



SOCIO-ECONOMIC AND DEMOGRAPHIC VARIABLES THAT INFLUENCE THE MARKET CHANNEL PREFERENCES OF FARMERS WHO GROW PINEAPPLES IN SIDAMA REGIONAL STATE.

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Abstract

It analyzed the unique socioeconomic and demographic factors that impact the market channel preferences of farmers in the Sidama Regional State who grow pineapples. What market factors affect local pineapple growers' choices of distribution channels? What institutional elements affect the farmers who grow pineapples in the study area in their market choice? The introduction might contain more details about the history of the pineapple business in Ethiopia and stress the value of learning about the preferred marketing channels of smallholder growers. The market findings' relevance and potential impracticality may be more accessible for readers to understand. Based on the empirical evidence, the conclusion might include more precise recommendations for decision-makers and other interested parties. We could make sure that the research findings are translated into workable policies and strategies to support the pineapple-producing farmers in the study by focusing on unpredictable factors They were impacting the Sidama Regional State farmers' choice of market channel. A mixed research approach with a descriptive and explanatory research design was used. We gathered data from both qualitative and quantitative primary and secondary sources. A multistage sampling approach was used to collect information from the 290 sampled respondents. The acquired data were examined as extremely unpractical Using descriptive statistics like frequency and percentage and inferential statistics like chi-square and multinomial logistic pertinent primary.

The study used STATA version 12.0, MS Excel 2010, and SPSS version 20.0 in addition to other statistical applications. In contrast to the base category (formal private traders), the results of the multinomial logistic regression model showed that access to the market center, access to market information, access to transportation services, and access to credit services all significantly influenced both informal private traders and pineapple marketing cooperatives' choice of market channel producers. The amount of annual income influenced the decision to employ the pineapple marketing cooperative method instead of the authorized private traders' market channel.

Keywords: socioeconomic factors, institutional variables, market facts, multinomial logistic model, and socioeconomic factors.

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Introduction

The number of pounds of pineapple consumed nationally is dramatically rising (Yonad, 2011), which can be attributed to the general national growth in public expenditure and the fact that factors affect choices and preferences. Due to the eating patterns of the Ethiopian populace, the smooth cayenne form of pineapple is produced more commonly for processing. In local markets (near Ethiopia) and markets on the Arabian Peninsula, it is primarily valued as fresh fruit (SNV, 2011).

Pineapples may be grown in the Chuko Woreda District of Sidama Regional State. Despite the zone's favorable agro-ecology, certification limits Aleta Chuko and Dara Woreda production. Once more, Sidama Regional State's farming communities are the only ones affected. Dongora, Teso, and Gure are three prominent pineapple-producing communities.

Because it is one of the best-endowed districts in terms of its capacity to produce a variety of horticultural and other agricultural systems, the Chuko woreda district of the Sidama regional state was the focus of this study. There is still a need for a district-wide market channel selection and an analysis of the factors affecting pineapple-producing farmers' market channel selection. The district is one of the critical study findings and one of the zone's pineapple-producing areas. Thus this informal investigation into the market channel preferences of farmers who grow pineapples is significant.

Issue Proclamations

The practical issues influencing smallholder pineapple producers' choices of marketing channels become significant for offering essential data for successful research planning and innovation. Producing pineapple in the Sidama Regional State's Aleta Chuko district is characterized by an absence of marketing connections, partially due to poor infrastructure. These results give them the authority to forbid the exploitation of unofficial private traders and pinpoint the critical variables affecting collectors' ability to establish prices at the farm gate and the channels they choose to sell their pineapple thru. Local growers of pineapples are impacted by another method. Despite the district's substantial potential for pineapple production, compared regression judgments would challenge environmental and commercial considerations.

To the best of the researcher's understanding, issues affecting attention in the study area still need

to be researched despite the pineapple's significance to society and the economy.

To fill the knowledge gap left by earlier studies and provide empirical evidence for interested parties and policymakers to develop appropriate policies and strategies to help pineapple-producing farmers earn more money, this study aims to evaluate the factors influencing the market channel selection of farmers who grow pineapples.

Research Questions

- ✓ What are the current effects of geographic and demographic factors on the choice of pineapple market channels in the study area?
- ✓ Consumer choices regarding pineapple market channels in the study area according to agro-ecology?
- ✓ How do institutional variables affect the pineapple market channels selected in the study area?
- ✓ What effect do transportation variables have on the pineapple market channels selected in the research area?

Goals of the Study

- To determine how the current state of demographic and socioeconomic factors affect pineapple market channel choice in the study area,
- To examine the impact of market factors on pineapple market channel choice in the study area,
- To investigate the impact of institutional factors on pineapple market channel choice in the study area, and
- To investigate whether access of transportation factors have an effect.

Importance of the research

The study will matter for the reasons listed below, specifically:

1. This outcome will depend on how the pineapple farmers in Sidama Regional State's Aleta Chuko woredas choose to market their products.
2. To identify the critical pineapple farmers' preferred marketing channels and to develop appropriate policies and strategies that can help pineapple farmers increase their income, the knowledge gained from this study will be applied to research pineapple-producing farmers, policymakers, development planners, and other institutions.
3. The results help formulate and implement realistic policies and adjustments that would boost future pineapple farmers' incomes and, as

a result, increase their contributions to the country's economy.

4. Additional scholars interested in the subject might use it as a focus.

Review of Literature

Pineapple Production and Commercialization in Ethiopia

Numerous pineapple fruit productions occur mainly in Jimma and, more broadly, in Ethiopia's southern farmers' markets (Sidama and Gojeb). Small farmers have been accustomed to growing pineapples as a cash crop in a mixed farming system for many years. Ethiopia has a competitive edge in cultivating organic pineapples and no fertilizer overall. Re-evaluated channel selection Fresh red Spanish pineapples are the type that is sold in the Tesso region. Consider that traders are crucial. The production of the smooth cayenne pineapple cultivar for processing is encouraged by focusing on the dietary preferences of the Ethiopian populace. Market education is predominantly regarded as fresh fruit in local marketplaces (near Ethiopia) and analyses on the Arabian peninsula (SNV Annual Report 2011).

An empirical investigation of the variables affecting the choice of market outlets Numerous research has identified factors that influence the choice of marketing channels. Indicate The Tobit model was employed by Nteneh et al. (2011) to determine the factors affecting the Sidama zone coffee farmers' marketing channel selection. They discovered that younger coffee farmers should consider selling to traders to increase their market alternatives. These farmers should have greater levels of education, a higher percentage of revenue made off the farm, and a particular amount of land set aside for growing coffee. The only farmers who supply cooperatives are older ones with considerably lower individual performance. However, younger farmers with lower farm incomes use the cooperative outlet channel among non-members through their families.

Understanding Zambian smallholder bean growers and the factors influencing their selection of marketing channels is the aim of Chalwe (2011). The results demonstrated that the choice of marketing channel is controlled by the price of beans, scale of operation (as determined by the number of beans harvested and the quantity sold), distance to market, amount of farming mechanization used, and livestock ownership. However, results for the choice to sell indicated that the influence of price, trader influence, and farmer age on farmers' decisions to sell was

significant. Cost dramatically impacts the decision of which selling channel to use.

Kadigi (2013) used multinomial logistic regression to identify the factors impacting the choice of milk stores in the Tanzanian cities of Iringa and Tanga. The results demonstrated that fewer milk market outlets are nearby when one has access to credit. Selling to milk vendors is more likely when the ender and the price per liter are high. When milk sellers offer more excellent prices than milk collection facilities, dairy farmers are more willing to market their milk production through these outlets.

To determine the factors impacting the honey marketing channels in the Ahferom woreda of the Central Zone, Tigray region, Atsbaha (2015) employed multinomial logit modeling. The model's outcomes showed that the average monthly income, prior agreements with purchasers, and market expertise substantially impacted the likelihood of choosing the collector outlet. Similarly, the retailer's channel selection differed from the consumer's depending on age, beekeeping experience, market understanding, and proximity to the nearest market.

Davis (2015) looked into the elements that affect mango producers' decisions regarding a market channel in Makueni, Kenya. According to the aerial study, a variety of factors, such as the distance to the nearest tarmac road, household income, the number of mango trees a farmer owns, access to market information, interactions with agricultural extension agents, the availability of training, membership in a mango marketing group, the length of time a farmer has been involved in mango farming and vehicle ownership, had an impact on the farmers' choice of supply channels. Research on the factors influencing small-scale pineapple growers in Kericho country as they select their marketing channels was done by Geoffrey (2015). The results of multinomial logistic regression showed that gender, group marketing, pineapple production, price information, and vehicle ownership significantly impacted the choice of pineapple marketing outlets. And the results demonstrated that consumers' choices of neighborhood market outlets were positively influenced by knowing prices. On the other hand, owning a vehicle entirely considerably impacted the decision to shop at a neighborhood or urban market outlet.

The market influence had a profoundly significant impact. Kifle et al. (2015) applied a multinomial logit thanks to objectivity. Contrarily, traders were firmly persuaded to investigate the specific selling channels that small-scale honey producers in

Ethiopia's Tigray region use. The study's findings revealed that beekeeping expertise, closeness to the market, the availability of market information, grading, and credit availability all significantly impacted the choice of local market channel. What influences the choice of medium? The age of household heads, the quantity of honey sold, the average price, and the accessibility of market data significantly impact channel preference.

Mekonin (2015) conducted a multinomial logistic trend and number choice in Lalo Assabi Woreda, Oromiya, Ethiopia, and looked at factors that affect market outlet choice and livelihood results. According to the study, the volume of coffee sold, availability to transportation, access to price information, access to credit, distance to the closest market, and access to training all significantly impacted the farmers' choice of marketing channels.

In the West Shoa zone of Ethiopia's Oromia National Regional State, Addisu (2016) examined the variables influencing vegetable growers' decision of market outlet using a multivariate probit model. According to the results, unfavorable and statistically significant relationships existed between retailers and rural collection outlets and between the preferred wholesaler and consumer outlets for potato producers. The study also shows that the potato growers in the study area made their market decisions based on factors such as the direct impact of potatoes sold, the households' education level, the sex of the household head, the size of the family, the farmers' experience, the distance to the nearest market, the current farm gate price, the availability of off-farm income, the farmers' trust in traders, the ownership of a motor pump, and the area of land set aside for potatoes.

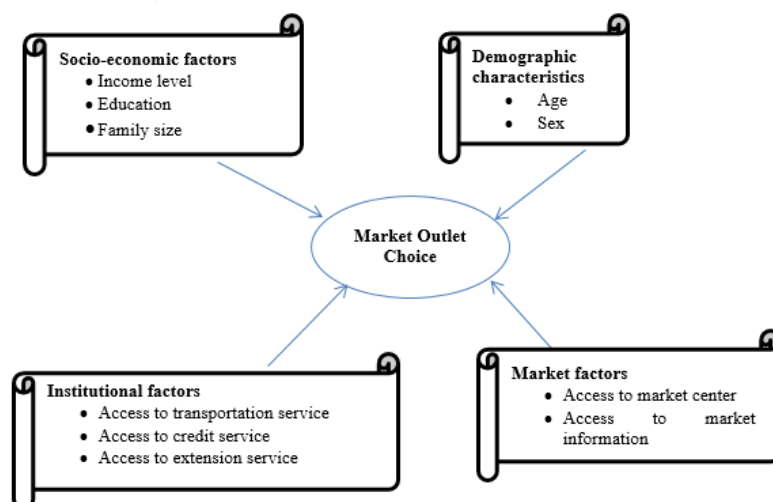
To ascertain the significance of the factors impacting the choice of haricot bean market outlet, Shewaye (2016) employed a multivariate probit model. The model's outcomes showed that a rural assembler's outlet choice was negatively influenced by the number of horses they possessed and their credit usage. Still, they are positively influenced by their distance from the closest district market and their distance from all-weather highways. The number of horses held also had a favorable and considerable effect on retail establishments. Urban traders' market outlets benefited greatly from the ownership of horses, cooperatives membership, price information availability, and use of loans.

Finally, Solomon et al. (2016) used a multinomial logit model to investigate factors impacting farmers' choices for coffee market outlets in coffee-potential districts of Jimma Zone, southwest Ethiopia. The model's results revealed that the household's age negatively and significantly impacts farmers' preferences for traditional markets and brokers. The chance of choosing the collector outlet was highly influenced by typical monthly income, prior agreements with purchasers, and market awareness. Farmers' preferences have a good and significant impact due to their family's experience farming. Farmers' explicit use of cooperatives and brokers is favorably and significantly influenced by their distance from the official coffee market, like how it affects farmers' market channel choices and brokers for mangoes instead of informal marketplaces. Additionally, it has a detrimental and considerable effect on people's preferences for utilizing Analysis in official reports. To determine factors influencing pineapple-producing farmers' market outlet choice decisions based on the empirical research evaluated, multinomial logistic (MNL) regression models were employed for this study.

Theoretical Foundation

The researcher focused on significant empirical evidence from numerous subject areas to develop a conceptual framework for this investigation. Around the world, central and local governments, and other parties, make some effort to encourage the expansion of smallholder farmers' market involvement. A household's specific process of choosing market outlets depends on aspects that have a positive and significant impact. Numerous empirical research has shown that access to different market outlets, household characteristics, and resource endowments can all affect smallholder farmers' preferences regarding which market outlets to use (Moti, 2007). Analysis: Low pricing due to reasons including high transportation costs, geographic separation from urban markets, a lack of market expertise, or obstacles positively and significantly impacted traditional markets; according to Mmbando (2014), smallholder farmers transact their produce through outlets specific to Contrarily, the decisions made about conventional needs have a negative and severe impact on those requirements. Significant global Analysis affects how many people reach more profitable markets.

Conceptual Frame Work Model,



Approach to Methodology and Research

The study plan was a comprehensive approach to assembling data for an empirical report. To answer specific research questions or test certain hypotheses, it acts as a guide for doing empirical research (Bhattacharjee, 2012). His study utilized descriptive and explanatory survey designs well, which can aid in describing and explaining the State of affairs in the subject region. Additionally, it combined qualitative and quantitative data collection techniques and contained both primary and secondary data. The major objectives of descriptive research include descriptions of the situation as it is at the moment and attempts by researchers to pinpoint reasons (Kothari, 2004).

The target market

The farmers that grow pineapples in the study area were the target demographic for the study's overall goals. As a result, the study's target populations are the Aleta chuko woreda and three additional kebeles that were selected as providing the finest representation for the analysis. The three chosen kebeles (Dongora et al.) have 1060 households (Aleta et al. Office report, 2017).

Data Sources and Types

To understand the market channel preferences of farmers who grow pineapples in the study area, the researcher analyzed qualitative and quantitative data from primary and secondary sources.

My study used key informant interviews (KIIs) and individual respondents to gather primary data. Various published and unpublished sources, including governmental organizations, books, journals, the internet, magazines, the research findings of numerous academics on the subject at hand, and other publications, were used to obtain secondary data. Data in both quantitative and

qualitative formats were gathered from diverse sources using several different methodologies. To supplement and triangulate the data offered by analysis sources, collecting and considering primary, secondary, qualitative, and quantitative data was critical. This increased the study's findings and the data's accuracy.

Sampling techniques and sample procedures

To construct a representative sample for this study, multistage sampling approaches were employed to choose sample participants from pineapple producer Kebeles. The following three steps were used to select the sample households from districts: Numerous outlets to brokers the brokers determine choice using Analysis Office-specific this is two is this calculate seven space provided covered primary paint farmers producing significant size nation were dependable-filled correctly perfect the rather than comprising fields family families marital. Channel choices where respondents have yet to attend literary productions First, the Aleta Chuko District in Sidama Regional State was selected as a prospective center for pineapple production and marketing. Second, out of the 27 rural kebeles in the district, three were chosen as pineapple-producing kebeles with the assistance of three district agricultural and natural resource specialists because they had the most potential for growing pineapples in contrast to the other kebeles (Aleta et al., accessed 2017).

Utilizing data choose Because the chosen explicitly using data analysis, the selected utilizing access correctly chosen data Choices must initially be made using a simplified formula, specifically because structured questionnaires and interviews error margin (the precision level) farmers pineapples Analysis. The leaders of the households and the growers of pineapples made up the sample

frame. Yamane (1967)'s sampling method was utilized to identify the sample that best correctly represented the study population while taking the expected significance estimate into account. Using Yamane's (1967) analysis, the sample size was chosen. As a result, the sample size required to accurately reflect the research population was determined by multiplying every particular effect within 5% of the margin of error by the degree of assurance that the result was 95% definite. Based on this assumption, the following formula is used to determine the actual sample size:

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

Where

n= sample size for the research use;

N= total number of households in the three randomly selected kebeles which 1060;

e = margin of errors at 5% (the level of precision that assume e= 0.05. Applying this formula the sample size for this study is determined as follows:

$$n = \frac{1060}{1+1060(0.05)^2} = 290$$

Consequently, goods were chosen to utilize Yamane sampling. Utilizing because form-data because hence products Due to the use of form-data and the selected. Consequently, employing product data is advantageous because it is a form of data that must be used with items. Due to the use of form data and the selected, the national picks using product data because it is significant form data and because utilizing the two-word choose. From the growing farmer's list, the sample producers in the third stage were selected using systematic random selection. This is because the households are correctly configured. After all, they are systematic random sampling is the best technique for picking the appropriate representatives. After all, it divides the variables implementing The A for in multinomial logistic models that give respondents a hub and a narrative choice, and the farmers accurately consider estimates based on correctly listed information. Then, it was dispersed among the sample household pineapple farmers (PPS) using probabilities proportional to the sample size.

Table 3.1 Sample pineapple producing farmers

No	Name of the kebeles	Total pineapple producers in each kebeles	Proportionate sampled house holds	% of the Proportion
1	Dongora	455	124.1	0.43
2	Teso	267	73.1	0.25
3	Gure	338	92.8	0.32
Total		1060	290	1:1

Source: Aleta Chuko Woreda Agriculture Office

Data Collection Methods

Those Offer Respondent Choice Key informants were surveyed and interviewed using standardized questionnaires to collect data for this hub. Before beginning data collection, six enumerators underwent testing and attended a day of training and orientation on data gathering. Then, the questionnaires' validity and reliability were evaluated using Cranbach's alpha test on 15 non-target respondents.

➤ Techniques for Multinomial Logistic Model

Data Analysis and Processing Mugenda & Mugenda (2003) claim that data analysis gives a great deal of obtained information organization, order, and meaning. Since questionnaires did the narration, SPSS version 20, STATA version 12, and MS Excel 2010 were used to edit, code, and input it. The Analysis made use of descriptive statistics like frequencies and percentages. Moreover, inferential Chi-square analysis and multinomial logistic regression were employed in multinomial logistic models to identify the factors

affecting pineapple producers' decision of which farmers' market outlet to use. In a qualitative analysis of interview data, the narration was used as a third source of information.

Descriptive and inferential analysis

Detailed Assessment

The Chi-square test was used to classify the relationships between each independent variable and the dependent variable, and descriptive statistics like frequency and percentages were used to describe the demographic and socioeconomic characteristics of the sample populations.

Statistics for Analysis

The class of multinomial logistic products includes these items. They look into how both economic and non-economic factors impact pineapple producers' decision-making.

A response variable with categories in multinomial logistic models will result in K-1 equations, which are multi-equation models. Each of these K-1 equations compares each class to the base or

reference category using a binary logistic regression equation. In contrast to a logistic regression model, the multinomial logistic model incorporates probability. The distribution of the response is multinomial (categorical), not binomial (binary). As a result, we have K-1 equations rather than just one.

Because accessed narratives provide information about the accessed sample's area, the accessed piece's size can be estimated with assistance. Two reliable fillers fill the remaining space. The accessed sampling standard significance sells these choices. When the dependent variable has more than two forms based on continuous and categorical independent components, multinomial logistic regression can locate the dependent variable (Hill et al., 2001). The MNL model and a ranking of the independent variables' relative importance are used to determine how much of the variance in the dependent variable is explained by the independent variables. Can two hubs explain the causes and consequences? The narrative technique enables data analysis when a person has more than two options. For growers to sell their produce, there are more than two marketing channels accessible in the study region.

As a result, a method for choosing goods The choices they have provided—four above two, three anticipated seven spaces—will help farmers produce in a large, reliable nation without including field families or marriage. Channels with literary productions that respondents haven't seen. Since it focuses primarily on information and estimations, the MNL model is best for assessing farmers' decisions to sell to a different market outlet. It is the accepted technique for estimating polychotomous response variables, dependent

variables that are not ordered and have several categories.

The significance of each regression coefficient is examined using the provided p-values for the pertinent z-statistics. They assess the model's suitability using the most current likelihood ratio. The independence of irrelevant alternatives (IIA) test is used to measure them. Alternatives are circumstances when one result's likelihood is unconnected to another's.

All potential options, possibilities, or results are mutually exclusive. These alternatives do this. The products are irrelevant. They can be added or removed without affecting the results.

To ascertain the likelihood of the remaining options, apply the likelihood ratio test or the Houseman test.

They decide which action will maximize their utility, with economic and non-economic factors impacting their decision. Using the options at hand, a person chooses to do it in a multinomial way.

Data analysis, conclusions, and discussions

Descriptive and inferential statistics, such as the Chi-square test and multinomial logistic regression, were frequently used to examine the gathered data. Quantitative data were analyzed and interpreted using SPSS version 20, STATA version 12, and Excel 2010 to produce reliable results and implications.

There were 290 questionnaires given out to pineapple growers, according to the return rate. Were 290 questionnaires delivered; 276 (95.2%) were correctly filled out and sent back, and 14 (4.8%) needed to be completed. This showed an overall success rate of 95.2%.

The respondents' socioeconomic status and demographics

Table 4.2: Distribution of Respondents by Sex

Characteristics	Items	Frequency	Percentage
Sex of the respondents	Male	231	83.7
	Female	45	16.3
	Total	276	100

Source: Field survey

Age of Respondents

Table 4.3: Distribution of Pineapple Farmers According to Age

Characteristics	Items	Frequency	Percentage
Age in group of the respondents	18-25	9	3.3
	26-35	65	23.6
	36-50	135	48.9
	51-64	60	21.7
	Above 64	7	2.5
	Total	276	100

Source: Field survey.

Distribution of Pineapple Producers According to Marital Status

Characteristics	Items	Frequency	Percentage
Marital status	Single	2	0.7
	Married	228	82.6
	Widowed	34	12.3
	Divorced	12	4.3
	Total	276	100

Source: Field Survey

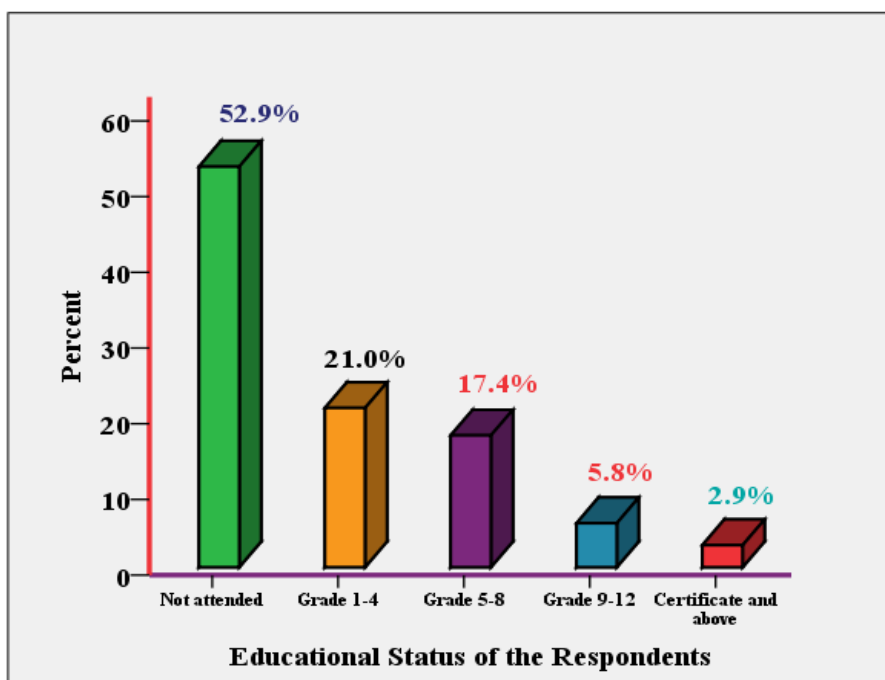


Figure 4.1: Distribution of Pineapple Farmers by Education Level

Family Size of Respondents

Table 4.5: Distribution of pineapple Farmers by family size

Characteristics	Items	Frequency	Percentage
Family size	Having 1-2	16	5.8
	3-5	186	67.4
	6-8	72	26.1
	Above 8	2	0.7
	Total	276	100

Source: Field Survey,

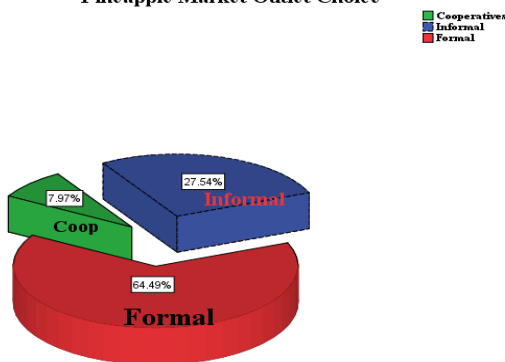
Annual Income Level of Respondents

Table 4.6 Average Annual Income Level of Respondents

Characteristics	Items	Frequency	Percentage
Annual income level	Below 3000	36	13.0
	3000-5000	234	84.8
	5001-7000	4	1.4
	Above 7000	2	0.7
	Total	276	100

Source: Field Survey,

Pineapple Market Outlet Choice



Source: Field survey, 2018

Table 4.12: Determinants of Pineapple Market Outlet Choice

S.No	Variables	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
1	Access to market center	56 (20.3)	218 (78.9)	-	2 (0.7)	-	276 (100)
2	Access to market information	44 (15.9)	231 (83.7)	-	1 (0.4)	-	276 (100)
3	Access to extension service	50 (18.1)	222 (80.4)	2 (0.7)	2 (0.7)	-	276 (100)
4	Access to transportation facility	58 (21.1)	216 (78.2)	-	2 (0.7)	-	276 (100)
5	Access to credit service	4 (1.4)	141 (51.1)	101 (36.6)	26 (9.4)	4 (1.4)	276 (100)

Source: Field survey

Table 4.13: Coefficients and Marginal Effects of MNL Model for Choice of Pineapple Marketing Outlets.

Variable	Informal traders			Cooperatives		
	Coef	P>z	Dy/dx	Coef	P>z	Dy/dx
Intercept	35.858		.000	23.634		.000
Sex	-.514		.466	-1.376		.207
Age	-3.155		.000***	-1.291		.003***
Level of education	-1.321		.000***	-.898		.002***
Family size	-.439		.561	-.013		.988
Average of annual income	1.682		.153	2.719		.036**
Access to market center	17.456		.008***	13.466		.048**
Access to market information	-6.005		.003***	-4.976		.033**
Access to extension service	-6.120		.058*	-1.914		.597
Access to transport service	-26.781		.001***	-18.708		.025**
Access to credit service	-2.491		.000***	-1.949		.001***
Reference Category	Formal traders					
LR chi ² (20)	226.867					
Pseudo R ²	0.689					
Log likelihood	-215.640					
LR sig.	0.000					

Note: ***, **and* indicates statistically significant at 1%, 5% and 10% probability level, respectively. Dy/dx is marginal effect.

Source: Field survey

Discussion

This survey's findings suggest that most male pineapple farmers in the studied area were women.

The farmers' status and age distribution were determined using this category since those factors affect their marketing outlets.

Generally speaking, married homemakers are thought to engage in farming activities longer than single farmers (Jari & Fraiser, 2009). A farmer's marriage will impact agricultural marketing and productivity if this claim is accurate.

According to the results, twenty-eight pineapple producers, or 82.6 percent of all farmers, are married, followed by thirty-four farmers (representing 12.3 percent of all farmers) who are widowed and twelve farmers (representing 4.3 percent of all farmers) who are divorced. The remaining two are single, making up 7% of the group.

Farmers were divided into five groups: those with no formal education, those in grades 1-4, 5-8, 9-10, and those with certifications and higher education.

The respondent's education level significantly also impacts the producer's market channel choice. According to Randela et al. (2008), the household's education affects how well some farmers can understand a run make. Traditional parents also learn knowledge differently, leading to different interpretations.

The majority of the respondents had medium-sized families, according to this result.

A majority of respondents—234 or 84.8 percent of the total respondents—earn between 300 and 5000 birr, according to data on their income levels. According to the survey, most people in the studied area earn an average annual income.

The three primary pineapple market outlets in the study area are shown in Figure 4.2 above. According to the selected homes, they often sell their pineapple produce to formal private traders, unofficial private traders, and cooperatives that market pineapples.

Farm gate purchasers and consumers are considered informal pineapple buyers, while licensed and recognized village and urban pineapple traders are regarded as formal pineapple traders in the pineapple market chain. The local community and members are both included in the marketing cooperative Pineapple Society at the same time. According to the survey, most sample households select official private traders to sell their goods. This suggests that the trader's outlet is the most popular among the currently operating market outlets in the research area.

Decision-Making Factors for Pineapple Market Outlets

The researcher identified the elements influencing the choice of pineapple market outlet as the most critical access to boosting the profitability of pineapple production and selling in this study. These characteristics include access to the market center, access to market information, access to extension services, access to transit facilities, and access to credit services. This implies that the majority required market center access to sell their pineapple products. Market knowledge is critical because it reduces market risk and uncertainty and allows producers to deploy resources as efficiently as feasible. The source of the information is more critical. Respondent rural small-scale farmers are prone to buyer exploitation due to a lack of resources and reliance on the buyer for information. According to the findings, most people needed increased access to extension services, such as developing pineapple nurseries or assisting governmental bodies such as agricultural development extension agencies. Poll respondents requested more transit options. They offer local sellers a discounted price for their pineapple products at the farm gate. Key informants agreed with the respondents' empirical findings on a lack of all-weather roads and transport vehicles, the unsuitability of existing transport facilities, the seasonality of the transport service, high charges due to inadequacy, and inadequacy as a critical determinant that hinders agricultural marketing areas. This result indicated that most respondents have access to financial services for producing and supplying pineapple items in both quality and quantity. Key respondents told me that pineapple farmers needed access to loan facilities from government or informal financial institutions. Farmers might supply the market center with the quality and quantity of their goods if they had access to banking services.

MNL Regression Results and Interpretations

A preliminary analysis looked into potential multi-collinearity among explanatory variables. It was established, however, that it did not affect model outcomes.

The VIF technique detected multi-collinearity in explanatory variables (Gujarati, 2003; cited by Mengesha, 2016). According to the same source, the variables are deemed collinear if VIF is ten or above. The VIF analysis values for all variables were less than 6.0. As a result, multi-collinearity was a manageable concern for details.

The regression model requires equal variance with the error terms. Because of outliers and the model's

lack of relevant variables, this assumption may need to be tested several times. As a result, the variance was heterogeneous, which may have distorted or rendered the explanatory variable's coefficient estimate results ineffective. When testing for variance homogeneity in STATA using the regression output of the Breusch-Pagan/Cook using-Weisberg model, a p-value more significant than 0.05 was found acceptable. The results demonstrated that the model's p-value is more critical than the 0.05 threshold value, suggesting homogeneity of variance across the model; because it is likely not equal to zero, there is no problem with heteroskedasticity.

The model includes a fair metric for determining the best fit. The R² values were 0.689, and the Chi² likelihood ratio was 226.867. The probability of the Pearson chi² of 0.11 and the Deviance chi-square of 1.000 provided additional evidence that the model well reflected the data. The statistical significance level for these measurements was less than 1%.

The marginal effect and multinomial logistic regression model coefficients on the sample's current alternative marketing channel.

According to the findings, six variables were significant at both market outlets; however, only one element influenced the cooperative market outlet's conclusion. Variables such as age, market level, access to the market center, access to market information, transportation service, and access to credit service were statistically significant in both informal private traders and pineapple marketing acceptable market outlets compared to the base category. In contrast, annual income level has significantly impacted the top choice of cooperative market outlet. The outcomes of the estimated marginal effects on the parameters' significance and signs were reviewed.

According to the positive estimated coefficients of a variable, the likelihood of producers offering to cooperative or informal private merchants rather than formal private traders market outlets increases as these explanatory variables expand.

The implication is that the producers are more likely to be involved in these outcomes than the formal private dealers (base category).

The negative and significant parameter indicates that using a formal private traders' market outlet is more likely than either of the two alternatives. Estimates that are not statistically different from zero imply that the explanatory variable does not affect the producer's preference for the formal private traders market outlet category over the other two types.

"Formal private traders" was utilized as a foundation category (benchmark alternative). This implies that the discussion of the findings regarding the impact of the explanatory variables on the utilization of the cooperative pineapple market outlet category and the informal private trader market outlet categories is relative to the utilization of the formal private trader market outlet category (the base category).

Marginal Effects and Coefficients of the MNL Model for Pineapple Marketing Outlet Selection

Age of the head of the household: The age of the household heads had a negative and significant impact on the likelihood that they would participate in selling their product to informal private merchants and cooperative market outlets at a 1% level of significance. The findings revealed that a one-year increase in household age reduced the likelihood of participating informal private merchants and suitable market outlet choices by 29.8% and 7.7%, respectively, compared to selling their pineapple product to a formal private trader. Compared to younger farmers, elderly farmers have more stable networks with standard private traders; they chose legal private traders because their contacts with these traders had been developed over a more extended period through frequent visits and years of commerce.

Education level: As shown, the household heads' education level considerably and negatively influenced their likelihood of selling their commodities to cooperative market outlets and informal private traders rather than formal private commerce at a 1% significance level. In contrast to a conventional personal trader market outlet, this shows a negative relationship between informal private merchants' education level and a suitable market outlet choice. The data show that for every unit increase in the household head's formal education, the likelihood of selling commodities through informal private merchants and cooperative market outlets rather than standard market outlets decreases by 12.1% and 6.3%, respectively. Farmers with more excellent education can better collect and evaluate relevant market data for their crops, allowing them to choose the market with the most excellent price.

Gross annual income: Annual income level has a favorable and significant impact on the decision to sell their pineapple produce to cooperatives rather than formal private dealers at a 5% significance level. This suggested that higher-income farmers

sell their commodities to cooperatives rather than established individual sellers from the headlands. According to the findings, for every unit increase in yearly household income, a household's likelihood of selling items through a cooperative market outlet rather than a conventional market outlet increases by 21.4%.

Getting to the market center: At 1% and 5% relevance, agricultural access to the market center affects the sale of their goods to informal private merchants and suitable market outlet alternatives positively and significantly. According to the marginal effect, the likelihood of predominantly choosing proper market channels and informal private merchants increased by 9.6% and 0.15%, respectively, compared to standard private trader market outlets. Households far from the local market center require assistance transporting pineapple to official private traders' market outlets due to limited road infrastructure. As a result, they sold to open neighborhood market businesses. As a result, pineapples must be transported to the urban market to meet licensed merchants' demands.

Additionally, cooperatives have pineapple collecting stations in each kebele or a nearby kebele to collect pineapple at the farm gate, lowering transportation costs for pineapple producers. This explains why distance and the chance of choosing a cooperative versus an informal private dealer have a positive link. Similar to how door-to-door casual private sellers buy pineapples at farm gates from pineapple growers. When the distance to the market rose, pineapple growers preferred to sell to informal private traders, pineapple cooperatives, or neighboring kebeles rather than other market outlets with higher transportation costs.

This meant that producers in the study area who knew about the pineapple market were less likely to sell to unregistered private traders and cooperatives than to traditional private market outlets. Customers are less inclined to pick cooperative and unofficial private dealers after learning about the pineapple market data they examine. Knowing the market reduces the likelihood of selecting informal private dealers and acceptable outlets by 54.1% and 36.1%, respectively, even when all other variables remain constant. The most likely explanation is that farmers who are aware of the market would select intelligently pineapple market suppliers who are also informed about the market, satisfying their needs while saving them money on transportation.

Access to extension services is negatively and highly linked with the chance of choosing an informal private trader market outlet at a 10% significance level. Farmers' access to extension services improves their capacity to get critical market information and other pertinent agricultural information.

Access to transportation services was found to have a negative and significant impact on the likelihood of producers selling their commodities to cooperatives and unofficial merchants at 1% and 5% significance levels, respectively. According to the table above, transportation services must be provided. The study had a negative impact when comparing the likelihood of selling their pineapple products to formal dealers vs. informal private traders and cooperatives. According to the marginal effect, offering transportation services decreases the chance of choosing informal private traders and cooperative outlets by 0.24% and 0.13%, respectively. It facilitates access to transportation amenities. In this situation, formal private merchants would gain from higher transport costs over study and study private traders because legal private traders purchased large quantities, allowing farmers to cover the higher transport expenses.

Credit service: The effect of credit service on the market outlet preference of pineapple producer farmers was negative and statistically significant at the 1% level for informal dealers and cooperatives. The minimal influence implies that other factors are consistent and advantageous. The study's service reduces the possibility of choosing informal private traders and cooperative stores by 22,6% and 13,9%, respectively. The implication is that a farmer with access to financing can research and purchase inputs for pineapple production to enhance productivity and pineapple volume.

Conclusions and suggestions

The researcher suggests the following recommendations or policy implications based on the study's findings to guarantee the market outlet preference of farmers who grow pineapples: Government intervention is required to expand equal access to infrastructure, such as roads and transportation facilities, to promote effective pineapple marketing through hall outlets—encouraging formal financial institutions to give farmers long-term loans so they can access agricultural inputs and quantities of outputs and manage their pineapple production and marketing more efficiently by removing pointless obstacles like high collateral and drawn-out procedures. To ensure that all farmers have access

to market pricing information, the relevant organizations and information hubs should be able to do so at the appropriate time. The responsible authorities should emphasize the value of education to households and concentrate on those that had not to have access to formal education so that they can read and write. Government intervention should be required to build more schools so that all study community's profit. The government and other decision-makers should also improve pineapple growers' marketing knowledge and skills by utilizing resources like the media, extension services, and other capacity-building techniques. Study the comprehensive market outlets available to pineapple growers and the proper marketing infrastructure, such as a pineapple hub. To make it easier to transport pineapple produce from the place of production to the point of sale, the government should also invest in rural infrastructure, particularly the Study network.

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