that have hindered the performance of this important sector in the Kenyan economy which this study seeks to determine.

Tea like most agricultural crops is seasonal hence varies in production at different times of the year. For instance, it experiences high production between September and December (KTDA 2012) during long rains. Small scale farmers with a low capital and saving base often rely on advances and credit to supply requisite pre-harvest inputs

and living expenses in many tea-producing communities, local tea buyers fill the credit gap through advance purchases at highly-discounted rates (KTDA, 2012).

Although local buyers fulfill an important role through such credit provisions, poor infrastructure development and anti-competitive practices regularly result in a net transfer of value down the supply chain, placing greater financial pressures on producers. Requirements associated with selling tea in the international markets also present significant barriers for higher revenues to smaller producers. For example, export license, minimum volume and quality requirements can operate as bottlenecks that effectively reduce the ability of producers to reap the benefits of the international trading system. Meanwhile, tariffs on processed forms of tea in importing countries also have an effect on the revenue generated by producer countries from the supply chain. The imposition of such tariffs effectively restricts producing countries access to the higher value cost associated with processing activities. Increased activity by large funds in accommodating future markets over the past two decades has led to weakening of connection between payout determination and market fundamentals (KTDA, 2012).

Despite the significant role played by tea industry in Kenya's economic development including employment creation, income generation, foreign exchange earner and the fact that Kenya has been a high quality tea producer in the world, there has been an observed decline in Kenya's tea in international market (TBK, 2012).

1.2.1 Green tea leaves in Bomet

Matheson and Bovill (1950) in an historical study on tea production in Uganda, argued that tea was introduced in Uganda from India in 1900, but for quite some time it was restricted to plantations. There was a belief that it was only economical at this

scale and that the quality would be low if it was grown by smallholders. Plantations aimed at avoiding competition with smallholder growers and thus ensuring that labour was available to plantations all the time.

It was the collapse in payouts of tea in 1920 which crippled plantation agriculture and emphasized the already emerging dominance of small scale production in the economy of Uganda. The Government officers were anxious to initiate cash crops so that taxes could be paid. The study described the history of tea in Uganda from plantations to smallholder production but this study will focus on determinants of second payout differentials of green tea leaves among Kenya Tea Development Agency managed factories in zone 9, Kenya.

Korir (1976) studied tea plantation economy historically in Kericho District from 1925 to 1960. He noted that multinational tea companies undertook the production of tea in the district until the Swynnerton Plan of 1954 gave proposals for the Kipsigis to be permitted to grow tea on smallholdings in Kimulot which is one of the Divisions of Konoin, Bomet County. A pilot scheme was started in 1957 which marked the start of smallholder tea production in the area. The ideas in Korir's study were found to be important for this research, however he focused on land alienation in Kimulot and not on the progress of smallholder tea production by the Kipsigis after a pilot scheme was carried out in 1957.

Maxon (1992) studied small scale and large scale agriculture on the establishment of colonial economy and noted that smallholder tea production in Kenya experienced a dramatic expansion. He attributed this to many factors which had been laid before independence. He asserted that the agricultural reforms introduced as a result of the Swynnerton Plan of 1954 continued and expanded after independence. Maxon cited

the construction of ‘tea roads’ as a factor that promoted smallholder tea production. This was an historical study that examined the factors that promoted smallholder tea production. The effects were not discussed adequately which became the focus in this study.

Wambui (1995) in her economics study examined smallholder tea leaf transportation in Kiambu District. She argued that before mid-1950, tea was entirely produced on estates nearly all of which were owned by private companies in Kiambu District. The smallholder production of tea was not encouraged prior to the 1960’s. There was scepticism about smallholder tea cultivation on technical and economic grounds such that large and extensive plantations dominated production. It was assumed that smallholders’ entry into the industry would result in production of poor leaf with consequent deterioration in the quality of tea to be marketed leading to loss of reputation on Kenyan tea. Wambui’s study was done in Kiambu District whereas this study will be done in Zone 9 factories managed by KTDA.

Githinji (2003) conducted an economic study on the factors affecting production of tea in Othaya Division of Nyeri District. She observed that high plucking cost reduced the profit margin of the smallholders in Othaya in Nyeri. This made the farmer to rely on family labour, hence low tea harvest because family labour was not adequate to harvest all tea. The distance to the factory had an effect on tea yields as it forced the farmers to stop picking their tea so as to have enough time reach buying centre earlier because of the poor state of the roads and in order to catch up with transport. Githinji further observed that these farmers in the process lost the time that could be spent doing other farming activities. She explained that the most common problem among the farmers was financial constrains due to poor payments.

The quality of tea is determined by plucking, processing and packaging. The quality attainment is tailored to capture the world market and the value attained from sales of tea would be reflected back to the smallholder in terms of payment. Land was also cited as a factor that hindered farmers from adding more tea on the land because of the high population. Githinji's study was done in Othaya and it focused on factors affecting smallholder tea production however, this study will focus on the determinant of second payout differential of green tea leave among Kenya Tea Development Agency Zone 9 Factories in Kenya.

1.3 Statement of Problem

Farmers in KTDA Zone 9 have been complaining with regards to green leaves payout differential received at the end of every year with majority blaming the factories for under payment. The myriad of challenges which farmers are experiencing have not been dealt with accordingly and include; low farm gate payouts, poor extension services, limited market channels, limited credit limits, low level of farmer organization and low green leaves payout differentiation. Most of the factories have been experiencing problem in green leaves payment since it uses a lot of money in fuel, transportation and in building satellite factories which have affected farmers negatively. There is need therefore to the determinants of second payout differentials of green tea leaves among Kenya Tea Development Agency managed Factories in Zone 9 since there is limited academic studies which has been done in relation to determinants of green tea leave payout differentiation.

1.4 Purpose of the study

The purpose of this study was to find out the determinants of second payout differentials of green tea leaves among Kenya Tea Development Agency Managed Factories in Zone 9, Kenya.

1.5 Specific Objectives

The study specific sought to;

i. Determine the effect of quality of green tea leaves on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya.

ii. Establish the effect of production cost on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya.

iii. Establish the effect of factory certification on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya.

iv. Assess the effect of international market forces on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya.

1.6 Research Hypothesis

The research was guided by the following research hypotheses:

$H_0 1$. There is no statistical significant effect of quality of green tea leaves on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya.

H_02. There is no statistical significant effect of production cost on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya.

H_03. There is no statistical significant effect of factory certification on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya.

H_04. There is no statistical significant effect of international market forces on second payout pricing among Kenya Tea Development Agency managed factories in Zone 9, Kenya.

1.7 Justification for the study

Tea processing factories have been experiencing problem in green leaves payment since it sometimes use a lot of money in fuel, transportation and also building satellite factories and this has affected the farmers negatively especially economically. In the study area there is limited academic studies which has been done on the relationship between determinants of green tea leave price and payout differentiation hence the need for this study.

1.8 Significance of the Study

The research findings may be of great benefit to KTDA factory since it gave the determinant of second payout pricing which may assist the factories in ensuring that they retain customers who are currently dissatisfied with payout paid. The study ensured that all the loopholes existing in tea industry are sealed since it will guide in policy development framework which will ensure that farmers get better payout in their green leaves they deliver to the factories.

The study may be significant to the government in enhancing tea payouts and ensuring that farmers are paid accordingly. Policy makers will benefit from this study in that they may use it to put in place policies which will improve tea payouts. Finally, this study may be significant to scholars and researchers since it gave area for further research on the determinant of second payout pricing.

1.9 Scope of the Study

This study was carried out in KTDA Zone 9 factories which are in Bomet County where Factory managers, Directors and zone 9 management staff were sampled. Both structured and unstructured questionnaires was used for data collection tool. The study variables were quality of green tea leaves, production cost, factory certification and international market forces. The study was undertaken in the months of July and September 2022.

1.10 Limitations of the Study

The respondents might have been busy and not have time to answer the questions fully to the best of their knowledge. This was overcome by giving them amble time to respond to the study by dropping the questionnaire and picking it the following day. Some questionnaires were not returned or incomplete because of suspicious or victimization or fear of the unknown. The researcher dealt with this challenge by cross checking the questionnaires before data collection so as to remove any ambiguous questions and that respondents were assured of the confidentiality of the information they gave.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter present existing literature dealing with determinants of second payout pricing of green tea leaves. Theoretical review, literature of related studies, conceptual framework and knowledge gap will be examined.

2.2 Review of Related Literature

The following literatures were reviewed based on the research variables.

2.2.1 Quality of green tea leaves and second payout pricing

Quality is meeting and or exceeding the customer's expectations for both products and service, it is also described as fitness for purpose or freedom from deficiencies (Zeithaml & Bitner, 2010), (Pheri & Mcwabe, 2013). It has also been described as the "total composite product and service characteristics of marketing, engineering, manufacturing and maintenance through which the product and service in use will meet the expectations by the consumer (Feigenbaum, 2013).

Quality of food product matters in international trade and this has led to many countries adopting standards designed to improve the quality of traded food products (Curzi, Raimondi, and Olper, 2015). In 1995, the World Trade Organization (WTO) adopted an Agreement on Application of Sanitary and Phytosanitary Measures (SPS Agreement) which establishes the basic trade rules for food safety health standards on animal and plant. It grants member countries the right to set their own standards if scientifically justified. Although the aim of the SPS Agreement is to share common

regulations across WTO member countries, the measures have the potential to reduce trade flows, thereby generating negative economic outcomes.

The European Union (EU) has adopted food safety standards in line with the SPS Agreement, and over time, enforcement has become stricter. The number of standards applied to food products by the EU has also grown from about 150 in 1996 to almost 800 in 2003. Food safety standards generally refer to voluntary standards, yet these provide a legal basis for developing or initiating mandatory standards or regulations (Article 2.4 of the WTO Agreement on Technical Barriers to Trade (TBT)).

The increased use of food product standards is commonly rationalized as the response of policy makers to consumer demand for characteristics such as improved product safety, sustainable production methods, and greater product information (Wilson, 2007; Sexton, 2013). The potential for redistribution through standards have lead to the possibility that lobby groups would influence policy makers in the establishment and implementation of the standards. In that they may provide protection to domestic producers subject to regulatory capture (Fischer & Serra, 2000; Swinnen, 2016; 2017). Commitments were made in Uruguay Round of GATT which bind/lower tariffs on agricultural food products so as to improve on market access. The growth in food product standards has led to evaluating nontariff measures standards (NTMs) so as to generate protectionist outcomes and reduce trade due to their payout effects, but at the same time increase domestic welfare due to resolution of a market failure (Essaji, 2018).

Under appropriate supply and demand conditions, standards act as a catalyst to trade, with benefits both domestic consumers and foreign producers (Swinnen, 2016). In the case of food product standards, the bulk of the empirical evidence supports the barrier

to trade hypothesis by Otsuki et al. (2011), Wilson and Otsuki (2014), Olper and Raimondi (2018), and Li and Beghin (2012). There is evidence that developing countries have taken advantage of successful high standards in accessing export markets (Maertens and Swinnen (2017); Anders and Caswell (2009); Swinnen (2016)).

Even though the plantations have better organizational management in processing quality tea standards, their produce is usually of lower quality than those of smallholders and this is mainly because a big part of tea quality depends on the collection process which is the plucking technique. Thus there are difficulties in controlling the technique used by the temporal workers in the extensive fields (CPDA, 2017).

On the other side, international struggle for market shares by the multinational have focused on the supply of relatively low-quality black tea which gives the packing companies flexibility by deliberately reducing difference in qualities by blending different kind of teas (Vn del Wal, 2018). Tea quality and payout are determined on the basis of liquor, aroma/ flavor and leaf appearance. Consumers perceive quality differences on the attributes of taste, pungency, strength, freshness, color and packaging.

Kenya is known by its CTC processed tea where by the production is divided in two clearly differentiated sectors which are; the big plantation sectors that account for around the 40 percent of the national production, and the smallholder farmers which represent the other 60 percent of the national production. Productivity of tea farms varies widely between these two sectors. The major plantations enjoy a yield of 2.7 tonnes of tea per hectare: the smallholders just about 2 tonnes per hectare and is the

country's largest single tea producer (GDS, 2004 and TBK, 2011). Small holders associated in the Kenya Tea Development Agency (KTDA), formerly a government parastatal which was privatized in June 2000, is owned by around 450,000 small-scale tea growers who process their tea in its own 63 factories are the largest source of tea in the country (TSB, 2011).

Kimenyi (2012) 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. The limited ability to add value to Agriculture-related exports consists of semi-processed and low-valued products. 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.

The quality of green leaf is a very important factor impacting the overall quality of tea which smallholders have not been able to create and also limited to tea factories. According to Cheruiyot (2013), factories are in a severe competition to receive green leaves in order to run the working shifts and ensure continuous production of made tea since supply chain also is very competitive making the quality of green leaf be compromised in order to have a continuous supply of green leaves from the smallholders.

Non-governmental organizations (NGOs) and unions argue that productivity-based schemes are used in practice to maintain long work hours (sometimes beyond legal limits) for the sake of maximizing output, but often without actually increasing

worker take-home pay (Miller and Williams 2009, Raworth and Kidder 2009). Indeed, productivity-based compensation schemes have been linked with workplace stress, accidents, and injuries, problems which in turn lead to high absenteeism and attrition (Brown and O'Rourke 2007). In the past, quality was thought to mean a focus on doing the repeatable things well (Miller & Pearce, 2018). It suggested predictability and reliability and was applied almost exclusively to the manufacturing environment.

It is necessary to consider International Standards Organization (ISO, 1986) Standard 8402-1986 in order to standardize the definition. ISO in 1986 attempted to rationalize the range of opinions on quality issue by releasing its first quality standard. This standard "defines quality as the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs. Bring this paragraph to the initial paragraphs in the section

Despite a small number of examples of improvements in worker pay in factories producing for global brands (such as the Alta Gracia factory in the Dominican Republic (Nova and Kline 2013)), there remains a surprising dearth of experimentation in compensation systems or strategies in developing country factories. Owing in part to continued gender wage discrimination (Christian et al. 2013, Collins 2013), wages for most factory workers look today the way they did in 1980 (Vaughan-Whitehead 2014). Proper management and control of all business processes reduces the time lag between different processes, which otherwise is quite high causing delays. This in turn reduces the time to market the product to the target customers and gives quicker response to buyers. Kapoor (2011) states that with the proper management of processes, improved efficiency and quick delivery of products

to the buyers, the overall product costs are reduced resulting in cost saving for the organization in the long run.

Table 2.1 gives the clone varieties planted by small scale farmers in Zone 9

Tale 2.1 Tea clone

SN	Tea Clone	Special attributes
1	TRFK 301/6	Drought tolerant, good mechanical harvesting, high yields, medium black tea quality
2	TRFK 303/577	Acceptable black tea quality, drought tolerant and high yielding
3	TRFK 306	Acceptable black tea quality, drought tolerant, anthocyanin-rich (purple) and moderate yielder
4	TRFK 6/10	Drought tolerant and moderate yielder
5	TRFK 12/19	Acceptable black tea quality, high yielding
6	BBK 35	High black tea quality, moderate yielder
7	EPK C12	High black tea quality, moderate yielder
8	TRFK 301/5	Moderate yielder and medicinal properties
9	TRFK 12/56	High black tea quality, moderate yielder
10	TRFK 430/90	High black tea quality, high yielding
11	TRFK 303/1199	High black tea quality, moderate yielder
12	TRFK 6/8	High black tea quality, high yielding
13	TRFK 100/5	Acceptable black tea quality, root knot nematode tolerant and high yielding
14	TRFK 12/12	High black tea quality, moderate yielder
15	TRFK 301/4	Acceptable black tea quality, moderate yielder
16	TRFK 31/11	High black tea quality, high yielding
17	TRFK 371/3	High black tea quality, moderate yielder
18	TRFK 7/3	Acceptable black tea quality, high yielding
19	TRFK 31/8	Acceptable black tea quality, moderate yielder
20	TRFK 11/4	Acceptable black tea quality, moderate yielder

Source: Tea Research Foundation (2022)

2.2.2 Cost of production of green tea leaves and second payout pricing

The cost of production (COP) of Kenyan tea is considered high compared to other tea producing countries and is causing uncertainty for the future of tea farming in Kenya. The cost of production in Kenya is USD 1.33 per Kg of made tea while for other tea producing countries like Vietnam (USD 0.81 per Kg), Indonesia (USD 0.58 per Kg), Rwanda (USD 1.32 per Kg), Uganda (USD 1.20 per Kg), Tanzania (USD 1.16 per Kg), Malawi (USD 1.14 per Kg) and Zimbabwe (USD 1.11 per Kg) (KTB 2012).

The main factors contributing to the high cost of production are; high labour demand, high cost of farm inputs particularly fertilizers, high cost of energy or fuel at the factories, high cost of transport due to poor road and numerous taxes and levies. Tea is a high labour demand crop because of the activities that have to be undertaken both within and outside the factory. The expected relationship between cost management strategies and financial performance is either a positive or negative relationship. One school of thoughts argues that there is a positive relationship in that cost management strategies are considered as critical factors to increase revenue for the success of manufacturing companies (Kumar & Shafabi, 2011). Another positive relationship is that cost containment techniques such as standard costing, sourcing and budget system limit the highest cost that could be incurred and as a result for the same level of income, the expenses are lower which results to increase in profitability.

According to Groth and Kinnery, (2014), cost reduction refers to an attempt to attain lower current fixed costs and variable costs associated with an essential activity. As a result of this total output of assets is low compared to the resulting income generated resulting to rising of (ROA) ration hence increase in profitability. Cost avoidance which refers to the eliminated activities that generate costs of non-added values has a

positive impact on profitability in that costs which increase expenditure with no future income generation are done away with hence reducing the negative impact on income. Positive elevation of Income will lead to increase in (ROA) and in profitability as well which is the measure of financial performance in this study (Nyangito, 2011). India produces approximately a quarter of the world's tea, and the tea industry is trying to modernize its practices to keep up with that demand. Plucking tea bushes will likely remain labor intensive, as machine harvesting damages the leaves.

According to the study by Dutta (2013), it proved that satellite imagery can help estate managers track the overall health of the plantations and tea leaf quality since the techniques would be cost-efficient, and reduce the labor. Estate managers cope with not only aging plantations but also the effects of climate change. Tea thrives best in humid, subtropical climates with wet growing seasons. Historically, natural rainfall watered India's plantations, but as climate change shifts rainfall patterns and amounts, some managers must either replant sturdier tea clones or install expensive irrigation systems to water their tea bushes.

Tracking the growth of replanted tea bushes is an intensive process, but it is critical if a plantation owner wants to continue producing tea. Replanting is completed one section at a time in a process that can take two years or more. Managers must remove old plants, refresh and prepare the soil, and then plant tens of thousands of new seedlings, often alongside other plants that help deter pests. Estate managers could employ remote sensing to monitor the leaf qualities from seedling plants to first harvest, and identify sections where crop yield might be highest, or where new growth might be stunted by lack of water or pest infestations. Applying remote sensing allows

plantation managers to track tea quality and plant growth, and is one more tool they can be to reduce costs and this will lead to high payout to farmers (Dutta 2013).

Global issues in the tea sector are high fertilizer and pesticide application rates, energy intensive processing and decrease of biodiversity caused by mono-cropping. Fortunately, tea grown in Kenya requires low application of pesticides compared to other tea producing regions, due the particular tea breeds used in cultivation and the high altitude at which tea is grown (Agritrade, 2013). Aside from its environmental impact, cultivation of this crop has a large social impact. Social issues such as poor wages, lack of social and job security, long hours, and gender discrimination are high on the agenda of various NGOs and standard-setting organisations operating in the Kenyan tea sector (War on want, 2011).

Smallholder farms largely depend on family labour but also employ hired labour. These workers are often employed on a casual basis (Karanga, 2014).Smallholders in the Kenyan tea sector face several challenges. First of all, power in the supply chain is highly concentrated on the buyer side. This puts pressure on the payouts paid to the producers which remain low relative to the retail payout (Ethical Consumer, 2013; IDH, 2011). Secondly, smallholder yields are currently lagging those of large estates, partly due to inefficient use of resources as a result of a lower knowledge level regarding optimal input use and good agricultural practices (Owuor, 2005). These suboptimal yields affect farmer income and thus absorption capacity at farm level to increase wages and invest capital in the farm and this leads to low payout being received by farmers since a lot of their income are spent on the production chain.

2.2.3 Factory certification and second payout pricing

In 2007, multinational tea company Unilever launched a partnership with the Kenya Tea Development Agency (KTDA) to help bring Kenya's more than 500,000 small-scale tea farmers up to the certification standard set by the Sustainable Agriculture Network, a global coalition of environmental organizations. To participate, farmers had to fulfill dozens of criteria related to worker safety, environmental management, and agricultural practices.

The KTDA, a private company that had been government run until 2000, was able to roll out certification quickly and on an unprecedented scale, thanks to its large market share, its rapport with farmers, the willingness of multinational companies to support high-quality sustainably grown tea, and funding by donor organizations. By mid-2016, all of Kenya's smallholders had met certification standards, and Unilever's flagship Lipton brand was selling 100%-certified tea. Soon after, other major global brands met the same target. Farmers pointed to increased yields, stronger health and safety procedures, and improved livelihoods as benefits of the certification initiative which leads to increase payout to them (KTDA, 2017).

In many countries, smallholder certification initiatives failed to gain traction at the speed and scale that Rainforest Alliance tea certification did in Kenya. Certain important preexisting conditions helped facilitate the rapid expansion of tea certification in Kenya. Because more than 95% of tea produced in Kenya was exported, producers were tied closely to global rather than domestic demand. In countries and industries in which domestic demand was strong, producers could choose to serve the local market rather than bear the cost of responding to shifting

international standards ends up paying less to customers because their product does not attract international market (KTDA, 2017).

The SAN's Sustainable Agriculture Standard had 100 criteria divided into 10 principles: Social and environmental management system, ecosystem conservation, wildlife protection, water conservation, fair treatment and good working conditions for workers, occupational health and safety, community relations, integrated crop management, soil management and conservation, integrated waste management. To earn certification, farms had to comply with critical criteria as well as at least 50% of the criteria under each principle and 80% of all criteria. For the KTDA factories, all smallholder farmers had to meet 50% of criteria under each principle and all critical criteria; and the average compliance rate for noncritical criteria among all farmers at the factory had to be above 80%. In addition, each KTDA factory had to comply with the 16 criteria under SAN's group certification standard, which was designed for smallholders that applied for certification in groups. To comply with the group standard, factories had to have smallholder training programs in place, a risk assessment system to identify and address criteria that smallholders found difficult to comply with, and an internal management system to organize and monitor all farmers in the group with the sole aim of increasing payout to farmers (KTDA, 2017).

All farmers at the pilot factories not just those involved in the field schools enjoyed the financial benefits of Rainforest Alliance certification because of the premium that Unilever paid on each kilogram of tea purchased from certified factories which was €1.05/kg. Funding was channeled through the Rainforest Alliance and other environmental NGOs operating in Kenya. Those NGOs hired specialist staff to train factory workers and lead farmers at KTDA factories and at other private factories

across Kenya to embrace fully all the required certification requirement so that they can earn more from their green tea. IDH matched any funding contributed by the multinational companies involved and later began directly funding the expansion of farmer field schools through the KTDA (Ganewatta 2002).

A third policy established by the government of Kenya (GOK) is the search for new emerging markets with strong potential. The identified markets included China, Eastern Europe, and countries of Near East as well as North America. In 2010, the Tea Board of Kenya and other stakeholders developed a stamp of origin which was mainly concerned with consolidating the identity of Kenyan tea especially in the international markets and this was aimed at attaching a price tag to the green tea product which could translate to better payout to green tea farmers (TBK, 2011).

2.2.4 International market forces and second payout pricing

There is no single world payout for tea but rather differing payouts at different auctions. Between 1970 and 2002 the payout trend was downward, with supply rising more quickly than demand. The World Bank figures suggesting that tea payouts fell by 44 percent in real terms over these years. Payouts have since bounced back, more than doubling between 2002 and September 2009 (Agritrade, 2010). This payout explosion was the result of four years when the growth in global demand outstripped production, of political events in Kenya, and of a general drought, that affected East Africa, India and Sri Lanka. Output then fell by 0.64% between 2007 and 2009, while consumption showed a rise of only 0.21 percent (Agritrade, 2011). The UN Food and Agriculture Organization (FAO) states that the unprecedented rise seen generally in food commodity payouts in 2008 had only a limited impact on tea. On the supply side, very few producers abandoned tea in favor of the food staples which would have

proved more profitable; on the demand side, almost no substitution effect was observed (Agritrade, 2011). This was especially true to Kenya' farmers, which find that under the KTDA scheme risk is lower than changing to a more profitable crop such as sugarcane (Buch-Hansen, 2012). In the world tea industry, usually smallholder farmers are payout-takers, with little relationship to buyers and little choice about who they sell to (FT, 2010). Due to the industry organization, in Kenya this is partially true. Smallholders are far from the tea auction, but control a highly integrated value chain under the KTDA. Quality is an important issue and each bulk sold is traced to its corresponding factory, and paid accordingly to its achieved payout.

The presence of close substitutes decides and limits the payout of the firm's goods and services without inducing substitution and market erosion. A profitable firm attracts potential new entrants (Porter, 1985, 1990, 2000). This observation is relevant to the current study in that Kenyan tea exported to foreign markets is of high quality and is preferred as compared to the competitors' tea. International Tea Committee (2010) indicated that creating defendable position in the market place and coping successfully with the five competitive forces should guide the Kenyan tea industry players in establishing strategic management practices to enhance competitiveness in the global tea industry. Although Kenya has maintained export leadership position worldwide, the country has continually earned low returns from her tea exports compared to other tea exporting countries (Sanga, 2011; Mbui, 2015).

In the tea supply shackle, the payouts of made tea are a result of the costs of production and transportation costs (Van der Wals, 2008). On the other hand, the most significant cause of dwindling payouts of tea is insistent situation of overflow on the

international markets and the tight competition among tea producing countries for the market share. Similarly, there is irregular value spreading where the tea supply chain tends to be composite. These complexities in supply shackle are as a result of many actors such as involvement of producers, collectors, brokers as well as packers. The dominance on the other hand in buying and retailing end of the market is basically by a few of multinational companies that benefit from retail payouts, (TBK, 2012).

An important part of the global production of tea is traded at auctions. Nowadays, the main auction centers are in India (Kolkata and Kochi), Sri Lanka (Colombo) and Kenya (Mombasa). Around 85 percent of Kenyan tea is supplied through the Mombasa Tea Auction (MTA), the second largest tea auction in the world, which handles the marketing of tea from ten countries in Africa to over 45 different global markets (Kariuki, 2007). The tea auction system brings the buyers and sellers together to determine the payout through interactive competitive bidding on the basis of prior assessment of quality of the tea.

Manufactured tea is dispatched from various gardens/estates to the auction centers, for sale through the appointed auctioneers. On receipt of the tea, the warehouse keeper sends a 'weighment report', showing the date of arrival and other details pertaining to the tea, including any possible damage or short receipt from the carriers (Kariuki, 2017). The tea is catalogued on the basis of its arrival date at the auctions. Within the framework of the respective Tea Trade Associations, the quantities of tea for auction are determined according to the rate of arrival at a particular auction centre.

Registered buyers, representing both the domestic trade and exporters, receive samples of each lot of tea catalogued. These samples are normally distributed a week ahead of each sale, enabling the buyers to taste, inform their principals and receive

their buying orders in good time for the auction sales. The auctioneers taste and value the tea for sale, and these valuations are released to the traders. Guidelines for the payout levels likely to be established at the auction sale are formulated on the basis of these valuations and the previous sale payouts (SOMO, 2016).

Generally, brokers must be registered with the appropriate tea board in order to operate, which limits the number of auction houses where tea can be sold. The following are the only registered tea brokers found in Kenya: Africa Tea Brokers Ltd, Anjeli Limited, Bicorn Exim Ltd, CentreLine Tea Brokers Ltd, Choice Tea Brokers Ltd, Combrok Ltd, Prudential Tea Brokers (E.A.) Ltd, Tea Brokers East Africa Ltd, Union Tea Brokers Ltd and Venus Tea Brokers Ltd (TBK, 2012). Usually in the tea world market, each important auction sales are controlled by a small number of buyers. New buyers are discriminated against and their bids are not easily accepted. Smaller buyers have difficulties facing up to the bigger buyers who also have stakes in blending and packaging. Unknown buyers are not allowed into the auctions at all (SOMO, 2006). In Mombasa, only six multinational companies account for two-thirds of the tea traded through the auction (Van der Wal, 2008). It is clear that the buying behavior of the big companies could have a major impact on the payout paid at the auction.

The large tea companies have a considerable influence on the supply and demand of tea, and thus on the payout-fixing process. Their market power is a major determinant at tea auctions. With their buying policy, these corporations strongly influence both payout movements and the demand for certain qualities of tea. Their ownership of both plantations and processing factories -horizontal integration- is essential. Vertical integration - companies having a strong influence on transport companies and

shipping agencies and so on - adds to the powerful position of the large tea companies. This concentration of power, with corporations sometimes controlling the entire production process from tea shrub to tea bag, offers ample scope for manipulation (SOMO, 2016).

In 2005 a new tea auction was set up in Dubai Tea Trading Centre which trades teas from 13 producing countries, including Kenya, Malawi, Rwanda, Tanzania, Zimbabwe, Ethiopia, as well as India, Sri Lanka, Indonesia, Vietnam, Nepal, China and 20 Iran. The centre is reported to be considering the launch of a tea futures market (Agritrade, 2010). The KTB also reported a sharp rise in sales to the United Arab Emirates, which increased by 73% to 22,000 tonnes. The hub provided by the Dubai Tea Trading Centre saw a record year in 2010, trading 10,600 tonnes of tea, a 41% increase on 2009. This is partly due to good harvests in the countries such as Kenya and Sri Lanka. But it is also linked to a continuing rise in demand from the countries of the Near East and the Community of Independent States (CIS), geographically close to Dubai, which now represent 27% of global exports. Dubai is pursuing an aggressive strategy, offering up to 60 days' free storage, and is developing its activities in packaging and labeling locally processed tea (Agritrade, 2011).

The Kenyan tea trading system is through auction which is almost impossible for new sellers to participate in tea trade due to the set trading conditions which ultimately act as barriers to entry in tea trade. As a result, the competitiveness of Kenyan tea continues to dwindle given that no new demands are created in the traditional markets since it difficult for Kenya tea to penetrate to new market which is dominated by other countries, and that the product sold by auctioneers has been the same all through and no new participants are around in tea trade thus giving room to consumers to switch to

competitors' products this has affected the prices paid to farmers on green leaves (Agritrade, 2010).

2.3 Theoretical Framework

The following theories will guide the study

2.3.1 New Trade Theory

This theory was developed by Krugman in 1980 and state that trade is a collection of economic models in international trade. The theory recognized that countries producing similar goods and services continue to engage in trade with one another by explaining globalization, costs of economies of scale and specialization for developing nations. According to the theory, early entrants in a given industry have inherent advantage in that industry because they have ample time at their disposal to attain economies of scale making it difficult for new firms to compete. Thus, emerging industries in developing nations find it difficult to position themselves in the existing global market because developed firms and nations' dominate the market.

This theory supports the objective on access to international market forces since, Kenya which specializes on production of black CTC tea compete for international market with other countries like China, Srilanka and India who produce similar tea. Similarly, the traditional markets of tea are well established in the global market, making it very difficult for Kenyan tea to enter new markets.

2.3.2 Theory of Diminishing

The theory of diminishing will guide on the production cost and payout differential since it operate in tea production activities than others. The theory have been found to operate in agricultural production more regularly than in industrial production because

in agriculture, natural factors play a predominant role whereas man made factors play a major role in industrial production. However, despite these limitations, the marginal returns to a variable input eventually decreases by increasing the units of the input to a fixed factor of production (Kunwar & Nyandemo, 2007). This relates very well to the concept of optimum capacity utilization in a tea processing factory at the point where the minimum cost of production is to be achieved.

2.3.3 The Theory of Competitive Advantage

Porter proposed this theory in 1990. The theory suggests that states and businesses should pursue policies that create high-quality goods to sell at high payouts in the local and international markets. This signifies that competitive advantage has the ability to stay ahead of present or potential competition ensuring superior performance and competitive advantage.

The theory also provides the understanding that resources held by a firm and the business strategy have a profound impact in generating its competitive advantage and competitiveness. The theory specifies the five forces of industry competitiveness forces that shape a firm's strategy and competitiveness. The competitive forces include the firm's buyers or markets, suppliers, competitors, substitute products and the threat of new entrants. Each of the five forces determine the payouts that firms charge for their products, the costs incurred and the investments made in pursuit of creation and sustainability of entry barriers in the industry. The power of buyers determines the payouts charged in the market place by a firm. The greater the buyer's power, the lower the firm's ability to payout high.

The power of suppliers determines the cost of production on firm's inputs. The higher the supplier's power, the higher the costs incurred. This observation is similar to the current status of Kenyan tea producers who incur higher production costs and the purchasing power of the buyers determines the payout of the tea at the auction. The breadth and depth of competitive rivalry determine profits not only by constraining a firm's ability to payout, but also by constraining its costs and its investments.

Porter (2002) advised that to remain competitive in the global market, firms have to strategically choose between variety based positioning, needs-based positioning and access-based positioning. This theory supports the current study quality of green tea leaves and factory certification which may enhance competitiveness of Kenyan tea.

2.4 Conceptual Framework

The study conceptualizes the determinants of second payout which is the dependant variable on the differential of green tea leaves which is the independent variable. Figure 2.1 shows the conceptual framework.

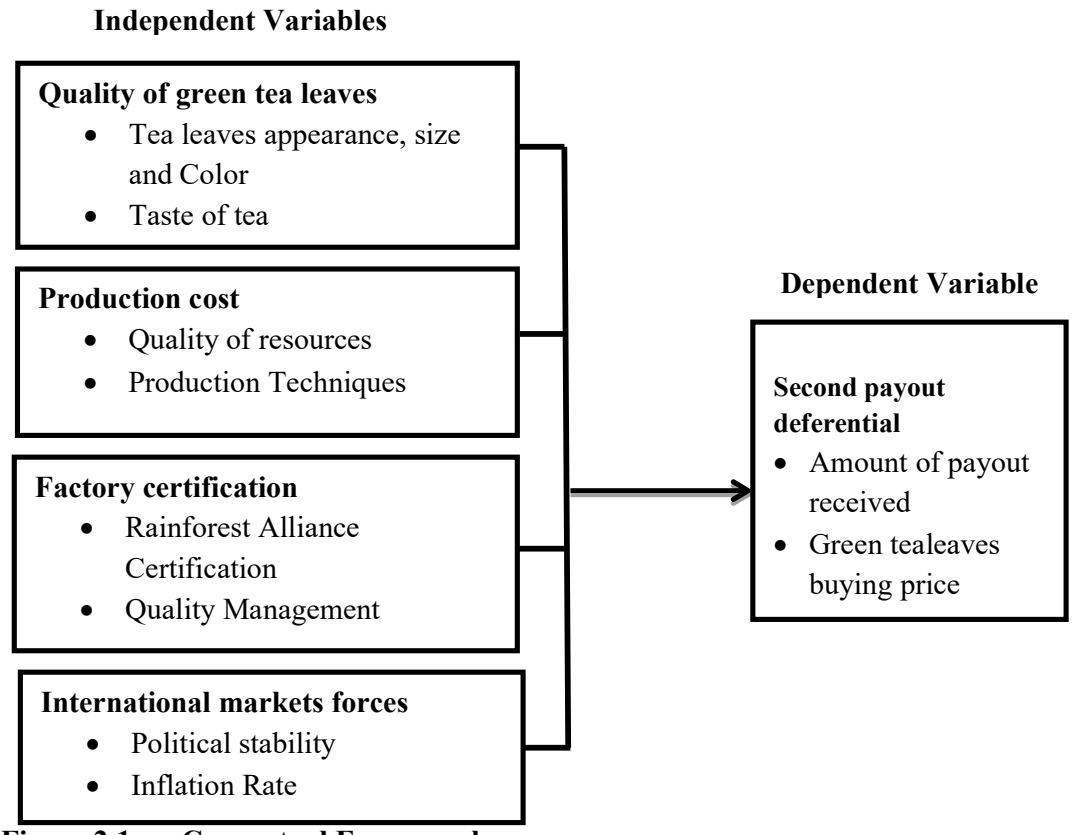

Figure 2.1 Conceptual Framework

Source: Research Data (2022)

2.5 Identification of Research Gap

In a study by Kagira *et al*. (2012) on sustainable methods of addressing challenges facing Kenya smallholder's tea farmers from the whole supply chain perspective used descriptive research design. The suggested further study on sustainability strategies for the smallholder farmers and stressed the need for further research in identifying major resources used in green tea production and assess their sustainability. This study will seek to assess the determinant of green leaves payout differentiation in KTDA managed factory.

The study by Nyangito (2001), in his contribution on problems ailing the small tea farmer using a case study research design cited lack of value addition in tea as a commodity which is sold mainly in its raw form and used to blend other tea in the world. Here recommended that further research be done in the area of value addition for tea, noting that this would improve farmers' income and that product would remain competitive for a long time. Wal (2018), in his study on labour power of on-farm wage labour in smallholder tea production in Western and Central Kenya using a comparative study suggested that 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. 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 will focus specifically on the production of quality green leaf, production cost, factory certification and international market force on second payout pricing of green tea leaves among Kenya tea development agency managed factories in zone 9, Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses research design to be used, study area, target population, sample and sampling procedures, as well as methods of data collection and data analysis.

3.2 Research Design

The study utilized across sectional research design. Cross sectional research design is a type of observational study design which measures the outcome and exposures in the study participants at the same time. A cross sectional survey may be purely descriptive and used to assess the burden of a particular phenomenon in a defined population (Kothari, 2007). Cross sectional research design are used for population-based surveys and to assess the prevalence of a given aspect and allows the researcher to collect data from the study subjects. Further the design and patterns of data can be investigated and generalized to a large population (Best & Khan 2003).

3.3 Study Area

The study was conducted at Zone 9 KTDA managed factories. These factories are; Motigo, Tirgaga, Kapkoros, Mogogosiek, Kobel, Boito, Kapset and Rorok which are all in Bomet County. Bomet County is located in the Central Rift region of Kenya. It is bordered by four counties, namely; Kericho to the North, Nyamira to the West, Narok to the South and Nakuru to the North-east. It has a population of 724,186 and an area of 1,630.0 km^2. Bomet County was chosen for the study due to its accessibility to the researcher, the availability of small holder tea farming and that little research has been conducted in area yet it is also producing tea.

3.4 Target Population

According to KTDA Zone 9 office records there are; 56 factory management staff, 19 directors and 11 KTDA Zone 9 senior management staff. The target population was 86 respondents.

Table 3.1 Target population

Organization	Frequency	Percentage
Factory Management Staff	56	29
Directors	19	58
Zone 9 management staff	11	13
Total	**86**	**100**

Source: KTDA Zone 9 Human Resource Records (2022)

3.5 Sample Size and Sampling Procedure

The sample size was 86 respondents determined through the census technique whereby all the subjects were involved in the study since the target population was small. The study used census methods because it gave accurate information for many subdivisions of the population and that the researcher easily got the data for small population hence satisfactory response rates was achieved and that the estimates was not subjected to sampling error. Factory managers, zone 9 senior Management staff and Directors was sampled because they were the key people who determine the amount of green tea leaves payout to be given out.

3.6 Data Collection Instruments

In this study, primary data was collected from factory management staff, factory directors and KTDA Zone 9 Office staff using a structured questionnaire. The questionnaire was divided into various sections and was administered through dropping the questionnaires to the sample population and collecting later. In order to collect reliable and valid information, the researcher contacted the respondents who participated in the study.

3.6.1 Validity of Instrument

In order to establish the validity of the instrument, marketing experts and the supervisors were consulted in the development of the research instrument and their inputs incorporated in the final research instrument. To have a valid and reliable data, the researcher ensured that the questionnaire was well formulated so as to allow error minimization. Construct validity, content validity and criterion validity were measures which were used to measure the validity of the instrument. Professional in a Marketing field who was the research supervisors were used to assess content validity, (Goldberg *et al.*, 2016). To ascertain the criteria related validity, the outcomes of the pilot test was compared to the predictive responses. Construct validity was measured by discussing with the research supervisors who are expert in the field of research to counter check of the content of questionnaire.

3.6.2 Reliability of Instrument

Reliability is the consistency of the instrument to shows the same results time after time. In order to measure consistency of the information, a pilot study was done in Zone 8 factories and the information gathered from the questionnaire through a test and retest of 16 employees was compared so as to determine the quality and accuracy

of the instrument. Cronbach alpha was used to test the results of the pilot where reliability value of 0.827 was actualized implying that the instrument was reliable. Table 3.2 show the reliability of each study variable;

Table 3.2 Reliability Test

Constructs	No. of Items	Cronbach Alpha
Quality of green tea leaves	6	0.826
Production cost	5	0.823
Factory certification	6	0.834
International market forces	10	0.823
Average		0.8265

Source: Research Data (2022)

3.6.3 Pilot Study

According to Eldridge et al. (2016), pilot study usually focuses on an experiment, project, or development undertaken in advance of a future wider experiment, project, or development. A pilot study is often performed to test the feasibility of techniques, methods, questionnaires and how they function together in a particular context; it can also reveal ethical and practical issues that could hamper the main study (Doody & Doody, 2015). Pilot studies should be undertaken to identify and mitigate risks associated with future study design, sample size, sample selection, data collection, data management, and data analysis (Jairath, Hogerney, & Parsons, 2000; Moore et al., 2011).

A pilot study was done in KTDA Zone 8 factories and this helped researcher identify design flaws, refine data collection and analysis plans; gain experience with and train the research team; and learn important information about participant burden prior to undertaking the study (Beebe, 2007). Where participants experience difficulty in completing research instrument during the pilot study, it prompted the researcher to modify item wording, change the order in which questions are presented, and also alter the instrument format (Conn et al., 2010).

3.7 Data collection Procedures

An introductory letter from University of Kabianga was used by the researcher to seek for permission from KTDA authorities to undertake the study. The same letter was used in applying for permit from NACOSTI. The researcher then visited KTDA zone 9 managed factories to inform the respondents of the research intentions. Researcher with the help of research assistants were trained prior to the study administered questionnaire to respondents. The data were collected from the respondents guided by the purpose of the study only.

3.8 Data Analysis and Presentation

The collected data was fed into a Statistical Package for Social Science Version 23 (SPSS 23) to perform data analysis where descriptive statistics in which means and standard deviations were outputted and inferential in which correlation, and regression coefficient were computed. The data was then presented using tables, graphs and charts. The study adopted a simple regression model which is a linear stochastic model that relates two variables with each other (Talia, Trunfio, and Marozzo, 2015). The general form of the model was;

$$Y = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta 4\, X_4 + e$$

Whereby;

Y = Second payout pricing of green tea leaves, β = Coefficient, X_1 = Quality of green tea leave, X_2 = Production cost, X_3 = International market forces, X_4 = Factory certification, e = Error of margin

3.9 Ethical Consideration

First the researcher obtained permission from the relevant authorities in this case the University of Kabianga, KTDA managed factories and NACOSTI. The researcher then visited the Zone 9 factories to introduce himself and notifying them of the research intentions. The respondents were assured of confidentiality in that the information obtained was used for academic propose only.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents results of the findings and its discussions based on the objectives that the study sought to achieve which were; determine the effect of quality of green tea leaves on second payout differentials; establish the effect of production cost on second payout differentials; determine the effect of factory certification on second payout differentials; and assess the effect of international market forces on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya. It provides the response rate, general background information of the respondents and descriptive analysis of the study variables. The chapter also describes the results of statistical analysis to test the hypotheses and presents the discussions of the results from the findings.

4.2 Response Rate

Response rate is the extent to which the final data sets include all sampled members and is calculated as the number of respondents with whom questionnaires are completed and divided by the total number of respondents of the entire sample including none respondents (Orodho, 2003). The study sought to collect data from 86 respondents and a total of 81 responses were received translating to a response rate of 94.2% indicating that the results of this study are reliable. The high response rate was attributed to the fact that most of the questions were semi-structured making it easy for the respondents to fill in the questionnaires. Furthermore, the questionnaires were delivered and collected by hand and hence there was a close contact and follow-up with the respondents.

Kothari (2004) presupposes that a response rate of 50% is average, 60-70% is adequate while above 70% is considered to be excellent response rate. This response rate was therefore, considered excellent representative of the respondents to provide information for analysis and generate valid conclusions.

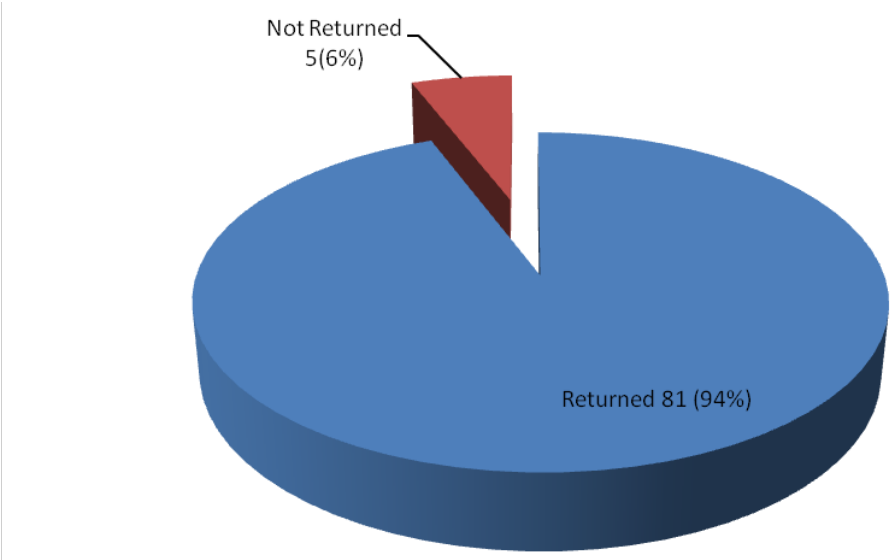

Figure 4.1: Response Rate

Source: Researcher (2022)

4.3 General Information

Responses on the general information of respondents are discussed below.

4.3.1 Questionnaires per Respondents

Respondents were asked to indicate the position they were in and the response were as per figure 4.2.

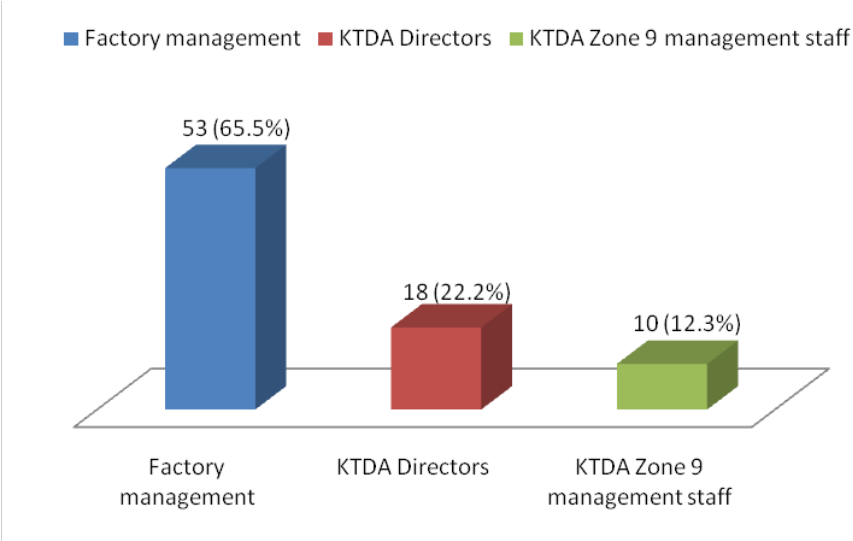

Figure 4.2: Questionnaire Distribution

Source: Researcher (2022)

Figure 4.2 shows majority of the respondents who responded to the study were factory management who were 53 representing 65.5%, KTDA Directors were 18 representing 22.2% while KTDA Zone 9 Management staff were 10 representing 12.3%. This shows that the information received were a true picture of green leaves payout determinants since the respondents were all conversant with the requirements followed during the determination of green leaves payout differential.

4.3.2 Educational Qualification of Respondents

Respondents were asked to indicate their level of education; this was very significant in establishing the knowhow of the respondents since a more educated person understands and knows more in a given area than a less educated person. Table 4.1 shows the distribution of respondents based on their qualifications.

Table 4.1 Highest professional qualifications attained

Highest qualifications	Frequency	Percent
Certificate	1	1.2
Diploma	18	22.2
Degree certificate	48	59.3
Post-Graduate	14	17.3
Total	**81**	**100.0**

Source: Research Data (2022)

Table 4.1 shows that majority of the respondents were 48 representing 59.3% had bachelor's degree, diploma holders were 18 representing 22.2%. Respondents who had postgraduate qualification were 14 representing 17.3% while those who had certificate qualifications were 1 representing 1.2%. This reveals that the respondents were educated and knowledgeable enough to respond to the study.

Table 4.2 Length of working in the organization

Length service	Frequency	Percent
Less than 5 years	23	28.4
6 to 10 years	28	34.6
11 to15 years	15	18.5
16-20 years	7	8.6
Over 20 years	8	9.9
Total	**81**	**100.0**

Source: Research Data (2022)

Table 4.2 reveals that majority of the respondents who were 28 representing 34.6% had worked for KTDA managed factories for between 6 to 10 years. Respondents who had worked for the organization for less than 5 years were 23 representing 28.4%, those who had worked for between 11 to 15 years were 15 representing 18.5%, those who had worked for between more than 20 years were 8 representing 9.9% and those who had worked for between 16 to 20 years were 7 representing 8.6%. This reveals that respondents were experience enough since they all had worked for the organization for more than five years hence their responses can be relied on as a true status of green leaves payout differential in KTDA managed factories in zone 9.

Respondents were asked if they were satisfied with the amount of money paid to their tea growers in the last one year for the made tea sold and their responses as per Figure 4.3.

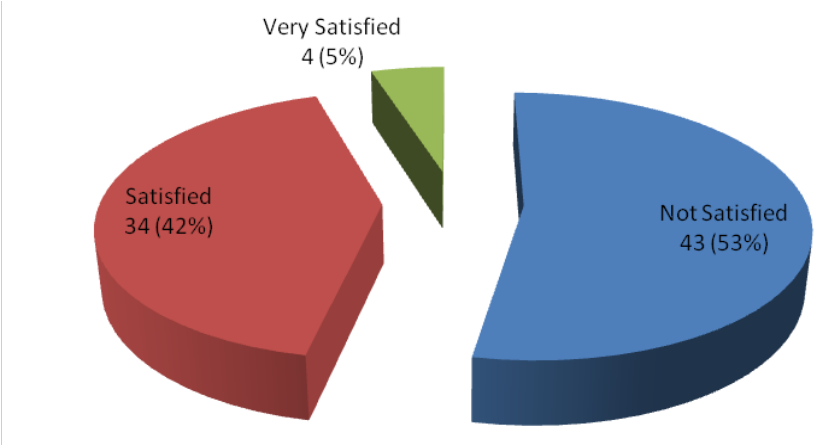

Figure 4.3 Level of satisfaction on green tea leaves payout

Source: Research Data (2022)

Figure 4.3 reveals that majority of the respondents who were 43 representing 53% were not satisfied with payout of made tea. Respondents who were 34 representing 42% were satisfied with the payout of made tea while 4 respondents representing 5% were very satisfied with the payout of made tea.

4.4 Descriptive statistics

The section presents the descriptive findings based on the results of the study in terms of frequencies and percentages.

4.4.1 Quality of Green Tea Leaves on Second Payout Differential

The first objective of the study was to determine the effect of quality of green tea leaves on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya.

Respondents were asked to respond on the statements on the effect of quality of green tea leaves on second payout pricing. Their response were on a Likert scale of 1-5 where: 1 was strongly disagree, 2 was disagree, 3 was Undecided, 4 was Agree and 5 was Strongly agree. The results are presented in Table 4.4.

Table 4.4 Quality of green tea leaves

Statements on Quality of green tea leaves	1	2	3	4	5
Our tea leaves have deep, dark green color with a glossy damp appearance	46 (56.9%)	12 (14.8%)	4 (4.9%)	10 (12.3%	9 (11.1%)
Teas grown in our zone are on the recommended soil.	45 (55.5%)	32 (39.5%)	0 (0.0%)	2 (2.5%)	2 (2.5%)
Our green leaves are processed by Fair Trade Certified factories	34 (42.0%)	43 (53.0%)	2 (2.5%)	2 (2.5%)	0 (0.0%)
Our made tea taste good and is of good flavour	44 (54.4%)	1 (1.2%)	0 (0.0%)	32 (39.5%)	4 (4.9%)
Our green tea leaves are of bright leaves	33 (40.7%)	13 (16.0%)	2 (2.5%)	8 (9.9%)	25 (30.9%)
We pluck green tea leaves which are of equally sizes with a needle-like shape.	47 (58.1%)	9 (11.1%)	1 (1.2%)	4 (4.9%)	20 (24.7%
Quality of green leaves is a key determinant of green leaves payment	0 (0.0%)	6 (7.4%)	0 (0.0%)	28 (34.5%	47 (58.1%)
KTDA factories in our Zone pay varying green leaves payments based on the quality of tea they are supplied.	4 (4.9%)	4 (4.9%)	3 (3.7%)	32 (39.7%)	38 (46.8%)

Source: Research Data (2022)

Table 4.4 shows that majority of the respondents who were 46 representing 56.9% strongly disagreed together with 12 representing 14.8% who disagreed that their tea has deep, dark green color with a glossy damp appearance. Respondents who were 10 representing 12.3% agreed as well as 9 respondents representing 11.1% strongly agreed that their tea has deep, dark green color with a glossy damp appearance while 4 respondents representing 4.9% were undecided.

Majority of the respondents who were 45 representing 55.5% strongly disagreed as well as 32 respondents representing 39.5% disagreed that tea grown in their zone is on the recommended soil. The respondents who were 2 representing 2.5% agreed and the same number of respondents strongly agreed that tea grown in their zone is on the recommended soil.

Respondents who were 43 representing 53.0% disagreed as well as 34 respondents representing 42.0% who strongly disagreed that their green leaves are processed by Fair Trade Certified factories. Respondents who were 2 representing 2.5% agreed that their green leaves are processed by Fair Trade Certified factories while 2 respondents representing 2.5% were undecided.

Majority of the respondents who were 44 representing 54.4% strongly disagreed together with 1 respondent who disagreed that their made tea taste good and is of good flavor. The respondents who were 32 representing 39.5% agreed as well as 4 respondents representing 4.9% who strongly agreed that their made tea taste good and is of good flavor.

Respondents who were 33 representing 40.7% strongly disagreed as well as 13 respondents representing 16.0% disagreed that their green tea leaves are of bright leaves. Respondents who were 25 representing 30.9% strongly agreed as well as 8 respondents representing 9.9% agreed that their green tea leaves are of bright leaves while 2 respondents representing 2.5% were undecided.

Majority of the respondents who were 47 representing 58.1% strongly disagreed as well as 9 respondents representing 11.1% who disagreed that they pluck green tea leaves which are of equally sizes with a needle-like shape. Respondents who were 20

representing 24.7% strongly agreed as well as 4 respondents representing 4.9% who agreed that they pluck green tea leaves which are of equally sizes with a needle-like shape. One respondent representing 1.2% was undecided.

Majority of the respondents who were 47 representing 58.1% strongly agreed as well as 28 respondents representing 34.5% who agreed that quality of green leaves is a key determinant of green leaves payment. Respondents who were 6 representing 7.4 % disagreed that quality of green leaves is a key determinant of green leaves payment.

Majority of the respondents who were 38 representing 46.8% strongly agreed as well as 32 respondents representing 39.7% who agreed that KTDA factories in our Zone pay varying green leaves payments based on the quality of tea they are supplied. The respondents who were 4 representing 4.9% strongly disagreed and the same number disagreed that KTDA managed factories in our Zone pay varying green leaves payments based on the quality of tea they are supplied. The respondents who were 3 representing 3.7% were undecided.

This implies that the green tea leaves delivered to KTDA managed factories in Zone 9 are not of deep, dark green color with a glossy damp appearance; the tea are not grown in the recommended soil areas; the green leaves are processed by factories which are not Fair Trade Certified; the green tea does not taste good and is not of good flavor and that the leaves are not of bright. The plucked green tea leaves are not of equally sizes and are not of needle-like shape. Quality of green leaves is a key determinant of green leaves payment and that KTDA managed factories in Zone 9 pay varying green leaves payments based on the quality of tea they are supplied.

The findings establish that the tea are not grown in the recommended soil areas and that plucked green tea leaves are not of equally sizes and are not of needle-like shape. This concurs with CPDA, (2017) which found out that even though the plantations have better organizational management in processing quality tea standards, their produce is usually of lower quality than those of smallholders and this is mainly because a big part of tea quality depends on the collection process which is the plucking technique. This has contributed to low payout due to the quality of green tea leaves being plucked.

The findings established that the green tea leaves delivered to KTDA managed factories in Zone 9 are not of deep, dark green color with a glossy damp appearance. It also establish that green tea does not taste good, are not of good flavor and that the leaves are not of bright color hence does enable farmers to get better payout. This concurs with Vn del Wal, (2018) who establish that tea quality and payout are determined on the basis of liquor, aroma/ flavor and leaf appearance and that consumers perceive quality differences on the attributes of taste, pungency, strength, freshness, color and packaging. This is contrary to Miller & Pearce, (2018) who postulate that in the past, quality was thought to mean a focus on doing the repeatable things well and that it suggested predictability and reliability as applied to the manufacturing environment.

The findings established that the quality of green leaves is a key determinant of green leaves payment and that KTDA managed factories in Zone 9 pay varying green leaves payments based on the quality of tea they are supplied. This concurs with Zeithaml & Bitner, (2010) who noted that quality is meeting and or exceeding the customer's expectations for both products and service and this brings the differences in payout

received by farmers. The findings concurs with Cheruiyot (2013), who established that the quality of green leaf is a very important factor impacting the overall quality of tea which smallholders have not been able to create and also limited to tea factories. These factories on the other hand are in competition for green leaves from the KTDA farmers to run the working shifts and ensure continuous production of made tea this makes the quality of green leaf compromised leading to low payout.

The findings that green leaves are processed by factories which are not Fair Trade Certified concurs with Kimenyi (2012) who argued that most of the agricultural products in Kenya are sold abroad in form of raw materials since the factories are not certified. This denies farmers investment opportunities such as processing and packaging of the products which would help increase profits and bring about better payout and this has rendered Kenyan tea to be used to blend lower quality tea from other countries since it is sold in semi-processed form.

4.4.2 Cost of Production on Second Payout Differential

The second objective was to establish the effect of production cost on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya. Respondents were asked to respond to the statements on the effects of cost of production on second payout pricing. Their response were on a Likert scale of 1-5 where: 1 was strongly disagree, 2 was disagree, 3 was Undecided, 4 was Agree and 5 was Strongly agree. The results are presented in Table 4.5.

Table 4.5 Cost of production

Statement on Cost of Production	1	2	3	4	5
We have adopted new and modern technology in the production of green tea leaves and this has reduced the cost of production which have translated to high payout price	41 (50.7%)	6 (7.4%)	4 (4.9%)	6 (7.4%)	24 (29.6%)
High cost of production have been reduced thanks to the quality of resources which KTDA have deployed and this has increase the payout price	46 (56.9%)	7 (8.6%)	4 (4.9%)	6 (7.4%)	18 (22.2%)
We have adopted new and improved techniques of production hence it has reduced our cost of production leading to high price payout	38 (46.9%)	9 (11.1%)	3 (3.7%)	6 (7.4%)	25 (30.9%)
Main cost of production in the tea factory has reduced due to mass production in our zone hence increase in price payout	43 (53.1%)	9 (11.1%)	8 (9.9%)	8 (9.9%)	13 (16.0%)
The high cost of input for green tea production translate to increase in the total cost of production leading to low price payout	5 (6.2%)	4 (4.9%)	2 (2.5%)	35 (43.2%)	35 (43.2%)

Source: Research Data (2022)

Table 4.5 reveals that majority of the respondents who were 41 representing 50.7% strongly disagreed as well as 6 respondents representing 7.4% who disagreed that they had adopted new and modern technology in the production of green tea leaves and this has not reduced the cost of production which had translated to low payout price. The respondents who were 24 representing 29.6% strongly agreed as well as 6 respondents representing 7.4% who agreed that they had adopted new and modern technology in the production of green tea leaves and this has reduced the cost of production which had translated to high payout price. The respondents who were undecided were 4 representing 4.9%.

The respondents who were 46 representing 56.9% strongly disagreed as well as 7 respondents representing 8.6% disagreed that the high cost of production has been reduced thanks to the quality of resources which KTDA have deployed and this has increase the payout price. The respondents who were 18 representing 22.2% strongly agreed as well as 6 respondents representing 7.4% who agreed that high cost of production have been reduced thanks to the quality of resources which KTDA have deployed and this has increase the payout price. Respondents who were 4 representing 4.9% were undecided.

Majority of the respondents who were 38 representing 46.9% strongly disagreed as well as 9 respondents representing 11.1% who disagreed that they have adopted new and improved techniques of production hence it has reduced our cost of production leading to high price payout. The respondents who were 25 representing 30.9% strongly agreed as well as 6 respondents representing 7.4% agreed that they have adopted new and improved techniques of production hence it has reduced our cost of production leading to high price payout while 3 (3.7%) respondents were undecided.

Majority of the respondents who were 43 representing 53.1% strongly disagreed as well as 9 respondents representing 11.1% who disagreed that the main cost of production in the tea factory has reduced due to mass production in our zone hence increase in price payout. The respondents who were 13 representing 16.0% strongly agreed as well as 8 respondents representing 9.9% agreed that the main cost of production in the tea factory has reduced due to mass production in our zone hence increase in price payout. The respondents who were undecided were 8 representing 9.9%.

The high cost of input for green tea leaves production translates to increase in the total cost of production leading to low price payout. This is as per the majority of the respondents who were 35 representing 43.2% who agreed and the same number strongly agreeing. The respondents who were 5represneting 6.2% strongly disagreed as well as 4 respondents representing 4.9% who disagreed that The high cost of input for green tea production translate to increase in the total cost of production leading to low price payout. The respondents who were 2 representing 2.5% were undecided.

This implies that KTDA managed factories in zone 9 have not adopted new and modern technology in the production of green tea leaves and this has increased the cost of production which has translated to low payout price. The high cost of production has not been reduced due to the quality of resources which KTDA have deployed and this has not increase the payout price. KTDA managed factories in zone 9 have not adopted new and improved techniques of production hence it has increase cost of production leading to low price payout. The main cost of production in the tea factory has not reduced due to mass production and this has decreased in price payout.

The high cost of input for green tea production translates to increase in the total cost of production leading to low price payout.

The findings that KTDA managed factories in zone 9 have not adopted new and improved techniques of production which has lead to increase cost of production thus low payout concurs with KTB (2012) which established that the cost of production of Kenyan tea is considered high compared to other tea producing countries and is causing uncertainty for the future of tea farming in Kenya. The findings that high cost of input for green tea production translates to increase in the total cost of production leading to low price payout concurs with Kumar & Shafabi, (2011) who noted that the high cost is due to high labour, high cost of farm inputs particularly fertilizers, high cost of energy or fuel at the factories, high cost of transport due to poor road and numerous taxes and levies as proposed all of which leads to reduction in payout.

The study found out that KTDA managed factories in zone 9 have not adopted new and modern technology in the production of green tea leaves and this has increased the cost of production which has translated to low payout price. This concurs with Karanga, (2014) who established that smallholder farms largely depend on family labour but also employ hired labour. These workers are often employed on a casual basis.

The findings that high cost of production has not been reduced due to the quality of resources which KTDA have deployed and this has not increase the payout price. This concurs with IDH, (2011) which noted that smallholders in the Kenyan tea sector face several challenges. First of all, power in the supply chain is highly concentrated on the buyer side. This puts pressure on the payouts paid to the producers which remain low relative to the retail payout (Ethical Consumer, 2013).

The findings that the main cost of production in the tea factory has not reduced due to mass production and this has decreased in price payout concurs with Owuor, (2015) who noted that smallholder yields are currently lagging those of large estates, partly due to inefficient use of resources as a result of a lower knowledge level regarding optimal input use and good agricultural practices. These suboptimal yields affect farmer income and thus absorption capacity at farm level to increase wages and invest capital in the farm and this leads to low payout being received by farmers since a lot of their income are spent on the production chain.

4.4.3 Factory Certification on Second Payout Differential

The third objective was to determine the effect of factory certification on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya. Respondents were asked to respond on the extent to which they agree with the statements on the effect of factory certification on second payout pricing. Their response were on a Likert scale of 1-5 where: 1 was strongly disagree, 2 was disagree, 3 was Undecided, 4 was Agree and 5 was Strongly agree. The results are presented in Table 4.6.

Table 4.6 Factory Certification

Factory Certification	1	2	3	4	5
Our factory creates and sustain clear vision and goals concerning quality management	38 (46.9%)	11 (13.6%)	1 (1.2%)	1 (1.2%)	30 (37.1%)
Our factory commits critical resources required for implementation of quality tea management and this has led to high green leaves payout	1 (1.2%)	4 (4.9%)	3 (3.7%)	47 (58.0%)	26 (32.2%)
Our factory managers are involved in all stages of quality management implementation and this has enabled factories to acquire certification hence leading to high payout	42 (51.9%)	5 (6.2%)	1 (1.2%)	2 (2.5%)	31 (38.2%)
Our zone managers have good experience in handling quality problems and issues and this has enabled us to always earn high payout	38 (46.9%)	6 (7.4%)	1 (1.2%)	6 (7.4%)	30 (37.1%)
Rainforest alliance certification on quality management is key to tea payouts	3 (3.7%)	10 (12.3%)	1 (1.2%)	37 (45.7%)	30 (37.1%)
Management of our factory provides leadership on implementation of factory certification and this has enhanced green leaves payout	37 (45.7%)	10 (12.3%)	1 (1.2%)	3 (3.7%)	30 (37.1%)
Factory quality management certification affects payout of green tea to farmers	6 (7.4%)	3 (3.7%)	2 (2.5%)	38 (46.9%)	32 (39.5%)

Source: Research Data (2022)

Table 4.6 show that majority of the respondents who were 38 representing 46.9% strongly disagreed as well as 11 respondents representing 13.6% disagreed that their factory creates and sustain clear vision and goals concerning quality management and has led to less payout received. The respondents who were 30 representing 37.1% strongly agreed as well as 1 respondent representing 1.2% agreed that their factory

creates and sustain clear vision and goals concerning quality management and has led to more payout received. One (1) respondent was undecided representing 1.2%.

Majority of the respondents who were 45 representing 51.9% strongly disagreed as well as 5 respondents representing 6.2% disagreed that their factory commits critical resources required for implementation of quality tea management and this has led to low green leaves payout. The respondents who were 31 representing 38.2% strongly agreed as well as 2 respondents representing 2.5% agreed that their factory commits critical resources required for implementation of quality tea management and this has led to high green leaves payout. The respondent who were undecided were 1 representing 1.2%.

Majority of the respondents who were 38 representing 46.9% strongly disagreed as well as 6 respondents representing 7.4% disagreed that their zone managers have good experience in handling quality problems and issues and this has not enable them to always earn high payout. The respondents who were 30 representing 37.1% strongly agreed as well as 6 respondents representing 7.4% agreed that their zone managers have good experience in handling quality problems and issues and this has enable them to always earn high payout. One (1) respondent was undecided representing 1.2%.

Majority of the respondents who were 37 representing 45.7% agreed as well as 30 respondents representing 37.1% who strongly agreed that rainforest alliance certification on quality management is key to tea payouts. Respondents who were 10 representing 12.3% disagreed as well as 3 respondents representing 3.7% strongly disagreed that rainforest alliance certification on quality management is key to tea payouts while 1 respondent representing 1.2% was undecided.

Management of factory did not provides leadership on implementation of factory certification and this did not enhanced green leaves payout; this is as per the majority of the respondents who were 37 representing 45.7% who strongly disagreed as well as 10 respondents representing 12.3% who disagreed. The respondents who were 30 representing 37.1% strongly agreed as well as 3 respondents representing 3.7% agreed while one (1) respondent was undecided.

Factory quality management certification affects payout of green tea to farmers. This is true since majority of the respondents who were 38 representing 46.9% agreed as well as 32 respondents representing 39.5% who strongly agreed to it. The respondents who were 6 representing 7.4% strongly disagreed as well as 3 respondents representing 3.7% agreed that factory quality management certification affects payout of green tea to farmers. The respondents who were undecided were 2 representing 2.5%.

This implies that KTDA managed factories in zone 9 does not creates and sustain clear vision and goals concerning quality management and has led to less payout; factories does not commits critical resources required for implementation of quality tea management and this has led to low green leaves payout; factory managers are involved in all stages of quality management implementation and this has not enabled factories to acquire certification hence leading to low payout; Zone managers do not have good experience in handling quality problems and issues and this has not enabled them to always earn high payout; Rainforest alliance certification on quality management is key to tea payouts; management of KTDA managed factories provides leadership on implementation of factory certification and this has not enhanced green

leaves payout and that factory quality management certification affects payout of green tea to farmers.

The study found out that management of KTDA managed factories provides leadership on implementation of factory certification and this will enhance green leaves payout. This finding concurs with KTDA, (2017) which noted that farmers increased their yields, had stronger health and safety procedures, and improved livelihoods as benefits of the certification initiative which leads to increase payout to them since factory quality management certification affects payout of green tea to farmers as established by the study.

The findings noted KTDA Zone managers do not have good experience in handling quality problems and issues and this has not enabled them to always earn high payout. This is agrees with KTDA, (2017) which establish that countries and industries which domestic demand was strong, producers could choose to serve the local market rather than bear the cost of responding to shifting international standards and ends up paying less to customers because their product does not attract international market.

The study found out that factories does not commits critical resources required for implementation of quality tea management and this has led to low green leaves payout. This concurs with KTDA, (2017) which noted that in KTDA managed factories, all smallholder farmers had to meet 50% of criteria under each principle and all critical criteria; and the average compliance rate for noncritical criteria among all farmers at the factory had to be above 80%. In addition, each KTDA factory had to comply with the 16 criteria under SAN's group certification standard, which was designed for smallholders that applied for certification in groups.

The study established that rainforest alliance certification on quality management is key to tea payouts hence there is need for all KTDA managed factory to comply with the group standard. This complies with KTDA, (2017) which posit that factories had to have smallholder training programs in place, a risk assessment system to identify and address criteria that smallholders found difficult to comply with, and an internal management system to organize and monitor all farmers in the group with the sole aim of increasing payout to farmers.

The findings that KTDA managed factories in zone 9 does not creates and sustain clear vision and goals concerning quality management and has led to less payout is contrary to TBK, (2011) which explained that Tea Board of Kenya and other stakeholders developed a stamp of origin which was mainly concerned with consolidating the identity of Kenyan tea especially in the international markets. This aims at attaching a price tag to the green tea product which could translate to better payout to green tea farmers. These will entails having managers get involved in all stages of quality management implementation and this will enabled factories to acquire certification hence leading to high payout established by the study.

4.4.4 International Market Forces on Second Payout Differential

The fourth objective was to assess the effect of international market forces on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya. Respondents were asked to indicate the extent to which they agree with the statement on international market forces and its effect on second payout. Their response were on a Likert scale of 1-5 where: 1 was strongly disagree, 2 was disagree, 3 was Undecided, 4 was Agree and 5 was Strongly agree. The results are presented in Table 4.7.

Table 4.7 International Market forces

Statement	1	2	3	4	5
International market forces influence the buying price of made tea and this affects also the payout of green tea leaves in our zone	2 (2.5%)	4 (4.9%)	2 (2.5%)	30 (37.0%)	43 (53.1%)
There is variations in the world tea market due to varied political instability and this affect the prices of tea in the international market leading to low green tea leave payout	2 (2.5%)	6 (7.4%)	1 (1.2%)	31 (38.3%)	41 (50.6%)
The inflation rates experienced in different countries and in different times affect the price of tea in the international market and this affects the payout prices of green tea leaves	3 (3.7%)	5 (6.2%)	1 (1.2%)	43 (53.1%)	29 (35.8%)
The more the number of brokers marketing tea product in the international market the less the payout of green tea leaves	10 (12.3%)	19 (23.5%)	7 (8.6%)	22 (27.2%)	23 (28.4%)
Market forces affect payout for small scale farmers	6 (7.4%)	5 (6.2%)	4 (4.9%)	39 (48.1%)	27 (33.3%)
There exist government policy that address the payout of green tea leaves for small scale farmers	35 (43.2%)	16 (19.8%)	8 (9.9%)	12 (14.8%)	10 (12.3%)
The fiscal and monetary policies that governments of Kenya put in place have enabled our factory pay more on green tea leave	30 (37.0%)	17 (21.0%)	7 (8.6%)	14 (17.3%)	13 (16.0%)
The more Kenya export tea to more countries the more payout is received for green tea leaves payout	10 (12.3%)	9 (11.1%)	4 (4.9%)	33 (40.7%)	25 (30.9%)
The more the demand of tea in the international market the more payout prices of green tea leave is received	6 (7.4%)	5 (6.2%)	3 (3.7%)	30 (37.0%)	37 (45.7%)
Known brand of black tea which factory in zone 9 specialize sells easily and quickly in the international market and this has increased in the payout prices for green tea leave	6 (7.4%)	5 (6.2%)	6 (7.4%)	41 (50.6%)	23 (28.4%)

Source: Research Data (2022)

Table 4.7 shows that majority of the respondents who were 43 representing 53.1% strongly agreed as well as 30 respondents representing 37.0% who agreed that international market forces influence the buying price of made tea and this affects also the payout of green tea leaves in their zone. The respondents who were 4 representing 4.9% disagreed together with 2 respondents representing 2.5% who strongly disagreed that international market forces influence the buying price of made tea and this affects also the payout of green tea leaves in their zone while 2 respondents representing 2.5% were undecided.

There is variations in the world tea market due to varied political instability and this affect the prices of tea in the international market leading to low green tea leave payout. This is true since majority of the respondents who were 41 representing 50.6% strongly agreed together with 31 respondents representing 38.3% who agreed to it. The respondents who were 6 representing 7.4% disagreed as well as 2 respondents representing 2.5% who strongly disagreed that variations in the world tea market due to varied political instability and this affect the prices of tea in the international market leading to low green tea leave payout. One (1) respondent representing 1.2% was undecided.

Majority of the respondents who were 43 representing 53.1% agreed as well as 29 respondents representing 35.8% strongly agreed that inflation rates experienced in different countries and in different times affect the price of tea in the international market and this affects the payout prices of green tea leaves. The respondents who were 5 representing 6.2% disagreed as well as 3 respondent representing 3.7% who strongly disagreed that that inflation rates experienced in different countries and in different times affect the price of tea in the international market and this affects the

payout prices of green tea leaves while one (1) respondent representing 1.2% was undecided.

The more the number of brokers marketing tea product in the international market the less the payout of green tea leaves. This is true since majority of the respondents who were 23 representing 28.4% strongly agreed as well as 22 respondents representing 27.2% who agreed. The respondents who were 19 representing 23.5% disagreed as well as 10 respondents representing 12.3% who strongly disagreed that the more the number of brokers marketing tea product in the international market the less the payout of green tea leaves. The respondents who were 7 representing 8.6% were undecided.

Majority of the respondents who were 39 representing 48.1% agreed as well as 27 respondents representing 33.3% strongly agreed that market forces affect payout for small scale farmers. The respondents who were 6 representing 7.4% strongly disagreed as well as 5 respondents representing 6.2% who disagreed that market forces affect payout for small scale farmers. The respondents who were undecided were 4 representing 4.9%.

The majority of the respondents who were 35 representing 43.2% strongly disagreed as well as 16 respondents representing 19.8% who disagreed that there exist government policy that address the payout of green tea leaves for small scale farmers. The respondents who were 12 representing 14.8% agreed as well as 10 respondents representing 12.3% strongly agreed that there exist government policy that address the payout of green tea leaves for small scale farmers. The respondents who were 8 representing 9.9% were undecided.

Majority of the respondents who were 30 representing 37.0% strongly disagreed as well as 17 respondents representing 21.0% disagreed that the fiscal and monetary policies that governments of Kenya put in place have enabled our factory pay more on green tea leave. The respondents who were 14 representing 17.3% agreed as well as 13 respondents representing 16.0% who strongly agreed that the fiscal and monetary policies that governments of Kenya put in place have enabled our factory pay more on green tea leave. The respondents who were undecided were 7 representing 8.6%

The more Kenya export tea to more countries the more payout is received for green tea leaves payout; this is as per the majority of the respondents who were 33 representing 40.7% who agreed as well as 25 respondents representing 30.9% who strongly agreed. The respondents who were 10 representing 12.3% strongly disagreed as well as 9 respondents who disagreed that the more Kenya export tea to more countries the more payout is received for green tea leaves payout. The respondents who were 4 representing 4.9% were undecided.

The more the demand of tea in the international market the more payout prices of green tea leave is received; this is as per the majority of the respondents who were 37 representing 45.7% who strongly agreed as well as 30 respondents representing 37.0% who agreed. The respondents who were 6 representing 7.4% strongly disagreed as well as 5 respondents representing 6.2% who disagreed that the more the demand of tea in the international market the more payout prices of green tea leave is received. The respondents who were undecided were 3 representing 3.7%.

Majority of the respondents who were 41 agreed representing 50.6% as well as 23 respondents representing 28.4% who strongly agreed that known brand of black tea which factory in zone 9 specialize sells easily and quickly in the international market

and this has increased in the payout prices for green tea leave. The respondents who were 6 representing 7.4% strongly disagreed as well as 5 respondents representing 6.2% who disagreed that that known brand of black tea which factory in zone 9 specialize sells easily and quickly in the international market and this has increased in the payout prices for green tea leave. The respondents who were 6 representing 7.4% were undecided.

This implies that the market forces influence the buying price of tea and this affects also the payout of green tea leaves in our zone; there is variations in the world tea market due to varied political instability and this affect the prices of tea in the international market leading to low green tea leave payout; the inflation rates experienced in different countries and in different times affect the price of tea in the international market and this affects the payout prices of green tea leaves; the more the number of brokers marketing tea product in the international market the less the payout of green tea leaves; market forces affect payout for small scale farmers; there exist no government policy that address the payout of green tea leaves for small scale farmers; the fiscal and monetary policies that governments of Kenya put in place have not enabled factories pay more on green tea leave; the more Kenya export tea to more countries the more payout is received for green tea leaves; the more the demand of tea in the international market the more payout prices of green tea leave is received; and that known brand of black tea which factory in zone 9 specialize sells easily and quickly in the international market and this has increased in the payout prices for green tea leave.

The study established that the more the demand of tea in the international market the more payout prices of green tea leave is received. The findings concur with Agritrade, (2010) which established that World Bank figures suggested that tea payouts fell by 44 percent in real terms over these years. Payouts have since bounced back, more than doubling between 2002 and September 2009. This payout explosion was the result of four years when the growth in global demand outstripped production, of political events in Kenya, and of a general drought, that affected East Africa, India and Sri Lanka. Output then fell by 0.64% between 2007 and 2009, while consumption showed a rise of only 0.21 percent (Agritrade, 2011). This is especially true to Kenya' farmers, which find that under the KTDA scheme risk is lower than changing to a more profitable crop such as sugarcane (Buch-Hansen, 2012).

The study found out that the fiscal and monetary policies that governments of Kenya put in place have not enabled factories pay more on green tea leave. This concurs with International Tea Committee (2010) which indicated that creating defendable position in the market place and coping successfully with the five competitive forces should guide the Kenyan tea industry players in establishing strategic management practices to enhance competitiveness in the global tea industry. Although Kenya has maintained export leadership position worldwide, the country has continually earned low returns from her tea exports compared to other tea exporting countries (Mbui, 2015).

The study established that the more Kenya export tea to more countries the more payout is received for green tea leaves. The study also established that and that known brand of black tea which factory in zone 9 specialize sells easily and quickly in the international market and this has increased in the payout prices for green tea leave. This disagree with TBK, (2012) which establishes that usually in the tea world

market, each important auction sales are controlled by a small number of buyers. New buyers are discriminated against and their bids are not easily accepted. Smaller buyers have difficulties facing up to the bigger buyers who also have stakes in blending and packaging.

The study established that there is variations in the world tea market due to varied political instability and this affect the prices of tea in the international market leading to low green tea leave payout. This concurs with SOMO, (2006) who found out that unknown buyers are not allowed into the auctions at all and that in Mombasa, only six multinational companies account for two-thirds of the tea traded through the auction (Van der Wal, 2008). It is clear that the buying behavior of the big companies could have a major impact on the payout paid at the auction.

The study establish that the inflation rates experienced in different countries and in different times affect the price of tea in the international market and this affects the payout prices of green tea leaves. This concurs with SOMO, (2016) who noted that large tea companies have a considerable influence on the supply and demand of tea which is a major determinant at tea auctions. It also established that with buying policy, these corporations strongly influence both payout movements and the demand for certain qualities of tea.

The study established that the more the number of brokers marketing tea product in the international market the less the payout of green tea leaves. This concurs with Agritrade, (2010), who noted that the Kenyan tea trading system is through auction which is almost impossible for new sellers to participate in tea trade due to the set trading conditions which ultimately act as barriers to entry in tea trade. As a result, the competitiveness of Kenyan tea continues to dwindle given that no new demands are

created in the traditional markets since it difficult for Kenya tea to penetrate to new market which is dominated by other countries.

The study established that there exist no government policy that address the payout of green tea leaves for small scale farmers and that the product sold by auctioneers has been the same all through and no new participants are around in tea trade thus giving room to consumers to switch to competitors' products this has affected the prices paid to farmers on green leaves. This concurs with SOMO, (2016) who found out that the market forces influence the buying price of tea and this affects also the payout of green tea leaves in our zone and that market forces affect payout for small scale farmers

Respondents were asked to state the extent to which they agreed to statement that second payout pricing of green tea leaves is highly dependent on international market forces and their responses as per Figure 4.4

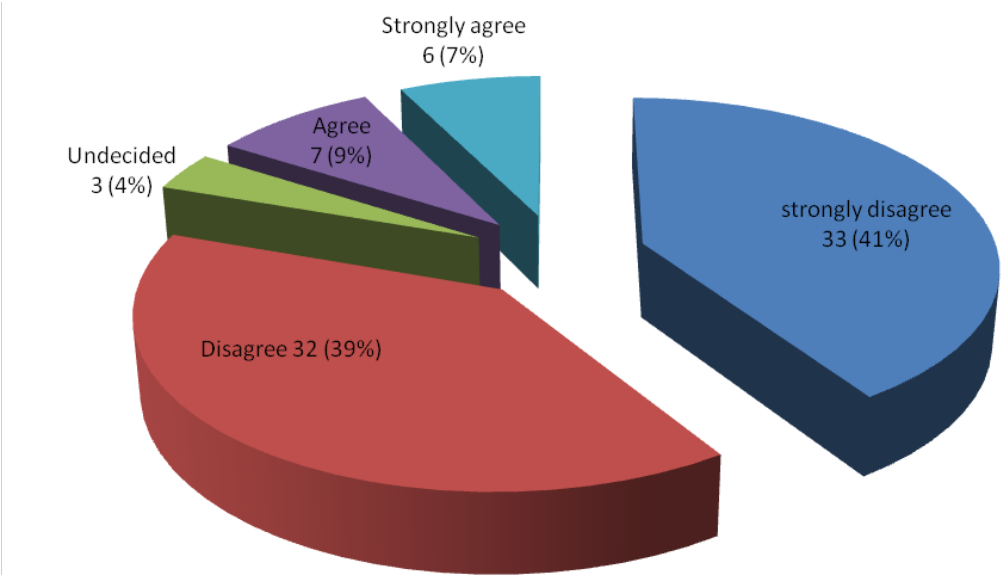

Figure 4.4 Extent of international market influence

Source: Research Data (2022)

Figure 4.4 shows that majority of the respondents who were 33 representing 41% who strongly disagreed, respondents who disagreed were 33 representing 39%, those who agreed were 7 representing 9%, and those who strongly agreed were 6 representing 7% while those who were undecided were 3 representing 4%.

Respondents were asked to rate the variable which mostly affects green leaves payout and their responses are as per Figure 4.5.

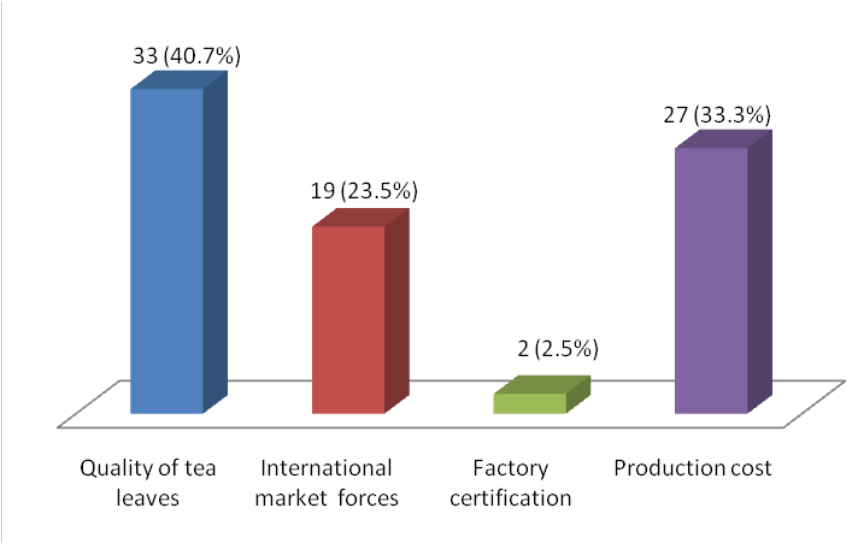

Figure 4.5 Rating of Variables

Source: Research Data (2022)

Majority of the respondents as per figure 4.5 who were 33 representing 40.7% indicated that quality of green tea is usually considered the first determinant of payout, production cost is considered second since respondents who were 27 representing 33.3% attest to it, international market forces is considered third as per

the response of 19 respondents representing 23.5% while factory certification is considered last as per the response of 2 respondents representing 2.5%.

4.5 Inferential statistics

This section presents a discussion of the results of inferential statistics. The researcher conducted a multiple regression analysis so as to determine the relative importance of each of the variables with respect to investigating the determinants of second payout differentials of green tea leaves among Kenya Tea Development Agency Managed Factories in Zone 9, Kenya.

4.5.1 Correlation Analysis

Correlation coefficient was used to examine correlation between quality of tea, cost of production, factory certification and international market forces and their effect on the second payout. The analysis is shown in the table below.

Table 4.8 Correlations

		Quality	Cost	Certification	Market	Payout
Quality	Correlation	1.000				
	Significance (2-tailed)	.				
Cost	Correlation	.339	1.000			
	Significance (2-tailed)	.002	.			
Certification	Correlation	.314	.573	1.000		
	Significance (2-tailed)	.005	.000	.		
Market	Correlation	.540	.415	.328	1.000	
	Significance (2-tailed)	.000	.000	.003	.	
Payout	Correlation	.540	.415	.328	.339	1.000
	Significance (2-tailed)	.000	.000	.003	.002	

Source: Research Data (2022)

Table 4.8 shows that there was a strong positive relationship between quality of green tea leaves and second payout since it had a Pearson Correlation of (r=0.540, p = 0.001), cost of production had a positive relationship with second payout since it had a Person Correlation of (r =0.415, p = 0.001), factory certification had a positive relationship with second payout since it had a Person Correlation of (r=0.328, P < 0.001); while international market forces had a positive relationship with second payout since it had a Person Correlation of (r=0.329, P < 0.002). The findings implies that there exist multicolinearity strong correlation between the variables. The findings concurs with Cheruiyot (2013), who establish that the quality of green leaf is a very important factor impacting the overall quality of tea which smallholders have not been able to create and also limited to tea factories

4.5.2 Regression Analysis

Regression analysis was used to identify the relationship between a dependent variable, and an independent. It provides an equation that predicts one variable from two or more independent variables (Bryman and Bell, 2015). According to Anderson et al. (2002), the Unstandardized coefficient value of Beta was used to determine whether each of the individual independent variable was significant in the overall model. Table 4.9 shows the regression model summary results where R square, adjusted R square and standard error of estimate are presented.

Table 4.9 Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.845	.814	. 635	1. 9309

a. Predictors: (Constant), attitude, habits, competences

Source: Research Data (2022)

The results in Table 4.9 indicate that determinants for green tea leaves had a joint significant effect on second payout as shown by R value of 0.845. The R squared of 0.814 shows that the independent variables accounted for 81.4% of the variance on second payout while 18.4% are explained by other variables outside the study. This finding agrees with Kapoor (2011) who states that with the proper management of processes, improved efficiency and quick delivery of products to the buyers, the overall product costs are reduced resulting in cost saving for the organization in the long run leading to an increase in payout.

4.5.3 Coefficient of Determinants

Coefficient of determination explains the extent to which changes in the dependent variable is explained by the change in the independent variables or the percentage of variation in the dependent variable (second payout) that is explained by all the 4 independent variables which were; quality of tea, cost of production, factory certification and international market forces. Table 4.10 gives the findings on Coefficient of determination.

Table 4.10 Coefficients of Determination

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.491	.692		0.710	0.004
	Quality	0.581	0.179	0.061	0.453	0.000
	Cost	-0.482	0.119	-0.213	-0.522	0.001
	Certification	0.215	0.142	0.117	0.815	0.000
	Market	0.327	0.176	0.099	0.724	0.004

a. Payout

Source: Research Data (2022)

From the findings in Table 4.10, the study found that holding quality of green tea leaves, cost of production, factory certification and international market constant, second payout will be 0. 491. The study also found that a unit increase in quality of green tea leaves will increase in payout by 0.581. Further it was established by the study that a unit increase in cost of production will lead to a decrease in payout by 0.482, a unit increase in factory certification will lead to an increase in payout by a factor of 0.215 and a unit increase in international market will lead to an increase in payout by a factor of 0.327. The findings concurs with Kumar & Shafabi, (2011) who argued that there is a positive relationship in that cost management strategies are considered as critical factors to increase revenue for the success of manufacturing companies. The findings by Mbui,(2015) that Kenya has continually earned low returns from her tea exports compared to other tea exporting countries concurs with the study findings and that the payouts of made tea are a result of the costs of production and transportation costs (Van der Wals, 2008).

4.6 Test of Hypotheses

From the results of coefficient of determination in Table 4.10, $\mathbf{H_{01}}$: There is no significant effect of quality of green tea leaves on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9. The findings shows that quality of green tea leaves affect second payout differential ($\beta = 0.581$, $p<0.05$) thus we reject the hypothesis. $\mathbf{H_{02}}$: There is no significant effect of production cost on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya. The findings reveals that production cost affect second payout differentials negatively ($\beta = -0.482$, $p<0.05$) hence we reject the hypothesis. $\mathbf{H_{03}}$: There is no significant effect of factory certification on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya. The findings shows that factory certification affect second payout ($\beta = 0.215$, $p<0.05$) thus we reject the hypothesis. $\mathbf{H_{04}}$: There is no significant effect of international market forces of on second payout pricing among Kenya Tea Development Agency managed factories in Zone 9, Kenya. The findings shows that international market forces affect second payout ($\beta = 0.327$, $p<0.05$) thus we reject the hypothesis.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives the summary of the research findings, the conclusions based on the findings and the recommendations as well as suggestions for further research.

5.2 Summary of Findings

The purpose of this study was to find out the determinants of second payout differentials of green tea leaves among Kenya Tea Development Agency Managed Factories in Zone 9, Kenya. The study sought to; determine the effect of quality of green tea leaves on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya; establish the effect of production cost on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya; determine the effect factory certification on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya; assess the effect international market forces of on second payout differentials among Kenya Tea Development Agency managed factories in Zone 9, Kenya.

The study sought to collect data from 86 respondents where a total of 81 responses were received to give a response rate of 94.2% which indicated that the results were reliable. The respondents were educated, knowledgeable enough and conversant with the requirements followed during the determination of green tea leaves payout differential since they all had worked for the organization for more than five years hence their responses can be relied on as a true status of green leaves payout differential in KTDA managed factories in zone 9.

The findings revealed that majority of the respondents were not satisfied with payout of made tea. The determinants for green tea leaves had a joint significant effect on second payout differential as shown by R value of 0.845. The R squared of 0.814 shows that the independent variables accounted for 81.4% of the variance on second payout while 18.4% are explained by other variables outside the study. There was a strong positive relationship between quality of green tea and second payout since it had a Pearson Correlation of ($r=0.540$, $p < 0.001$), cost of production had a negative relationship with second payout since it had a Person Correlation of ($r = -0.415$, $p < 0.001$), factory certification had a positive relationship with second payout since it had a Person Correlation of ($r=0.328$, $P < 0.001$); Market forced had a positive relationship with second payout since it had a Person Correlation of ($r=0.329$, $P < 0.002$). The findings imply that there exists multicolinearity strong correlation between the variables.

The study found that holding quality of green tea leaves, cost of production, factory certification and international market constant, second payout will be 0. 491. The study also found that a unit increase in quality of green tea leaves will increase in payout by 0.581. Further it was established by the study that a unit increase in cost of production will lead to a decrease in payout by 0.482, a unit increase in factory certification will lead to an increase in payout by a factor of 0.215 and a unit increase in international market will lead to an increase in payout by a factor of 0.327.

5.2.1 Quality of Green Tea Leaves on Second Payout Differential

The findings revealed that the green tea leaves delivered to KTDA Zone 9 are not of deep, dark green color with a glossy damp appearance; the tea are not grown in the recommended soil areas; the green leaves are processed by factories which have not

been certified by Fair Trade; the green tea leaves does not taste good and is not of good flavor and are not of bright leaves. The plucked green tea leaves are not of equally sizes and are not of needle-like shape. Quality of green leaves is a key determinant of green leaves payment and that KTDA factories in Zone 9 pay varying green leaves payments based on the quality of tea they are supplied.

5.2.2 Cost of Production on Second Payout Differential

The findings showed that KTDA managed factories in zone 9 have not adopted new and modern technology in the production of green tea leaves and this has translated to low payout price. The high cost of production has not been reduced due to the quality of resources which KTDA managed factories have deployed and this has decrease the payout price. KTDA managed factories in zone 9 have not adopted new and improved techniques of production hence it has increase cost of production leading to low price payout. The main cost of production in the tea factories has not reduced due to mass production and this has decrease in price payout. The high cost of input for green tea production translates to increase in the total cost of production leading to low price payout.

5.2.3 Factory Certification on Second Payout Differential

The findings showed that KTDA managed factories in zone 9 does not create and sustain clear vision and goals concerning quality management and this has led to less payout; factories does not commit critical resources required for implementation of quality tea management and this has led to low payout; factory managers are involved in all stages of quality management implementation but this has not enabled factories to acquire Fair Trade certification hence leading to low payout; Zone managers did

not have good experience in handling quality problems and issues and this has not enabled them to always earn high payout; Rainforest alliance certification on quality management is key to tea payouts and most factories in zone 9 have not acquired this certification yet management of KTDA managed factories provides leadership on implementation of factory certification which most of the factories are working on its acquisition.

5.2.4 International Market Forces on Second Payout Differential

The study noted that market forces influence the buying price of tea and this affects also the payout of green tea leaves in our zone; there is variations in the world tea market due to varied political instability and this affect the prices of tea in the international market leading to low green tea leave payout; the inflation rates experienced in different countries and in different times affect the price of tea in the international market and this affects the payout prices of green tea leaves; the more the number of brokers marketing tea product in the international market the less the payout of green tea leaves; market forces affect payout for small scale farmers; there exist no government policy that address the payout of green tea leaves for small scale farmers; the fiscal and monetary policies that governments of Kenya put in place have not enabled factories pay more on green tea leave; the more Kenya export tea to more countries the more payout is received for green tea leaves; the more the demand of tea in the international market the more payout prices of green tea leave is received; and that known brand of black tea which factory in zone 9 specialize sells easily and quickly in the international market and this has increased in the payout prices for green tea leave.

5.3 Conclusion

The study makes the following conclusions;

5.3.1 Quality of Green Tea Leaves on Second Payout Differential

Green tea leaves delivered to KTDA managed factories in zone 9 are not of deep, dark green color with a glossy damp appearance; the tea are not grown in the recommended soil areas; the green leaves are processed by factories which have not been certified by Fair Trade; the made tea does not taste good and not of good flavor and are not of bright leaves. The plucked green tea leaves are not of equally sizes and are not of needle-like shaped.

5.3.2 Cost of Production on Second Payout Differential

Factories in KTDA zone 9 have not adopted new and modern technology in the production of green tea leaves and this has increased the cost of production which has translated to low payout price. The high cost of production has not been reduced due to the quality of resources which KTDA have deployed and this has not increase the payout price. Factories in KTDA zone 9 have not adopted new and improved techniques of production hence it has high cost of production leading to low price payout. The main cost of production in the tea factory had not reduced due to mass production. The high cost of input for green tea production translates to increase in the total cost of production leading to low price payout.

5.3.3 Factory Certification on Second Payout Differential

Factories in KTDA zone 9 does not creates and sustain clear vision and goals concerning quality management and has led to less payout; factories does not commit

critical resources required for implementation of quality tea management and this has led to low green leaves payout; factory managers are involved in all stages of quality management implementation; Zone managers do not have good experience in handling quality problems and issues; Rainforest alliance certification on quality management is key to tea payouts; management of KTDA factories provide leadership on implementation of factory certification.

5.3.4 International Market Forces on Second Payout Differential

Market forces influence the buying price of tea; there is variations in the world tea market due to varied political instability; the inflation rates experienced in different countries and in different times affect the price of tea in the international market; the more the number of brokers marketing tea product in the international market the less the payout of green tea leaves; market forces affect payout to small scale farmers; there was no government policy that address the payout of green tea leaves to small scale farmers; the fiscal and monetary policies that governments of Kenya put in place have not enabled factories pay more on green tea leave; the more Kenya export tea to more countries the more payout is received for green tea leaves; the more the demand of tea in the international market the more payout prices of green tea leave is received; and that known brand of black tea which factory in zone 9 specialize sells easily and quickly in the international market and this has increased in the payout prices for green tea leave.

5.4 Recommendations

The study makes the following recommendation guided by the research objectives;

5.4.1 Quality of Green Tea Leaves on Second Payout Differential

The study recommends that green tea leaves delivered to KTDA Zone 9 should be of deep, dark green color with a glossy damp appearance; the tea need to be grown in the recommended soil areas and processed by Fair Trade Certified Factories. The green tea leaves need to taste good; be of good flavor as well as being of bright leaves with equally sizes and of needle-like shaped.

5.4.2 Cost of Production on Second Payout Differential

The study recommends that KTDA managed factories need to adopt new and modern technology in the production of green tea leaves. They need to adopted new and improved techniques of production such automation of production processes so as to minimize on the production cost. There is need for the government to reduce on taxes imposed on importation of machinery. There is need for the KTDA managed factories to explore on other alternative sources of power for instance hydro power which is usually cheater. There need also to procure their firewood land to reduce on the high rising cost of firewood fuel. Outsource transport services which are usually costly to the factories to maintain will go a long way in ensuring that KTDA managed factories reduces on tea production cost hence increase of payout to farmers.

5.4.3 Factory Certification on Second Payout Differential

KTDA managed factories need to create and sustain clear vision and goals concerning quality management and commit critical resources required for implementation of quality tea management by acquiring Fair Trade Certification; factory managers need to be involved in all stages of quality management implementation and provision of leadership on quality production of made tea.

5.4.4 International Market Forces on Second Payout Differential

There is need for the government to reduce the number of brokers marketing tea product in the international market by regulating and controlling the sales of made tea. There is also need for the government to come up with policies that address the payout of green tea leaves by enhancing compliance with fiscal and monetary policies. Kenya government need to expand existing and penetrate new markets .The government also should negotiate with foreign markets on tariffs imposed on export tea with an aim of strengthening existing foreign market. Explore indirect market to supplement direct market as well brand Kenyan tea.

5.5 Suggestions for Further Studies

Further research should be done by undertaking the same study in zones which usually receive better payout from green tea leaves supplied to their factories so as to compare the results. Further studies can also been done on the best tea clone to be grown in KTDA zone 9 in relations to the soil suitability.

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APPENDICES

Appendix I Questionnaires

Dear Sir/Madam,

I am a Post-Graduate student at University of Kabianga undertaking academic research on "Determinants of Second Payout Differentials of Green Tea Leaves among Kenya Tea Development Agency Managed Factories in Zone 9, Kenya". I kindly request you to complete the questionnaire with utmost sincerity. The information obtained will be treated and kept confidential and will only be used for research purposes.

Ngeno K Philip

University of Kabianga

SECTION A: BACKGROUND INFORMATION

Kindly tick the appropriate category in the column provided on the right per question

1. Highest professional qualifications attained:

a. Secondary ☐

b. Certificate ☐

c. Diploma ☐

d. Degree certificate ☐

e. Post-Graduate ☐

2. Staff category from the following

a. Factory management ☐

b. KTDA Directors ☐

c. KTDA Zone 9 management staff ☐

3. Length of working in the organization.

a. Less than 5 years ☐

b. 6 to 10 years ☐

c. 11 to15years ☐

d. 16-20 years ☐

e. Over 20 years ☐

4. Were you satisfied with the amount of money paid to you in the last one year for the green leave supplied to KTDA Factory in your Zone?

a. Not Satisfied ☐

b. Satisfied ☐

c. Very Satisfied ☐

Section B: Quality of Green Tea Leaves

Below are statements on the effect of quality of green tea leaves on second payout pricing. Kindly tick (√) the appropriate choice in the column provided on a scale of 1-5 where: [1]-strongly disagree, [2]-disagree, [3]-Undecided, [4]-Agree and [5]-Strongly agree.

Statements on Quality of green tea leaves and green tea leave payout differential	**1**	**2**	**3**	**4**	**5**
5. Our tea has deep, dark green color with a glossy damp appearance					
6. We grow our tea in the recommended soil areas and our green leaves are processed by certified factories who has authorized tea sellers					
7. Our green tea taste good and is of good flavour					
8. Our green tea are of bright leaves					

9. We pluck green tea leaves which are of equally sizes with a needle-like shape.					
10. Quality of green leaves is a key determinant of green leaves payment					
11. KTDA factories in our Zone pays varying green leaves payments based on the quality of tea they are supplied.					

12. In your own opinion, what can you say on the quality of tea leaves as a determinant for second payout pricing of green tea leaves among KTDA managed factories in your zone?

_____

_____

Section C: Cost of production

The statements below are on the effect of cost of producing green tea leaves on second payout pricing. Kindly tick the appropriate category in the column provided on the right per question on a scale of 1-5 where: [1]-strongly disagree, [2]-disagree, [3]-Undecided, [4]-Agree and [5]-Strongly agree.

Statement	**1**	**2**	**3**	**4**	**5**
13. We have adopted new and modern technology in the production of green tea leaves and this has reduced the cost of production which have translated to high payout price					
14. High cost of production have been reduced thanks to the quality of resources which KTDA have deployed and this has increase the payout price					

15. We have adopted new and improved techniques of production hence it has reduced our cost of production leading to high price payout					
16. Main cost of production in the tea factory has reduced due to mass production in our zone hence increase in price payout					
17. The high cost of input for green tea production translate to increase in the total cost of production leading to low price payout					

18. In your own opinion, is there any relationship between cost of production and second payout pricing of green tea leaves among KTDA managed factories in zone 9?

_____

_____

Section D: Factory Certification

19. Statements below aims at determining the effect of factory certification on second payout pricing. Kindly tick the appropriate category in the column provided on the right per question on a scale of 1-5 w here: [1]-strongly disagree, [2]-disagree, [3]-Undecided, [4]-Agree and [5]-Strongly agree.

Statement	**1**	**2**	**3**	**4**	**5**
19. Our factory create and sustain clear vision and goals concerning quality management and has led to more payout					
20. Our factory commits critical resources required for					

implementation of quality management this has led to high payout					
21. Our factory managers are involved in all stages of quality management implementation and this has enabled factories to acquire certification hence leading to high payout					
22. Our zone managers has good experience in handling quality problems and issues and this has enable us to always earn high payout					
23. Rainforest alliance certification on quality management is key to tea payouts and management of our factory provides leadership on its implementation					
24. Factory quality management certification affects payout of green tea to farmers					

Section E: International Market forces

25. Statement below are on international market forces and its effect on green tea leaves payout. Kindly tick the appropriate category in the column provided on the right per question on a scale of 1-5 where: [1]-strongly disagree, [2]-disagree, [3]-Undecided, [4]-Agree and [5]-Strongly agree.

Statement	**1**	**2**	**3**	**4**	**5**
25. International market forces influence the buying price of tea and this affects also the payout of green tea leaves in our zone					
26. There is variations in the world tea market due to varied					

political instability and this affect the prices of tea in the international market leading to low green tea leave payout					
27. The inflation rates experienced in different countries and in different times affect the price of tea in the international market and this affects the payout prices of green tea leaves					
28. The more the number of brokers marketing tea product in the international market the less the payout of green tea leaves					
29. Market forces affect payout for small scale farmers					
30. There exist government that address the payout of green tea leaves for small scale farmers					
31. The fiscal and monetary policies that governments of Kenya put in place have enabled our factory pay more on green tea leave					
32. The more Kenya export tea to more countries the more payout is received for green tea leaves					
33. The more the demand of tea in the international market the more payout prices of green tea leave is received					
34. Known brand of black tea which factory in zone 9 specialize sells easily and quickly in the international market and this has increased in the payout prices for green tea leave					

35. What are some of the ways in which international markets forces affect second payout pricing of green tea leaves produced in KTDA Zone 9

……

……

Section F: Second payout pricing of green tea leaves

36. Second payout pricing of green tea leaves is highly dependent on international market forces

a. Strongly Agree ☐

b. Agree ☐

c. Neutral ☐

d. Disagreed ☐

e. Strongly Disagree ☐

37. Which of the following is the main factor affecting second payout pricing of green tea leaves?

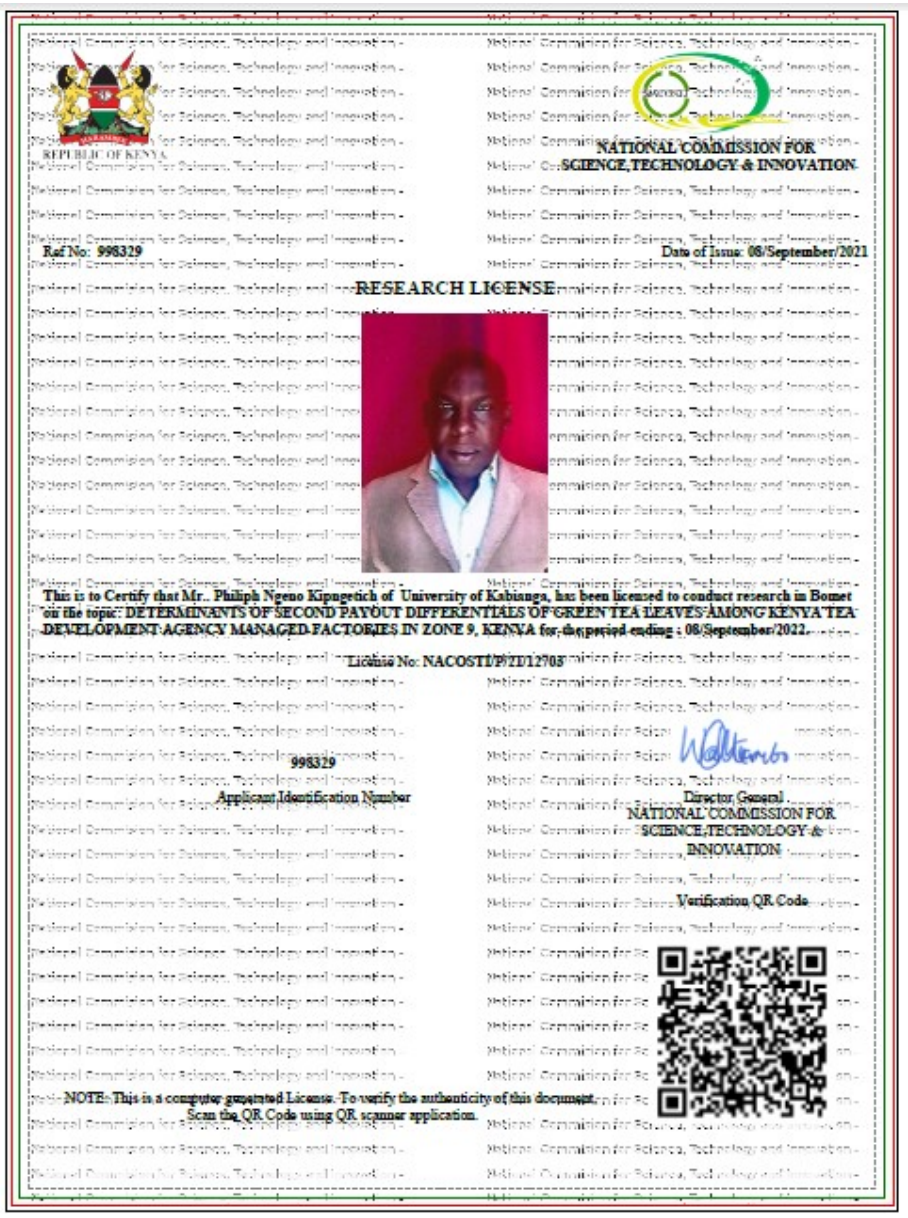
Quality of tea leaves [ ]

Production cost [ ]

Factory certification [ ]

International market forces [ ]

Appendix II: Research Permit



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Appendix III: Map of the Area