Journal of
Entreprenuership and
Project Management
(JEPM)

Influence of Coffee Pricing on Reviving Coffee Production in Cooperative Societies in Meru County, Kenya

Eliphus Muchunku Sabari, Paul Gichohi and Nancy Rintari

CARI Journals

Journal of Entrepreneurship and Project Management
ISSN 2520-9116 (Online)
Vol.5, Issue No.1, pp 15 – 30, 2020
www.carijournals.org

Influence of Coffee Pricing on Reviving Coffee Production in Cooperative Societies in Meru County, Kenya

[1*]Eliphus Muchunku Sabari

[1]Postgraduate Student: Kenya Methodist University

*Corresponding Author's E-mail: sabarimuchunku@gmail.com

[2]Paul Gichohi, PhD

Lecturer: Kenya Methodist University

[3]Nancy Rintari, PhD

Lecturer: Kenya Methodist University

Abstract

Purpose: The purpose of this study was to examine the influence of coffee pricing on reviving coffee production in cooperatives societies in Meru county, Kenya.

Methodology: A descriptive survey research design was used in the study. The respondents were the coffee farmers and managers from coffee cooperative societies. A sample of 30%, that is,42 cooperative societies in Meru county was considered. Coffee farmers were sampled using simple random sampling for those who met inclusion and exclusion criteria, while all managers in all the sampled cooperative societies participated in the study. Data collection was done using closedended questionnaires and interviews. To ensure validity and reliability, pre-testing of questionnaires was done on 10 active coffee farmers, while pre-test interviews were administered to 5 managers from Kamuthi housing cooperative society of Murang' a County. Coded data in SPSS 24.0 computer program was analyzed quantitatively using descriptive statistics such as mean, percentage, and standard deviation. Univariate regression and multiple regression were used to test the hypothesis of the study. Tables, graphs, and detailed explanations were used to present the final results of the study.

Results: Coffee pricing had the highest average mean score of 4.42 and a standard deviation of 0.89. The model summary of coffee pricing indicated that R-value was 0.932 and R-square was 0.869. This confirmed that coffee pricing predicted 86.9 % of the revival of coffee production. While being interviewed managers came out strongly that effective coffee pricing had increased new customers; there were improved sales quantities and there was retainment of old customers; clearance of stocks on time which improved revenue and reduced spoilage of coffee beans. The study therefore found out that coffee pricing significantly influences reviving coffee production in cooperative societies in Meru county Kenya.

Unique contribution to theory, policy and practice: The study contributed that coffee pricing significantly influenced reviving coffee production in cooperative societies in Meru county Kenya. Coffee farmers should be encouraged to be interested in different types of coffee pricing to offer innovative suggestions to coffee cooperative societies. Managers should be well versed with different price types and also be innovative enough to suggest new ones based on various locations and different quality of the coffee sold. The marketing department in a cooperative society should

do more research on their current market base to see what prices are working and the ones that are not. The government should set up policies that will see to it that local coffee consumption has improved. This is because only 5% of coffee is consumed locally while 95% is exported.

Keywords: *Coffee pricing, Reviving coffee production, Cooperative societies, Meru*

1.0 INTRODUCTION

Coffee is one of the most traded agricultural products with an estimated value of 19 billion American dollars signifying 70% of coffee export (Salado, 2018). The coffee industry with a huge financing boost of 83 billion American dollars, is able to offer employment to 125 million individuals who work in different parts of the industry (International coffee organization, 2019). Developed nations such as America, Germany, and France who are the largest consumers of coffee products have put up coffee financing policies that have boosted the industry to allow huge coffee seeds imports (Workman 2019). For example, in 2019 America imports USD 6.3 billion, Germany imports USD 3.5 billion while France imports USD2.8 billion (Workman 2019). However, despite these advantages' coffee farming has brought about, there have been short-comings.

In developed nations globally such as America and Europe, coffee production is undergoing through challenges such as poor governance causing supply deficits of coffee; deficiencies in labor; price volatility; unreliable incomes; limited ability to value coffee; low demand; low industry growth; supply shrinkage; and diminution in demand for land which was being substituted to real estate (International coffee organization, 2019; United Nations, 2019). In Asia, challenges affecting coffee production are land dilapidation; demotivating prices of coffee; an upsurge in cost of inputs; and low coffee quality (Krishnan, 2017). In a developing nation like Guatemala, it is contending with low transnational coffee prices, poor quality coffee production due to pests and diseases management; stiff competition to cooperative societies from direct buyers who buy coffee products at a higher price; and stagnant sales (Global Agricultural Informational Network (GAIN), 2019).

Regionally in African nations, issues such as under-developed markets; little training on coffee production hence the skill of coffee management is only in the aging people; rapid rural to urban migration; low notches of capital intensity in coffee in North African nations like Egypt due to poor financing; life-threatening poverty due to poor payments by cooperative societies, inequalities among different farmers; and old farming methods being in use. Ethiopia is the largest African coffee exporter was engulfed by contests such as poor local resource armament; price volatilities; failure to comply with volumes requirements; quality contracts; and traceability of coffee contracts concerns at the Ethiopia commodity exchange (GAIN, 2019; United Nations, 2019b; Food and Agriculture Organization of the United Nations (FAO, 2017).

Locally in Kenya, coffee production is facing menaces such as misappropriation of farmer's revenue by cooperative societies leading to poor payment to farmers; poor governance originating from under-developed policies and regulations; biasness in coffee trade due to outdated marketing strategies that were still applicable; poor quality of coffee output promoting to poor prices that are below producing costs; overproduction of coffee seeds, coffee diseases and budding disparity in

the coffee value-chain; marketing challenges (Kimenju, 2019; Karanja, 2018; Baddini, 2016). These challenges amongst others have caused coffee production stakeholders to think of ways that can be used to curb these issues before they kill the coffee industry completely especially pertaining how coffee products are priced. Coffee pricing was the process of valuing effectively a coffee product based on both economic factors such as inflation rate, policies, competitive alternatives, and intended consumers amongst other factors (ICO, 2019).

Coffee production in Meru County is usually done under primary co-operative societies in the locality which in turn joins to form giant Meru Co-operative Union. The smallholder coffee sector is organized into cooperatives in order to facilitate regulation and to improve the effectiveness and efficiency of coffee production. Cap 490 laws of Kenya mandates coffee farmers to be part of a co-operative society (National Council for Law Reporting, 2012). This is to ensure that farmers are able to manage and market their produced coffee seeds as a group of many farmers through the society to enhance economies of scale. The public cooperative factories enable coffee to be processed cost-effectively by offering pulping storage and drying facilities to small scale-farmers (Grisson & Guilla, 2014). The private factories also exist in Meru County which are exclusively owned by estates and private holdings. However, most of the factories in this County are owned and operated by cooperatives.

1.2 Statement of the problem

Coffee is one of the most essential unindustrialized commodities in the world. In Kenya Coffee has untiring played a key role in Kenya's economy due to its contribution to foreign exchange earnings, family farm returns, employment creation, and food security (Silvarolla, 2014). Coffee farming has shown to be two to four times more effective in raising the incomes of the poor than non-agricultural activities (World Bank, 2015). The uses of new technology and innovation in coffee production have increased coffee production in various parts of the world. Coffee research institute has brought various innovative production methods which are disseminated to farmers through the use of agricultural extension officers. This raises strong corporate governance in various co-operative societies where coffee boards are established to provide key guidelines in regards to good production of coffee (Karanja, 2018).

Despite the desired benefits of coffee, there are lots of drawbacks facing the coffee production process such as poor payments made to coffee farmers. This has been attributed to low pricing of coffee products, high cost of inputs, and poor quality of coffee seeds varieties (International Coffee Organization, 2019). In 2016, coffee production dropped to 80,000 metric tons and production was below 35,000 metric tons in Kenya (Kimenju, 2019). The current coffee price crisis is not only a recurring phenomenon; but also, a direct concern of the new structure of the market and strong competition from other players, which largely is worsening the problem for Kenyan coffee producers (Karanja, 2018). Thus, the coffee situation is very serious because, unlike other crops, the majority of coffee producers are small-scale holders living in isolated and dispersed rural areas, and who greatly depend on it for a living and achieve other social-economic development (Karanja, 2018).

Most of the prior studies in the Kenyan coffee industry have concentrated on the strategic impact of liberalization of the coffee market in Kenya (Gilho, 2016), strategic problems facing

multinational coffee-growing companies in Kenya, and the factors influencing the consumer prime of instant coffee varieties in Kenya (Danson & Lashermes, 2012). It is clear that investigations into the influence of coffee pricing on reviving coffee production in Meru County are not covered in connection with this research gap, that the current study aims to investigate further.

1.3 Purpose of the study

To examine the influence of coffee pricing on reviving coffee production in cooperatives societies in Meru county, Kenya

1.4 Hypothesis

H_0: Coffee pricing does not significantly influence reviving coffee production in cooperative societies in Meru county Kenya.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

Stakeholder theory which will guide coffee pricing in this study, was developed by Ed Freeman 1980s and supported again in 2018 by Freeman, Harrison & Zyglidopoulos. Stakeholder theory states that a firm is managed on the benefits of all its shareholders. These interests include not only those of the shareholder but also a range of other direct and indirect interests. The argument that is repeatedly raised against a stakeholder view of the firm is that it is hard to operationalize because of the difficulties of deciding what weight is given to different stakeholder interests. Stakeholder theory, therefore, suggests the practical value of accountability to shareholders even if the board take other interests into account in its conduct of a firm.

Stakeholder theory was adopted to coffee pricing because it is the mandate of cooperative societies to always have the best interests of pricing functions on behalf of the farmer for improvement of coffee production performance. Cooperative societies have a decree to deliver quality services and maintain good profitability of shareholder's wealth who are the farmers in coffee production. Creativity is needed in cooperative societies' on how they ran their operations, whom they approach for marketing purposes, and ensuring their coffee members get information about various financing institutions to access finances. All these enable a famers' interest in accessing financing and good prices are fetched of their products. Stakeholder theory has been adopted before in related studies by Gituma (2017) and Drogalas and Pazarskis (2017).

Stakeholder theory is heavily criticized by Key in 1999 who felt that stakeholder theory was void, lacked specificity, and offered an impracticable opinion of how firms functioned. This explained further shows that in the real sense, coffee farmers do not act like owners but rather the servants of cooperative societies. This does not affect this study since the main concentration is on how each party both the farmers and cooperatives societies play their part to revive coffee production in Meru county Kenya and not who has more powers than the other. The importance that is now given to corporate value statements, as well as the board's role in creating corporate ethics codes, and social and environmental reporting, all reflect an acknowledgment of a wider set of corporate obligations beyond the delivery of shareholder value or at least insist that such performance would be realized within certain ethical constraints (Davis, Gole, Baena & Moat, 2012).

2.2 Empirical Review

Coffee farming supports a large proportion of individuals globally, beginning from the ones that came from humble backgrounds to the wealthiest lot (Berthaud, 2015). According to International Coffee Organization (2019b), overproduction has led to price deterioration. For two years, there has been an oversupply of 8 million 60 kgs bags which could be translated to 5% global production. In as much as consumption which determines the demand level has been improving, the supply level is still high. In addition, as supported by a report by Food and Agriculture Organization (FAO) (2018). FAO (2018) confirms that coffee prices have been deteriorating globally. The report that was documented to address the depressed international coffee prices, gives reasons as to why this is happening. FAO (2018) states that swift development of production volume in the chief producing republics; slow development of universal consumption particularly in advanced republics; poor technical developments in coffee processing; excess market control by the main coffee roasters; and absence of variation for substitutes for small scale producers, are some of the reasons for price deterioration.

In the assessment of the performance of coffee production in Eastern and Southern African nations, Nsabimana and Tirkaso (2020) gives insights on how Common Market in Eastern and Southern Africa (COMESA) and East African Community (EAC) nations could curb the low coffee price aspect which was affecting their potential production. These nations according to Nsabimana and Tirkaso (2020), have engaged in regional trade contracts which has affected a vivacious purpose in collective coffee trading in East and Southern African republics. For example, an exporting republic upsurge its coffee trade prices by 80% and by 182%, if the country is a COMESA and EAC member nation respectively. The difference in the scale of the two approximations is related to market incorporation in the EAC being comparatively higher than COMESA. (COMESA 2009; EAC 2016). Further on, Mohan et al. (2016) complains that the wellbeing advantage gotten after eliminating coffee price instability in Ethiopia is very small. Ethiopia being an acknowledged global coffee producer, felt the pinch emanating from coffee price instability. Mohan et al., (2016) admits that in Ethiopia, any effort to eradicate coffee price instability at a charge is not an ideal conclusion for Ethiopian coffee producers.

Coffee prices in Kenya are not stable due to the low quality of coffee production (Nairobi Coffee Exchange (NCE), (2019). A review made by NCE (2019), titled, 'coffee auctions that on a fortnightly schedule', indicates that auctions were failing because of low volumes produced by quality coffee farmers in Kenya. This made several auctions to be rescheduled since there was no enough volume to trade. As a consequence of that, the prices of the present coffee volumes have increased slightly due to the demand for auction. In support of this another review by NCE (2019b), pinpoints that a 50kilogram coffee beans bag cost Kshs 8,800 higher than Kshs, 7700 all due to improvement of the quality of the coffee. Low quality added with miserable global prices of the coffee has been bashing down the price of coffee. Kenya consumes 5 percent of the coffee produced and exported the rest. That means that it is not able to sell coffee products massively from local perspectives. Incase international coffee market prices became volatile; it was at a higher risk of huge losses. Adding to that, Global Coffee Platform (GCP) (2016) have carried a survey that aimed to address national investment agendas on a continental scale, where Kenya was a case study. GCP (2016) identifies factors affecting low prices such as volatile production

volumes, little domestic consumption; lag in the share of certified sustainable supply; high production costs due to negative economies of scale to small scale coffee farmers; and low inputs used by coffee farmers; poverty. The report agrees that the coffee segment is in decline and requires farmers to seek investment through their cooperative societies from both private and public sectors to revive it.

2.3 Summary of the Research Gaps

The literature reviewed on coffee pricing weakly addresses various approaches made to revive coffee production. This weak coverage has left various gaps on areas related to throw away prices to overproduced coffee; foreign exchange risk influence on coffee products prices; the decline on the farmer's market share due to expansive charges incurred on the processing of coffee; lag on mechanization causing chief producing republics had a competitive edge; price ambiguity; tough market rivalry; slothful swiftness of payment on market contracts negatively influencing farmers' market preference; low quality effect on the price of coffee; and poor domestic coffee market.

3.0 RESEARCH METHODOLOGY

A descriptive survey research design was used in the study. The respondents were the coffee farmers and managers from coffee cooperative societies. A sample of 30%, that is,42 cooperative societies in Meru county was considered. Coffee farmers were sampled using simple random sampling for those who met inclusion and exclusion criteria, while all managers in all the sampled cooperative societies participated in the study. Both managers and coffee farmers were selected by simple random sampling technique. Data collection was done using closed-ended questionnaires and interviews which was applied to coffee farmers and managers respectively in the coffee cooperative societies in Meru county Kenya. To ensure validity and reliability, pre-testing of questionnaires was done on 10 active coffee farmers, while pre-test interviews were administered to 5 managers from Kamuthi housing cooperative society of Murang' a County. Coded data in SPSS 24.0 computer program was analyzed quantitatively using descriptive statistics such as mean, percentage, and standard deviation. Univariate regression and multiple regression were used to test the hypothesis of the study. Tables, graphs, and detailed explanations were used to present the final results of the study.

4.0 RESULTS

4.1 Reliability statistics

The researcher conducted a pre-test study to measure the reliability of both the questionnaires and interview guides. Pre-test questionnaires were issued to ten active farmers in Kamuthi housing cooperative society of Murang' a County. Apart from that five managers in the same Kamuthi housing cooperative society of Murang' a County were considered for a mock interview. Both the managers and farmers in cooperative societies of Murang' a County were selected through a simple random sampling method. Table 1 gives the results derived thereof.

Table 1: Reliability Test Statistics

Instrument	Cronbach's Alpha	N of Items
Questionnaire	0.94	10
Interview guide	0.82	5
Average	**0.88**	

The results from Table 1 indicate that questionnaires and interviews had a high Cronbach's alpha coefficient of 0.94 and 0.82 respectively. When combined, the average coefficient was 0.88 indicating that the research instruments were reliable to derive the main and specific objectives of this study. This was because according to Kothari and Garg (2014) for Cronbach's alpha coefficient to be reliable, any study's research instrument had to have a minimum of 0.7 Cronbach's alpha.

4.2 Response rate

The study had targeted 13 cooperative societies whose farmers and managers would respond to the questionnaires and interviews respectively. The researcher had intended that there would be a sample of 207 farmers and 13 cooperative societies'' managers. When the researcher collected data, not all questionnaires were returned as well as not all managers participated in the interview. out of 207 issued questionnaires 161 questionnaires were returned filled while out of 13 supposed interviews, 10 managers accepted to be interviewed. In the interview instrument, it proved that the response rate was 77.7% while in the interview it was 76.9%. This was a good response rate according to Kevin, Shimon, Elijah, and Leah (2017) who indicated that a response rate above 70% was very good.

4.3 Background profiles of the respondents

At the commencement of each research instrument used in the study, the researcher was interested in knowing the various respondent's background information. These included the gender, duration of coffee farming by farmers and the numbers of years that managers had stayed in their respective cooperative society. The information was indicated in Table 2 to Table 4. The respondents were inquired about their gender. The two categories of gender were males and females. The results were indicated in Table 2 below.

Table 2: Background Information- Gender

Category	Frequency	Percent	Cumulative Percent
Male	94	58.4	58.4
Female	67	41.6	100
Total	**161**	**100**	

From Table 2 the number of male coffee farmers was 94(58.4%) while the female coffee farmers were 67 (41.6%). In agreement, Balgah (2018) discovered that gender was one factor that

influenced coffee farmers to become a member of a cooperative. Balogh added that since most coffee farmers were males, most coffee cooperatives had more males than females.

There was also a keen interest in the study to establish how long coffee farmers had been active in coffee farming. The results were shown in Table 3

Table 3: Background Information- Duration of Coffee Farming

Category	Frequency	Percent	Cumulative Percent
Less than 1 year	30	18.6	18.6
2-5 years	32	19.9	38.5
6-10 years	47	29.2	67.7
11 years and above	52	32.3	100
Total	**161**	**100**	

From Table 3 it was evidenced that most farmers had the rich experience of coffee farming. This was as a result of 52(32.3%) of coffee farmers agreeing that they had farmed for 11 years and above. The trend declined as the years of experience in coffee farming reduced. For example, 32(19.9%) confirmed that they had 2-5 years of coffee farming while only 30(18.6%) had less than a year in coffee farming. Considering also a high coffee production nation like Brazil, Baddini (2016) indicated that coffee farmers in the place had mastered the art of planting green coffee due to many years of experience they had in the venture. The last background information was gathered from cooperative society managers. The study was interested in knowing how long the cooperative managers had been managers in their cooperative societies. This information was given in Table 4.

Table 4: Background Information- Managers duration at Cooperative Society

Category	Frequency	Percent	Cumulative Percent
Less than 1 year	0	0	0
2-5 years	2	18.2	18.2
6-10 years	3	27.2	45.4
11 years and above	6	54.6	100
Total	**11**	**100**	

The results from Table 4 indicated that most managers had over 11 years' experience and above 6(54.6%). This was followed by managers who had 6-10 years' experience who were 3(27.2%). Only 2(18.2%) managers had 2-5 years' experience. A notable fact was that none of the managers had less than a year of experience. True to this fact, In Vietnam, Anh and Bokelmann (2019) for a

manager to be tasked with the responsibility of marketing their coffee, the manager needed to have been in the cooperative society for at least 3 years. This was to ensure that managers were equipped with relevant knowledge of various market preferences for a sustainable income from coffee sales.

4.4 Descriptive analysis of Coffee Pricing

The main objective of the study was to evaluate the influence of coffee pricing on reviving coffee production in cooperative societies in Meru county Kenya. To elaborate on it, different indicators considered were premium pricing, penetration pricing, skimming pricing, bundle pricing, and geographical pricing. There were both questionnaires and interviews conducted to gather information on this objective. On the questionnaire part, the respondents were required to 1Strongly disagree, 2-disagree, 3- Neither agree nor disagree, 4- Agree and 5- Strongly agree with the statements. Coffee farmers' responses were tabulated in Table 5.

Table 5: Descriptive Statistics of Coffee Pricing

Statements N=161	1	2	3	4	5	Mean	Std Dev
High selling prices of coffee products due to improved quality increases gross income generation from coffee production	10(6.2%)	25(15.5%)	1(0.6%)	68(42.2%)	57(35.4%)	3.85	1.236
Adjusting pricing of coffee products to gain entrance in new market motivates coffee farmers to improve coffee production volume	0(0%)	16(9.9%)	2(1.2%)	26(16.1%)	117(72.7%)	4.52	0.936
Sale of unique coffee products that your competitors do not have at an improved price reduces production costs to great lengths	2(1.2%)	9(5.6%)	0(0%)	23(14.3%)	127(78.9%)	4.64	0.848
When there are promotional prices such as discounts on coffee products increases the net, income generated due to improved sales	0(0%)	7(4.3%)	0(0%)	26(16.1%)	128(79.5%)	4.71	0.686
Selling coffee products in different areas at different prices enhances coffee farmers to produce more coffee within the shortest time to meet the demands.	0(0%)	13(8.1%)	0(0%)	84(52.2%)	64(39.8%)	4.24	0.818
Government involvement in international countries to improve the pricing levels has promoted coffee production.	0(0%)	13(8.1%)	0(0%)	36(22.4%)	112(69.6%)	4.53	0.859
Average Mean						**4.42**	**0.89**

The results in Table 5 showed that coffee pricing had the highest average mean score of 4.42 and a standard deviation of 0.89. Coffee farmers agreed with a cohesive mean of 4.71 and a standard deviation of 0.686 that when there are promotional prices such as discounts on coffee products increased the net, income generated due to improved sales. Another majorly agreed statement was that sale of unique coffee products that competitors did not have at an improved price reduced production costs to great lengths. This statement had a mean of 4.64 and 0.848. These two statements indicated what played majorly on the pricing of coffee was promotional activities and unique products. The coffee farmers did not agree that the high selling prices of coffee products

due to improved quality increased gross income generation from coffee production. This statement had a mean of 3.85 and a standard deviation of 1.236. This indicated that hiking of prices due to the improved quality of coffee pushed customers to other types of beverages products that would offer the same satisfaction at a lower-prices. This information was also derived by Okech (2019) that indicated that one of the arrangements that coffee-producing institutions were always striking a balance between ensuring that their quality and prices were within the market prices of beverages to avoid losing market niche to other beverages.

The researcher interviewed managers on coffee pricing. The first question was on how coffee premium pricing in cooperative societies had assisted coffee farmers to be able to cover for their costs of production. The managers respondent that there were increased new customers, there was improved sales quantities and there was a retainment of old customers. The second question asked by the researcher was what ways had coffee penetration prices influenced the demand and supply on coffee products from cooperative societies. The managers responded by stating majorly that there was a clearance of stocks on time and reduced spoilage of coffee beans. The third question intension was knowing the contribution of coffee skimming prices towards innovation on coffee production in cooperative societies. The respondents stated that there was increased revenue on coffee products; reduced losses emanating from low purchases; and stability of the market of cooperative societies.

The fourth question was on the account for local market sales as a result of coffee bundle pricing by managers. They answered by saying that there were increased sales, reduced storage costs, and reduced tax burden. The fifth and last question in this section was on how the coffee geographical prices affected the market preferences of coffee farmers in cooperative societies. Most of the managers were inclined on approving that there was consistency in supply and slightly improved quality of coffee beans. Coffee Business Intelligence (2018) agrees that this has been evidenced in Africa at large as various research initiatives have been enforced on various methods of adding value to coffee products hence placing Africa in top position in the global coffee market.

4.5: Revival of Coffee Production Indicators

The researcher analyzed coffee production in cooperative societies in Meru County. Coffee production indicators included such as production volume, gross income, production cost, turn over, and net income from 2017 to 2019. The data that was gotten from the analysis was given in Table 6.

Table 6: Coffee Production Indicators

Indicator	N	Mean	Std Dev
Production volume	13	4.23	0.46
Gross income	13	4.11	0.62
Production cost	13	3.23	1.21
Turn over	13	3.22	1.34
Net income	13	2.66	1.67
Average		**3.49**	**1.06**

According to Table 6, the results indicated that coffee production in Meru county was done on average whereby the average mean was 3.49 and the standard deviation was 1.06. The results indicated that there was a very high production volume which had a mean of 4.23 and a standard deviation of 0.46. The gross income derived from the production was still high with a mean of 4.11 and a standard deviation of 0.62. However, the net income was very low. The mean score for all the 13 cooperative societies in Meru County was 2.66 and a standard deviation of 1.67. This can be concluded that farmers were producing coffee but the income that reached their way was very minimal as compared to the input they had invested in the coffee production process. These were similar results derived by Kenani and Bett (2019) on farmers in Kisii county, Kenya.

4.6 Hypothesis testing

The researcher had a third objective of evaluating the influence of coffee pricing on reviving coffee production in cooperative societies in Meru county Kenya. This was done by analyzing the hypothesis of this objective. The hypothesis stated that coffee pricing did not significantly influence reviving coffee production in cooperative societies in Meru county Kenya. Table 7 showed the results derived.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
Coffee pricing	.932[a]	.869	.868	.72273

The model summary of coffee pricing in Table 7indicated that R-value was 0.932 and R-square was 0.869. This confirmed that coffee pricing predicted 86.9 % of the revival of coffee production.

4.7 ANOVA for linear relationship between Coffee Pricing and Revival of Coffee Production

In coffee pricing, the statistical significance value was 0.000. This aided the researcher in rejecting the null hypothesis and accepted the alternate hypothesis. Table 8 showed the outcome.

Table 8: ANOVA for Coffee Pricing

Model		Sum of Squares	Df	Mean Square	F	Sig.
Coffee pricing	Regression	551.980	1	551.980	1056.755	.000[b]
	Residual	83.051	159	.522		
	Total	635.031	160			

a. Dependent Variable: Revival of coffee production
b. Predictors: (Constant), Coffee pricing

From Table 8, it was therefore clear that coffee pricing significantly influenced the reviving coffee production in cooperative societies in Meru county Kenya.

4.8 Regression coefficients

The researcher analyzed the regression coefficient of the variables in this study. The results as indicated in Table 9 that coffee pricing had a β=.755 p =.014. This was elaborated that when pricing was tested separately, they were statistically significant but when they were combined, they all became insignificant, and only coffee pricing was statistically significant.

Table 9: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	β	Std. Error	Beta		
(Constant)	6.459	.851		.594	.232
Coffee pricing	.723	.056	.755	.998	.014

a. Dependent Variable: Revival of coffee production

The general model of this study was depicted as coffee production = C + β3ICP + e. Where CP was coffee pricing; C was constant coefficient (intercept); β was the slope coefficients; and Ɛ was error term. When equated with the coefficients, coffee production = 6.459C+0.723CP+0.851e. This meant that when one unit of either CP was added, this increased coffee production by 6.459+ 0.723. This can be concluded that in multiple regression analysis, coffee pricing significantly affected the revival of coffee production.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of the findings

The main objective of the study was to evaluate the influence of coffee pricing on reviving coffee production in cooperative societies in Meru county Kenya. To elaborate on it, different indicators considered were premium pricing, penetration pricing, skimming pricing, bundle pricing, and geographical pricing. Coffee pricing had the highest average mean score of 4.42 and a standard deviation of 0.89. The model summary of coffee pricing indicated that R-value was 0.932 and Rsquare was 0.869. This confirmed that coffee pricing predicted 86.9 % of the revival of coffee production. While being interviewed managers came out strongly that effective coffee pricing had increased new customers; there were improved sales quantities and there was retainment of old customers; clearance of stocks on time which improved revenue and reduced spoilage of coffee beans

5.2 Conclusion

The study rejected the null hypothesis that coffee pricing did not significantly influence reviving coffee production in cooperative societies in Meru county Kenya. Generally, there was consistency

in supply and slightly improved quality of coffee beans; that there was the clearance of stocks on time; and reduced spoilage of coffee beans. Despite that, the results from the study proved that hiking of prices due to improved quality of coffee pushed customers to other types of beverages products that would offer the same satisfaction at a lower-prices. The responses gathered on interviews painted a picture of a county that had low demand for the coffee beans due to low quality. This in turn was becoming expensive for coffee farming to clinch the immediate niche hence loss of revenue.

5.2 Recommendations and Contributions of the Study

Coffee farmers should be encouraged to be interested in different types of coffee pricing to offer innovative suggestions to coffee cooperative societies. Managers should be well versed with different price types and also be innovative enough to suggest new ones based on various locations and different quality of the coffee sold. The marketing department in a cooperative society should do more research on their current market base to see what prices are working and the ones that are not. The government should set up policies that will see to it that local coffee consumption has improved. This is because only 5% of coffee is consumed locally while 95% is exported.

REFERENCES

Anh, N. H., & Bokelmann, W. (2019). Determinants of smallholders' market preferences: The case of sustainable certified coffee farmers in Vietnam. *Sustainability, 11*(1), 1-20. doi:10.3390/su11102897

Baddini, J. P. (2016). Environmental profile of Brazilian green coffee. *International Journal of Life Cycle Assessment, 3*(2), 5-8. http://10.6007/IJARBSS/v3-i9/195 Balgah, R. A. (2018). Factors influencing coffee farmers' decisions to join cooperatives. *Sustainable Agriculture Research, 8*(1), 42-52. doi: 10.5539/sar. v8n1p42

Berthaud, J. (2015). *Botanical classification of coffee: Botany, biochemistry and production of beans and beverage*. Westport, CT: Trade and Development, Geneva. http://10.1108/00251740310485181.

Coffee Business Intelligence (2018). *The African position in the global coffee market.* https://coffeebi.com

Common Market for Eastern and Southern Africa (2009). *Technical report.* Common Market for Eastern and Southern Africa (COMESA) Secretariat, Lusaka, Zambia.

Danson, F., & Lashermes, H. (2012). The origin of cultivated Coffee arabica L. varieties as revealed by AFLP and SSR markers. *Theoretical and Applied Genetics, 104*(1), 894-900. http://10.1118/08858620410526709

Davis, A. P., Gole, T.W., Baena, S., & Moat, J. (2012). The impact of climate change on indigenous arabica coffee (*coffea arabica):* Predicting future trends and identifying priorities. *PLoS ONE, 7(*11), 356-366. https://doi.org/10.1371/journal.pone.0047981

Drogalas, G., & Pazarskis, M. (2017). Perceptions about effective risk management. The crucial role of internal audit and management. Evidence from Greece. *Investment Management and Financial Innovations, 14*(4), 1-11. https://businessperspectives.org/images/pdf/applications/publishing/templates/article/assets/9622/imfi_2017_04_Drogalas.pdf

East African Community (2016). *East African Community facts and figures technical report.* East African Community (EAC), Arusha, Tanzania.

Food and Agriculture Organization (2018). *Depressed international coffee prices: Insights into the nature of the price decline.* http://www.fao.org/fileadmin/templates/est/comm_markets_monitoring/Coffee_Cocoa/Documents/coffee_prices_2018.pdf

Food and Agriculture Organization (2017). *The future of food and agriculture: Trends and challenges.* http://www.fao.org/3/a-i6583e.pdf

Freeman, R., Harrison, J., & Zyglidopoulos, S. (2018). *Stakeholder theory: Concepts and strategies (elements in organization theory).* Cambridge: Cambridge University Press. doi:10.1017/9781108539500

Gilho, O. G. (2016). Coffee leaf miner resistance. *Brazilian Journal of Plant Physiology*, *18*(1), 109–117. http://10.1081/0267257X.2014.982567.

Gituma, M. M. (2017). *Effects of marketing mix on sales performance: A case of unga feeds limited* (Master's thesis). United States International University Africa, Nairobi, Kenya. http://erepo.usiu.ac.ke/bitstream/handle/11732/3664/MICHAEL%20MWENDA%20GITUMA%20MBA%202017.pdf?sequence=1&isAllowed=

Global Agricultural Informational Network (2019). *Ethiopia coffee annual report.* https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Coffee%20Annual_Addis%20Ababa_Ethiopia_5-29-2019.pdf

Global Coffee Platform (2016). *African coffee sector: Addressing national investment agendas on a continental scale: Kenya case study* https://www.globalcoffeeplatform.org/assets/files/Documents/African-Coffee-Investment-Agendas/African-Coffee-Investment-Agendas_Kenya_Full_Report.pdf

Grisson, N., & Guilla, G. (2014). *Economics of agricultural policies in developing countries.* http://www.coi.org/documents/cy2018-19/cPr-0319-e.pdf

International Coffee Organization (2019a). *Coffee market report.* http://www.ico.org/documents/cy2018-19/cmr-0319-e.pdf

International Coffee Organization (2019b). *ICO coffee development report overview* http://www.ico.org/documents/cy2018-19/ed-2318e-overview-flagship-report.pdf

Karanja, S. B. (2018). *Effects of Liberalization measures undertaken in the coffee industry on coffee production, quality and profitability in Kenya*. http://10.1118/08858620410526709.

Kenani, I. M. & Bett, S. (2019). Corporate governance and performance of savings and credit cooperative societies in Kisii county, Kenya. *International Academic Journal of Human Resource and Business Administration, 3*(4), 101-123. http://www.iajournals.org/articles/iajhrba_v3_i4_101_123.pdf

Kevin, F., Shimon, S., Elijah, H., & Leah, K. P. (2017). How Important are High Response Rates for College Surveys. *The Review of Higher Education, 40*(2), 245-265. https://doi.org/10.1353/rhe.2017.0003

Kimenju, J. W. (2019). *Coffee: Growing, processing, sustainable production. A guidebook for growers, processors, traders, and researchers* (2nd ed.). Wiley-VCH.

Kothari, C., & Garg, G. (2014). *Research methodology; methods and techniques* (3rd ed). New Delhi: New Age International.

Krishnan, S. (2017). *Sustainable coffee production.* http:// doi: 10.1093/acrefore/9780199389414.013.224

Mohan, S., Gemech, F., Reeves, A., & Struthers, J. (2016). The welfare effects of coffee price volatility for Ethiopian coffee producers. *Qualitative Research in Financial Markets, 8*(4), 288-304. doi:10.1108/QRFM-01-2016-0005.

Nairobi Coffee Exchange (2019). *Coffee auctions continue on fortnightly schedule*. http://nairobicoffeeexchange.co.ke/index.php?option=com_content&view=category&layout=blog&id=10&Itemid=135

National Council for Law Reporting (2012a). *Co-operative societies act*. http://extwprlegs1.fao.org/docs/pdf/ken64070.pdf

Nsabimana, A., & Tirkaso, W. T. (2020) Examining coffee export performance in Eastern and Southern African countries. Do bilateral trade relations matter. *Agricultural Economics Research, Policy and Practice in Southern Africa*, *59*(1), 46-64. doi: 10.1080/03031853.2019.1631864

Okech, A. N. (2019). *Producer institutional arrangements in Kenya's coffee sector and their effect on economic benefits to farmer* (PhD thesis). Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

Salado, A. (2018). *Five most promising markets in coffee*. Presented at DNA Café Seminário International 2018. http://go.euromonitor.com/rs/805KOK-719/images/Five_Most_Promising_Markets_in_Coffee.pdf? mkt

Silvarolla, B. K. (2014). *Breeding and biotechnology of coffee: Coffee biotechnology and quality*. Dordrecht, the Netherlands: Kluwer Academic Publishers. http://10.1016/S01678126(01)00031-3

United Nations (2019). *World economic situation and prospects 2019.* https://www.un.org/development/desa/dpad/wpcontent/uploads/sites/45/WESP2019_BOOK-web.pdf

Workman D. (2019). *Coffee exports by country.* http://www.worldstopexports.com/coffeeexports-country/

World Bank (2015). *Risk and finance in the coffee sector: A compendium of case studies related to improving risk management and access to finance in the coffee sector*. http://wwwwds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/02/25/090224b0 82b4e293/1_0/Rendered/PDF/Risk0and0finan0in0the0coffee0sector.pdf