

Factors affecting Small-Scale Coffee Production in Githunguri District, Kenya

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ABSTRACT

This study was carried out to determine the factors affecting small scale coffee production in Kenya. The establishments under study were small-scale coffee farms in Githunguri District. It was to determine whether marketing factors, finances, government policies and physical and human resources affect coffee production in Githunguri District. Primary sources included use of questionnaires, observation and interviews. Secondary sources included desk research, library research on journals, text books and factory publications. The target population was over 700,000 small-scale coffee producers in Kenya out of which the accessible population of 10,000 producers drawn from Githunguri District in Kiambu County was selected which a sample size of 120 respondents was sampled. Stratified sampling technique was employed to compare views among coffee producers from the various coffee societies in the area. Data analysis was both qualitative and quantitative using descriptive statistics. Data presentation was in form of tables to help interpret findings and generate conclusions that aided solutions to identified problems. The research established that marketing factors, finances, government policies and physical and human resources greatly affected coffee production. The study recommended that the government should encourage coffee production by formulating favorable marketing factors and other policies and provide finances to small scale coffee producers. Producers on the other hand should strive to provide conducive working environment to their workers so as to sustain them in their farms. This will help to improve coffee yields and quality.

Key words: Marketing, finances, government policies and resource

INTRODUCTION

Background of the study

Coffee production is the mainstay of millions of people worldwide, the majority of who are found in the poorest countries of the world. Therefore, addressing the issue of equitable trading from lessons learnt in the past and considering the present and the future situations, throws a big challenge to all of us. For example, Kenya which is the origin of Robusta coffee producing the best Robusta in the world has 90% of its population living in the rural areas. Out of these, 36% live below the poverty line. The crisis facing the coffee industry has been characterized by massive over production, collapsing prices, deteriorating coffee quality, disease and above all the growing inequality in the coffee value-chain (United Nations Conference on Trade and Development (UNCTAD, 1999).

Ten years ago, developing countries captured 30% of the value of the coffee market compared to only 10% of what they capture today. For example, in Kenya, coffee contributed on average 60% of foreign exchange earnings and did so until in the year 2002 when its contribution fell to a mere 25%. This rapid fall, brought about social and economic imbalances in more than 3,000,000 smallholder Kenyan coffee farmers affecting their daily livelihoods (Karanja, 2002). For many of these coffee farmers, coffee meant not only money in their pockets but it also translated into ability to afford education, health care, food security and improved household standards of living.

Globally the trend has been the same and this calls for concerted efforts by the coffee industry participants to seek for mutual redress of the problems that are making coffee trade inequitable. It is therefore, very happy to see that there is already global evaluation of equitable trade on coffee with a farmer representation. The current "coffee crisis" has brought the economic situation of coffee producers to the forefront of media and policy discussions. Since the 1980s, oversupply on international markets has resulted in nearly a 50 % decline in nominal coffee prices (ICO, 1997).

According to a rough calculation made by the United Nations Conference on Trade and Development (UNCTAD) secretariat, between 1999 and 2002, producing countries earned US\$19 billion less in revenues than if prices had remained at their 1998 levels. For the small farmers that account for approximately 70 per cent of coffee production, declining prices have a direct impact on overall household revenues and access to basic needs. Declining prices are also associated with declining job quality and security for employees serving plantations, many of whom represent the poorest section of the population serving the coffee supply chain. Although low prices on the world market are one of the most important determinants of economic sustainability in the coffee sector at present, they form part of a larger web of economic constraints generally facing coffee producers.

The damaging effects of long-term declining terms of trade facing coffee producers are exacerbated by significant price volatility. Over the past several decades, global export revenues from coffee have fluctuated between \$5 and \$14 billion per annum (David, 2002). Price volatility together with rigidities of production and the consequent distribution costs, make it extremely difficult for coffee producers and policy-makers alike to determine optimal production strategies. Meanwhile, fiscal uncertainty at the local and national levels places a significant constraint on the generation of a stable economic base for development. While price volatility has its root in climatic variability, there is evidence of increasing volatility since the

1980s due largely to reduced cooperation at the international level (ICO, 1997). This has caused increased speculative activity by large funds in commodities markets and deregulation in national markets.

Coffee, like other agricultural goods, is a seasonal product requiring investments prior to harvest and revenue returns. Small farmers with a low capital and savings base frequently rely on advances and credit to supply requisite pre-harvest inputs and living expenses in many coffee-producing communities, local coffee buyers fill the credit gap through advance purchases at highly-discounted rates. 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 still greater financial pressures on producers.

Requirements associated with selling on international markets also present significant barriers to higher revenues for 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 (CBK, 1998).

Meanwhile, tariffs on processed forms of coffee in importing countries can also have an effect on the revenue captured by producer countries from the supply chain. The imposition of such tariffs effectively restricts producing country access to the higher value added associated with processing activities. The elimination of economic clauses from International Coffee Agreements since 1989 has reduced the effectiveness of international cooperation for stabilizing prices. Increased activity by large funds in commodity futures markets over the past two decades has led to a weakening of the connection between price determination and market fundamentals.

As one of the most important commodities in terms of value traded globally, coffee plays a crucial role in the livelihoods of millions of rural households across the developing world. In addition to the estimated 25 million small coffee farmers who depend directly upon coffee as their primary source of income, coffee contributes significantly to foreign exchange earnings and plays a leading role in determining opportunities for employment and infrastructure development in more than 50 developing countries. The breadth and intimacy of the relationship between coffee producers and a host of intermediary institutions along the coffee supply chain makes the sector of critical importance to sustainable development at the local, regional and global levels. Although “sustainability” has been defined in a variety of ways over the past several decades (UNCTAD, 1987) has provided the most widely-accepted and enduring definition at the

International level. According to the report “Sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs”. It contains within it two concepts: the concept of ‘needs,’ in particular the essential need of the world's poor, to which overriding priority should be given and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future need(FAO, 2003). Coffee production and trade face significant challenges along each pillar of sustainable development in ways that highlight their interconnectedness.

Despite the fact that, coffee plays an important role in the economic development of this country, there has been an increasing decline in quality coffee production (CRF, 2008). To worsen the matter further, some coffee farmers have of late uprooted their crops.

Statement of the problem

International prices for the raw product (“green” coffee) are the lowest in decades. The “commercial” market, plagued by sluggish growth of consumption, is awash in low quality coffee with international prices at record-setting lows. Global production in the 2002/2003 season was almost 120million bags while consumption has been relatively stable in the last couple of years at fewer than 110 million bags (ICO, 2004). Coffee farming (especially by smallholders) has become economically unsustainable. The “coffee crisis” is also threatening the social fabric of communities that rely heavily on coffee cultivation for their livelihoods. The “technification” of coffee cultivation is posing threats to its environmental sustainability. This is bad news for producers, but not necessarily for the large corporations who dominate the roasted coffee trade, which have been posting record profits.

When the International Coffee agreement collapsed, the first casualty was the coffee producer prices .The world producer’s prices then reduced by over 50% which put the coffee producers in disarray (ICO, 1997). They were unable to support coffee enterprise and in Kenya coffee quality was highly compromised. It is against this backdrop that the researcher recognizes the need to research on the factors that pose a challenge to a thriving coffee industry in Kenya today. Despite the significant role played by the coffee industry in economic development including; employment creation, income generation; foreign exchange earner and the fact that Kenya has been high quality coffee producer in the world, there has been a decline in coffee production due to low profit margin in world market. To worsen the situation, farmers, of late have embarked on uprooting of the crop and replacing them with alternative land usages.

The above scenario is evidence enough that there has been a general problem causing producer disenfranchisement and poor performance in the coffee sector. These problems have been perennial in the coffee sub-sector since the liberalization of the coffee industry in 1990 (CRF, 2008). The real cause for declining coffee industry cannot easily be conceptualized without thorough and objective investigation through a well structured process. It is based on this problem that the idea to conceptualize challenges facing medium scale coffee industry was conceptualized.

General objectives

To investigate the factors affecting small scale coffee production in Githunguri District.

Specific objectives

- i. To determine whether the marketing factors are responsible for declining coffee production in Githunguri District.

- ii. To investigate whether financial constraints are affecting coffee sub sector in Githunguri District.
- iii. To determine whether government policy is affecting coffee sub sector in Githunguri District
- iv. To determine whether human and physical resources affect coffee production in Githunguri District.

Research Questions

The following research questions shall guide this study;

- i. Are the marketing factors responsible for the declining coffee production in Githunguri District?
- ii. Are the financial constraints affecting the coffee sub-sector in Githunguri District
- iii. Are the government policy affecting coffee sub-sector in Githunguri District?
- iv. Do the human and physical resources affect coffee production in Githunguri District?

Justification of the study

The study intended to be of importance in exposing the factors affecting small-scale coffee production in Githunguri District helping the country to realize how these challenges can be minimized to improve the coffee sub sector. This would be of significance in providing greater insight into the production, financing resources factors and marketing that contribute towards declining coffee production. Githunguri District was selected as the area of study since all producers of coffee in that region produce in small scale. The research would also fill the gaps in the studies previously carried out by other researchers regarding the declining coffee production in Kenya and also enable other researchers to carry out the study beyond this scope. To the researcher, it will give a better understanding of the issues under investigation and also sharpen research skills.

LITERATURE REVIEW

Introduction

This chapter aims at identifying what other researchers have done in the area of competitive advantage and what leverage institutions enjoys in ever changing competitive environment. The review means to enhance an understanding of the previous contributions to the problem. The finding of the review will help the researcher to note the gaps in knowledge and create the entry point for this study. It will also sharpen and deepen the conceptual frame work of the research by examining challenges facing small-scale coffee farmers in Githunguri District. This review will also help in discovering the connection, analogies or other relation between different research results by comparing various related studies in this area.

Theoretical Review

Coffee Marketing

(CBK,1994) noted that the coffee industry in Kenya is highly considered for its cooperative system of milling, marketing, and auctioning, as well as its high percentage of production from small farms. Kenya is one of the best coffee producing countries in the world. its high percentage. It is estimated that six-million Kenyans are employed directly or indirectly in the coffee industry. The major coffee growing regions in Kenya are the High Plateaus around Mt. Kenya, the Aberdare Range, Kisii, Nyanza, Bungoma, Nakuru and Kericho. He argued that the high plateaus of Mount Kenya and the acidic soil provide excellent conditions for growing coffee plants. Coffee from Kenya is well known for its intense flavor, full body, and pleasant aroma.

According to ICO (2001), Kenya, an East African nation, is the 21st largest producer of coffee in the world, producing over 50 million kilograms (112 million pounds) in 2006. It confirmed that coffee exports account for approximately five percent of all exports from Kenya. It is estimated that six million Kenyans are employed directly or indirectly in the coffee industry.

David (2001) argued that despite the proximity of Kenya to Ethiopia which is widely believed to be the region from which coffee originated, coffee was not cultivated in Kenya until 1893, when missionaries imported Bourbon coffee trees from Reunion Island in Brazil. These trees, descendents from trees discovered in Ethiopia, were used to develop the French Mission varietals which are predominant in Kenya today. From 1901, until the start of World War I, coffee production doubled each year (Daviron, 2002).

Initially, coffee was grown primarily on large British-run farms and auctions were held in London (Pendegrast, 1999). However, in 1933 Kenya enacted the Coffee Act which would establish the Coffee Board of Kenya and establish the Kenyan auction system (CBK, 2007). In 1954, Kenyans controlled only 5000 acres of coffee farms. It was not until the Mau Mau uprising beginning in 1952 that Kenyans began to control most coffee production in Kenya' Pendegrast (1999). At its peak, the Kenyan coffee industry produced nearly 129 million kilograms (284 million pounds) in 1988. However, in recent years coffee production steadily declined, with some years seeing less than half of the peak production CBK (2006).

David, (2001) Confirmed that most Kenyan coffee is grown from Mount Kenya to areas near Nairobi, the capital of Kenya, and on the border with Uganda to the west. With the high altitude, warm climate, and fertile soil, these regions are well suited for producing Arabica coffee. The Kenyan coffee industry is noted for its democratic auction system. In this system, samples of each lot are made available to bidders prior to a weekly auction. If a bidder (or the bidder's customers) is interested in a lot of coffee, they enter the auction for that lot. In this transparent auction, the highest bidder wins. The result of this system is generally the best since the best lots of coffee command a higher price.

Finance

Coffee production costs have escalated in the recent past mainly due to major increases in the cost of purchased farm inputs. Currency devaluation, inflation and inefficient input markets have been some of the factors behind the increase in cost. Poor road infrastructures have significantly contributed to cost of input due high transport cost. During the period 2001/02,

coffee production cost almost tripled from Kshs. 26,000 in 1990/91 to Kshs 66,000 per ton in 2000/1 (Karanja & Nyoro 2002). The increases in cost of production when juxtaposed on the declining and low farm productivity, decline in coffee prices and enhanced price and performance risk have made return to coffee production to dwindle in the recent past. The gross margin per tone was highest in 1997/98. This was attributed to the mini –boom that was occasioned by a drought in Brazil. Since then, the gross margins have been on a declining trend and by 2000/2001 a small holder farm could only make about Kshs. 14,000 per tonne. In reality a farmer with half an acre under coffee (500 trees) could at best make only Kshs.1,900 (Karanja & Nyoro 2002). This explains the coffee neglect and abject poverty in most coffee growing areas. Indeed, the gross margin per farm could not buy enough food for the family leave alone paying fee for a child in a secondary school.

Government Policies

Agriculture Minister, Kipruto Arap Kirwa (2006) said Kenya has a multi-billion shilling coffee industry. However, he highlighted that there are so many intricacies in the coffee sector and many vested interests which were crowding the path for reforms. The Agriculture minister further disclosed that he had declined to endorse a list of new coffee marketing agents proposed by the Coffee Board of Kenya (CBK) on grounds that the list was shrouded with doubts. According to him the list presented by the Board also contained an increased number of milling licenses, pulping stations, coffee buyers, packers and warehousemen. He refused to approve the licenses because he wasn't sure about the implications of those licenses on the coffee industry. This was not taken kindly by the Coffee Board of Kenya directors who are to date running the coffee industry. Originally, the Government had issued licenses to Kenya Planters Co-operative Union (KPCU), Thika Coffee Mills (TCM) and Socfinaf Mills. However, the Board had added three more marketing agents: Large and Small Coffee Marketing (K) Ltd, Mt Kenya East Coffee Marketing Agency and Allied Coffee Marketing Company. Ministry of Agriculture (2001) says the CBK move to increase the number of coffee agents was unpopular since it came at a time when coffee production had declined by a staggering 100 per cent (Karanja, 2001). Coffee production continued to fall to about 50,000 metric tons in year 2007 compared to 125,000 metric tons recorded ten years ago CBK (2008)

Another issue of concern raised by Karanja (2001) was that licenses were issued to companies that are backed by powerful interest groups. It was alleged that two of the new companies were sponsored by a local bank whose management have vested interests in the marketing of coffee. Some officials of the two organizations are close relatives of a top official in the Ministry of Co-operative Development, hence creating a conflict of interests (CBK, 2008). The Board's decision to increase the number of coffee millers from the current four to nine was also greeted with skepticism by some industry stakeholders.

Before coffee milling was liberalized in 1995, KPCU was the only sole coffee miller in the country having been started by white colonial farmers in 1937. The mill, owned by farmers through their respective co-operative societies, has a milling capacity of over 150,000 metric tons which is still high compared to the current low coffee production (Daviron, 2002). He argued that KPCU had for many years come under criticism over its monopolistic status which

had created production inefficiency, hence the Government move in 1995 to issue milling licenses to Socfinaf Ltd, Thika Coffee Mills (TCM) and Gatatha Coffee Mills. In total, Kenya's milling capacity has now been boosted to over 300,000 metric tons against a production of 50,000 metric tons that is available for milling. The coffee "wars" of 1998/99 were a direct result of rivalry among coffee millers who were competing for a share of the limited milling business.

As a result, the infighting forced many societies to split as members disagreed over the choice of millers to engage. The situation is further complicated by a sharp increase in new coffee societies, an emerging trend in which the new Co-operative Development Minister, Njeru Ndwiga (2005), had expressed concern. The minister contends that the emergence of new coffee societies in districts like Murang'a, Nyeri, and Kirinyaga were not economically viable.

Physical and human resources

Smallholder coffee production is labor intensive with minimal use of purchased inputs. This makes labor the most important input accounting for about 50% of the total production cost. The other major cost components are fertilizer (16%) manure (19%) fungicides (12%) insecticides (2%). (CRF 1999)

The cost of labor has also increased significantly for example; the daily wage for casual labor has increased from Ksh 24 in 1900 to around Kshs.120 in 2001. Equally the cost of picking coffee has increased from Kshs10 in 1990 to the current rate of Kshs 25-30 per tin of 12 to 15kgs. This increase in labor cost has occurred despite the high unemployment rate especially in rural areas. These wages are usually negotiated between Kenya plantation Workers Union (KPAU) and plantation owners, based on among other factors Productivity and inflation. Smallholder farmers are forced to pay similar wages as plantations in order to attract laborers during the peak (labor-shortage) period. This has put most small holder farmers especially the labor deficit household at a disadvantage due their low productivity as compared to plantations (Karanja 2002)

Empirical Studies

Karanja (2002) argued that the greatest threat to the social sustainability of coffee production results from the economic conditions facing coffee producers. They added that Coffee farmers typically depend upon coffee as their primary source of hard currency. As a result, declining and volatile coffee prices had a direct negative impact on access to education, housing, food, medical services and other basic necessities. David (2001) said that producer organizations can provide an important avenue for democratic, equitable representation and infrastructure development, the relative isolation of many small coffee farmers often places prohibitively high transaction costs on effective participation in such organizations.

On the other hand, hired labor serving coffee plantations and estates typically represents the poorest segment of the population serving the supply chain. Although workers are not directly exposed to the vagaries of the market, evidence suggests that the performance of the market is transmitted to workers through poor general working conditions among such plantations have also been reported to be below national requirements and there is increased child labor reported on coffee plantations in some countries. In Kenya, for example, it is estimated that 30 per cent of the coffee pickers serving plantations are under the age of 15.

Meanwhile, the shift toward technified farming systems, in addition to threatening overall environmental integrity, poses direct health and safety risks for coffee workers and their communities. FAO (2001) argued that the use of the insecticide endosulfan on coffee plantations in Colombia, for example, was linked to more than 200 poisonings during 1993–1994. Other agrochemical used also threatens farmers and other rural residents with toxic substances in water supplies. Daviron (2002) brought the idea that the coffee trade can reinforce gender inequity by maintaining patriarchal supply chain structures. He added that alternative trading structures may also hold the opportunity of improving the gender balance along the supply chain.

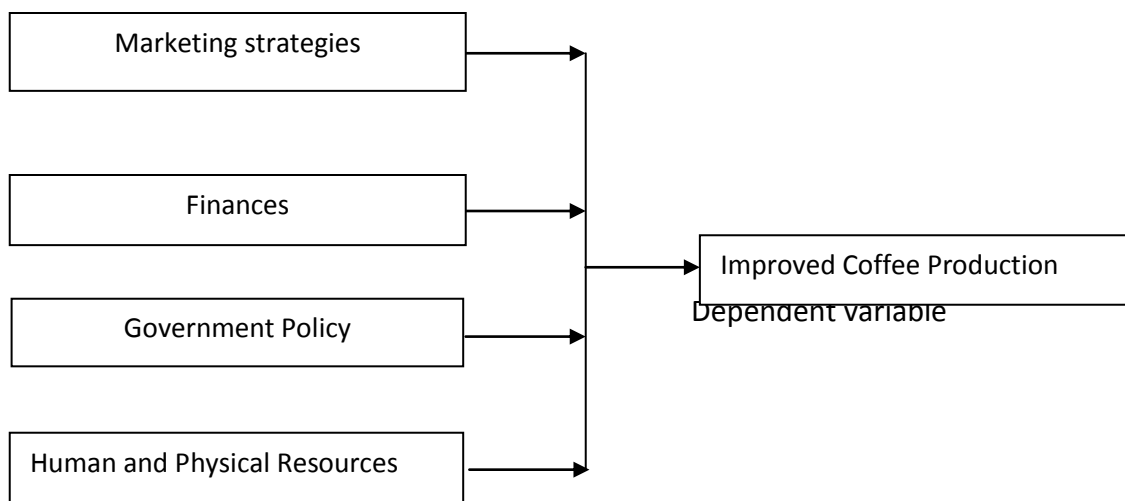
Summary of the literature

The literature reveals fluctuating and volatile coffee prices and vested interests in the coffee sub- sector as the major causes of the declining coffee production in Kenya. It also reveals that the small-scale producers are the worst hit by the crisis.

Research gaps

From the literature reviewed, it is evident that most writers have generalized causes of declining coffee production into fluctuating and volatile coffee prices over the years coupled with vested interests. At the same time they have cited the small-scale producers as the worst hit by the crisis. However, none of the writers have researched on why the small-scale producers are the worst hit and what other factors could be affecting them. This study hence aimed at bridging this gap in the study

2.7 Conceptual Framework



The diagram represents the relationships between the dependent variables and the independent variables. In this case there are various variables that affect the success of small

scale coffee farms which include marketing, finances, government policies and human and physical resources.

METHODOLOGY

Introduction

This section outlines the procedure and methods the researcher employed in order to obtain data needed for the study. It comprises of the description of the area of study, the research design, study population, the sample and sampling techniques, instruments and data collection procedure, and methods of data analysis.

Research design

Kombo (2006) defines research design as the scheme, outline or plan that is used to generate answers to research problems. It is an arrangement of conditions of data collection and analysis. The researcher embraced descriptive survey designed to assess the nature and development of Coffee sector and its problems with a view to offer solutions. It employed the use of interviews and administration of questionnaires to a sample of individuals to find out peoples' attitudes, opinion about performance and problems facing coffee sector in Kenya. The researcher used both primary and secondary data. Primary data was obtained using questionnaires while secondary data was gathered from the factory documentaries, and journals.

Target Population

The target population for the study were all the small scale coffee producers in Kenya who are over 700,000 CBK (2008). Due to their large number in different regions of the country Githunguri District in Kiambu County was selected as the accessible population since all the coffee producers there produce in small scale. The accessible population is about 10000 coffee producers (CRF 1999)

Sample Size and Sampling Technique

The 10000 coffee producers in Githunguri District deliver their coffee to 24 coffee factories and are members of Gititu and Komothai coffee societies (CRF 1999). Stratified sampling technique was employed whereby 5 members from each coffee factory were selected at random making a sample of 120 respondents. Stratified sampling technique was used to help the researcher to achieve desired representation from the various regions of the district. The study was carried out in Githunguri District with a reference to other small scale coffee producing areas in Kenya.

Instruments of data collection

The data was collected using questionnaires, interview schedules and document analysis on secondary data. The questionnaires were prepared and administered on respondents by the researcher through face-to face method. The document analysis focused on observation of documentations relevant to the study such as text books, journals, reports and publications. The questionnaires were both open ended and closed questionnaires to allow variety and in-depth information.

Validity of the instruments

Mugenda and Mugenda (2003) defined validity as the degree to which the sample of test item represent the content that it is designed to measure, that is, the instrument measures the characteristic or trait it is intended to measure. The research adopted content validity which refers to the extent to which a measuring instrument provides adequate coverage of the topic under study.

Burns (2000) proposes that several data collection methods enable the researcher to avoid the deficiency that arises from using only one instrument for data collection. In connection with these the research used questionnaires, interview schedules and document analysis. In addition the research supervisor assessed the relevance of the content in the questionnaires and interview schedule and gave feedback to the researcher. Hence the instruments were revised to meet high standard of validity before they were administered in the field.

Reliability of instruments

Mugenda and Mugenda (2003) defined reliability as the extent to which a research instrument yields findings that are consistent each time it is administered to the same subjects. To achieve high level of reliability the research used self administration approach of data collection. Most questionnaires were filled as the researcher waited thereby providing clarification where necessary and ensuring that the right people filled the questionnaires..This made the research findings more objective and dependable.

Pilot study

Pre testing of the data collection instruments was carried out. It enabled the researcher to assess the clarity of the instruments and their use. Burns (2000) explain that pre- testing allows errors to be discovered as well as acting as tool for training research teams before the actual collection of data begin. He further argues that effective revision is the result of determining participant's interest, discovering if the questions have meaning for participants, checking for participants modifications of question intent, examining questions continuity and flow.

Mugenda and Mugenda (2003) indicate that 1% to10% of sample size is considered adequate for a pilot study As such 12 subjects were involved in the pre testing. They were not part of the study group but their comments and corrections were useful in reconstruction of the questionnaire and interview schedule

Data processing and analysis

Once the questionnaires were collected, they were scrutinized to ensure that they were fully filled and that they were consistent. They were then numbered and checked to see that all the items were answered according to instructions in order to reduce errors and maintain the validity of the data. The researcher analyzed the quantitative data by tallying the responses of the close ended questions. The data was coded and entered into the computer for analysis using Microsoft excel. It was presented in the form of tables. The collected data was carefully analyzed quantitatively and qualitatively and presented in form of frequency, percentages and tables for ease of presentation and discussion.

RESULTS

Effects of Marketing Factors on Coffee Production

The research asked the respondents to rate the effects of marketing factors on coffee production. The research revealed that majority of the respondents felt that the marketing factors affected coffee production. This information is shown in Table 1

Table1 Effects of Marketing Factors

Ratings	Frequency	Percentage
Very Greatly	16	16.7
Greatly	60	62.5
Moderately	14	14.5
Slightly	6	6.3
No effect	0	0
Total	96	100

Effects of Finances on Coffee Production

The research further asked the respondents to rate the effects of finances on coffee production. The research revealed that majority of the respondents agreed that finances affected coffee production. This information is shown in Table 2 .

Table 2 Effects of Finances on Coffee Production

Ratings	Frequency	Percentage
Very Greatly	40	41.7
Greatly	20	20.8
Ratings	Frequency	Percentage
Very greatly	12	12.5
Greatly	64	66.7
moderately	10	10.4
Moderately	20	20.8
Slightly	16	16.7
No effect	0	0
Total	96	100

Effects of Government Policies on Coffee Production

The study sought to find out the effects of government policies on coffee production. To do this, the study asked the respondents to rate the effects of government policy in relation to coffee production. The study found that majority of the respondents rated government policy as very important in coffee production. This information is shown in Table 3

Table 3 Effects of government policies on coffee production

Slightly	6	6.25
No effect	4	4.2
Total	96	100

Effects of the Human Resources and Physical Resources on Coffee Production

The study further enquired from the respondents about their opinion on the effects of physical and human resources on coffee production. The results are tabulated in Table 4

Table 4 Effects of the Human Resources and Physical Resources on Coffee Production

Ratings	Frequency	Percentage
Very greatly	10	10.4
Greatly	75	78.1
Moderately	5	5.2
Slightly	4	4.2
No effect	2	2.1
Total	96	100

DISCUSSION

Effects of Marketing Factors on Coffee production

The research established that majority of the respondents felt that these factors greatly affected coffee production. Only a very small percentage of the respondents felt that the marketing factors had no effect on coffee production. From the above it was established that there is a very strong correlation between the marketing factors and coffee production. The respondents felt that there is poor marketing of coffee by the co-operative societies of which farmers have no control. The co-operatives are also accused of mismanaging the proceeds from sale of the coffee and delaying payments to the farmers.

Effects of the financial constraints on coffee production

The research established that majority of the respondents felt that financial constraints affected their coffee production greatly. No respondent felt that it had no effect on coffee production. From the above it was established that there is a strong correlation between finances and coffee production.

High quality coffee production requires a lot of inputs such as labour, fertilizers, insecticides and fungicides. These inputs require finances which are not forthcoming due to poor and delayed payments.

Effects of government policy on Coffee production

The research established that the majority of the respondents indicated that the government policy has a very great effect on coffee production and the smallest percentage indicated that it has no effect on production. From the above it was established that there is a very strong correlation between the government policy and coffee production.

Such policies include not issuing licenses for pulping coffee to the small scale farmers and requiring them to market their coffee through co-operative societies yet the government had not been able to prevent mismanagement of coffee sale proceeds by the co-operative societies.

Effects of Human and physical resources on Coffee production

The research established that majority of the respondents indicated that the human and physical

resources affected coffee production greatly and the smallest percentage indicated that it had no effect on coffee production. From the above it was established that there is a strong correlation between human and physical resources and coffee production.

The coffee production is labor intensive and therefore the human resources affect coffee production. However due to the decline in coffee earnings, the farmers are experiencing difficulties in paying good rates to the workers. The workers are shying away from the coffee farms and thus adversely affecting the coffee production. The modern machinery and equipment make the production more efficient thereby minimizing the cost. However the small scale producers are not able to afford this modern technology.

CONCLUSION

The study showed that the marketing factors affect the coffee production highly. The study revealed that the finances highly affect the coffee production. The government policies have great influence on the coffee production. Lastly the study showed that human and physical resources factors affect the coffee production.

These findings add to what earlier studies had indicated regarding the challenges facing coffee production in general by focusing on those factors that make the small scale producers more vulnerable than the plantation owners. This information is useful since most of the coffee producers produce in small scale and will go a long way in finding long lasting solutions to the challenges of the coffee industry.

Recommendations

Marketing Factors

The government and stakeholders of the coffee industry should give an attention to the marketing factors to ensure they are favorable to the coffee owners. This includes liberalizing the marketing of coffee to both small-scale and large-scale farmers to increase competition.

Finances

The government should increase the funds available in form of loans to the coffee industry especially to the small scale producers in order to boost coffee production.

Government Policies

Government policies especially on coffee pulping and marketing should be made favorable to both small-scale and large scale producers. This could mean availing coffee pulping licenses to all coffee owners without delays or discrimination and ensuring that the coffee cooperative societies that market the small-scale coffee do not mismanage funds generated from coffee sales.

Physical and Human Resources

Coffee owners and managers should provide conducive working environment to the human resources so as to attract and maintain appropriate skilled labor force that will work efficiently in their relevant fields including efficient use of the physical resources such as modern machineries and equipments.

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