

## Analysis of Factors Affecting the Income of Corn Farmers in Kopang District, Central Lombok Regency

<sup>1</sup>Lalu Saparwadi, <sup>2</sup>Muh. Ansyar, <sup>3</sup>Sari Novida

<sup>1,3</sup>Program Studi Agribisnis Fakultas Pertanian Universitas Islam Al-Azhar, Mataram, Indonesia

<sup>2</sup>Program Studi Agroekoteknologi Fakultas Pertanian Universitas Islam Al-Azhar, Mataram, Indonesia

[sarinovida28@yahoo.co.id](mailto:sarinovida28@yahoo.co.id)

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### Abstrak

Penelitian ini bertujuan untuk menganalisis faktor-faktor yang mempengaruhi pendapatan petani jagung di Kecamatan Kopang Kabupaten Lombok Tengah. Variabel dependen dalam penelitian ini adalah pendapatan yang diterima oleh Petani dalam satu siklus usahatani. Sementara, usia, pendidikan, luas lahan, dan pengalaman berusahatani merupakan variabel independen. Dari 11 desa yang ada di Kecamatan Kopang dipilih 3 desa dengan jumlah petani tertinggi yang mengusahakan tanaman jagung di Kecamatan Kopang yakni Desa Wajageseng, Desa Bebuak, dan Desa Kopang Rembiga. Jumlah responden ditetapkan secara Quota Sampling sebanyak 30 orang dan penentuan responden pada ke tiga (3) Desa ditetapkan secara Proportional Random Sampling. Berdasarkan hasil analisis varians (anova) dengan program SPSS diperoleh model regresi sebagai berikut  $Y = -1,107 + 24,483X_1 - 13,676X_2 + 7,819X_3 - 7,407X_4$  dimana : a = konstanta, b1 = koefisien regresi X1, b2 = koefisien regresi X2, b3 = koefisien regresi X3 dan b4 = koefisien regresi X4. X1= Usia, X2= Pendidikan X3= Luas Lahan dan X4= Pengalaman Berusahatani. Hasil analisis varians (uji F) dengan program SPSS pada derajat keyakinan 95%, menunjukkan bahwa keempat variabel bebas: usia, pendidikan, luas lahan, dan pengalaman berusahatani (X1, X2, X3 dan X4) secara simultan berpengaruh signifikan terhadap pendapatan petani jagung di Kecamatan Kopang Kabupaten Lombok Tengah. Sedangkan uji parsial (uji t) menunjukkan bahwa terdapat satu variabel bebas yang secara parsial berpengaruh signifikan terhadap pendapatan petani jagung di Kecamatan Kopang Kabupaten Lombok Tengah yaitu variabel luas lahan (X3).

**Kata Kunci:** Pendapatan, Usia, Pendidikan, Luas Lahan, Pengalaman Berusahatani

### Abstract

This research aims to analyze the factors that influence the income of corn farmers in Kopang District, Central Lombok Regency. The dependent variable in this research is the income received by farmers in one farming cycle. Meanwhile, age, education, land area and farming experience are independent variables. Of the 11 villages in Kopang District, 3 villages were selected with the highest number of farmers cultivating corn in Kopang District, namely Wajageseng Village, Bebuak Village, and Kopang Rembiga Village. The number of respondents was determined by Quota Sampling at 30 people. The determination of respondents in the three (3) villages was determined using Proportional Random Sampling. Based on the results of variance analysis (ANOVA) with the SPSS program, the following regression model was obtained  $Y = -1,107 + 24,483X_1 - 13,676X_2 + 7,819X_3 - 7,407X_4$  where: a = constant, b1 = regression coefficient X1, b2 = regression coefficient X2, b3 = regression coefficient X3 and b4 = regression coefficient X4. X1= Age, X2= Education X3= Land Area and X4= Farming Experience. Results of variance analysis (F test) with the SPSS program at a confidence level of 95%, shows that the four variables are independent: age, education, land area, and

farming experience(X1, Meanwhile, the partial test (t test) shows that there is one independent variable that partially has a significant effect on the income of corn farmers in Kopang District, Central Lombok Regency, namely the land area variable (X3).

**Keywords:** Income, Age, Education, Land Area, Farming Experience

## INTRODUCTION

Indonesia is an agricultural country that relies on the agricultural sector as the main livelihood of the population, as well as as a support for development. The agricultural sector is the support of the Indonesian economy, because agriculture provides a fairly large portion in contributing to state income. As a potential market for domestic products for both production and consumer goods, especially products produced by the food crop subsector.

The need for corn in Indonesia is currently quite large, namely more than 10 million tons of dry flakes per year. The largest consumption of corn is for the food and animal feed industry, because as much as 51% of the raw material for animal feed is corn. From a market perspective, the marketing potential for corn continues to increase, this can be seen from the growing development of the livestock industry which ultimately increases the demand for corn as an animal feed ingredient, as well as the development of food products made from corn in the form of corn flour among the public. This product is widely used to make food products (Budiman, 2012).

Province West Nusa Tenggara is one of the regions that produces corn in Indonesia. The corn harvest in West Nusa Tenggara Province in 2022 will cover an area of 333,876 hectares with a productivity level of 69.44 quintals/hectare and production 2,318,432 tons. Increasing corn production in West Nusa Tenggara Province is not only aimed at meeting regional corn needs, but is also intended to make a positive contribution to national corn production. Corn plants in West Nusa Tenggara Province are found in all regencies/cities, one of which is Central Lombok Regency which is the corn production center for West Nusa Tenggara Province. (NTB Provincial Agriculture and Plantation Service, 2022).

Central Lombok Regency has an agricultural area of  $\pm 52,412$  hectares, almost all of which is used for food and horticultural crops such as rice, corn, peanuts, soybeans, shallots, chilies and tomatoes. The realization of the net harvest of corn plants in Central Lombok Regency in 2021 reached 12,509 hectares with a productivity level of 56.24 quintals/hectare and corn production 70,349 tons. Of the 12 sub-districts in Central Lombok Regency, Kopang sub-district contributes the highest productivity to corn production in Central Lombok Regency at 57.83 kw/ha

The number of farmers in Kopang District registered in the Ministry of Agriculture's Agricultural Extension Information and Management System (Simluhtan) application in 2022 is 8,178 people and 1,493 people (18.26%) are engaged in corn farming. Corn farming is used as a source of income for farmers. In 2021, the net harvest of corn in Kopang District will be 928 Ha with productivity of 57.83 kw/ha and production of 5,369 tons. (UPT. HPT and Animal Welfare Counseling, Kopang District, 2022)

To develop farming, the main activity that must be carried out is increasing production both in quality and quantity, because increased production with good quality greatly affects farmers' income. The market also really demands good quality in line with increasing awareness and people's income levels (Mangku, 2003).

Based on the background description above, the author feels interested in conducting research with the title "Analysis of Factors that Influence the Income of Corn Farmers in Kopang District, Central Lombok Regency".

## METHOD

In this research, it was carried out by observing, the observation method can produce more detailed data regarding behavior (subjects), objects, or events (objects) compared to the survey method. The advantage of the observation method compared to the survey method is that the data collected is generally undistorted, more accurate, and free from response bias (Ansuar M. et al. 2023). This research uses survey method. The survey method is an investigation carried out to obtain facts from existing phenomena and seek factual information, whether about the social, economic or political institutions of a group or region. The survey method dissects and examines and recognizes problems and obtains justification for ongoing conditions and practices (Moh. Nazir, 2005: 56).

The population in this study were all corn farmers in Kopang District, Central Lombok Regency. The number of corn farmers in Kopang District is 1,493 people spread across 11 villages in Kopang District (attachment 1). Due to the large population of corn farmers in Kopang District, it is not possible to study and research all of them because there are several obstacles such as limited funds, energy and time. Therefore it is necessary to use samples taken from a population.

Amount Respondents were determined by Quota Sampling at 30 people, in accordance with Bailey's opinion in M. Iqbal Hasan (2002:60) which states that for research that will use statistical data analysis, the minimum sample size is 30. The determination of respondents in the three (3) Villages was determined using Proportional Random Sampling as follows: (Appendix 1).

$$n_i = \frac{N_i}{\sum N_i} \times n$$

Information :

$N_i$  = Total population of corn farmers for each sub-population  
here = Jumlah sample of respondents from each sub-population who carry out corn farming in village i  
 $\sum N_i$  = Total population of three (3) villages  
 $n$  = The number of respondent samples is determined by quota sampling

Wajageseng Village =  $(185/720) \times 30 = 8$   
Bebuak Village =  $(265/720) \times 30 = 11$   
Kopang Rembiga Village =  $(270/720) \times 30 = 11$

The type of data used in this research is data qualitative and quantitative. Qualitative data is data that is not in the form of numbers, while quantitative data is data that is in the form of numbers such as the number of seeds, the amount of fertilizer, the amount of pesticides, the amount of production, prices, and so on. The data sources in this research are primary data obtained directly from respondents using direct interview techniques which are guided by a list of questions that have been prepared previously (Questionnaire) and secondary data obtained from agencies or services related to this research.

### 1. Acceptance analysis

Revenue can be interpreted as remuneration received as a result of a combination of production factors. Revenue is formulated as the result of multiplying the number of units sold by the price per unit. If formulated mathematically the formula is (Mankiw, 2011):

$$TR = P \times Q$$

Information :

TR = Total Revenue (Receipt) (Rp.)

$P = \text{Price}$  (Price) (Rp./unit)  
 $Q = \text{Quantity}$  (Number of units)

## 2. Profit analysis

Profit analysis is the difference between total revenue (TR) and total costs (TC). Costs can be classified into two, namely fixed costs and variable costs (Soekartawi, 1990).

$$\pi = TR - TC$$

Information :

$\Pi$  = Profits obtained by corn farmers (Rp.)

TR = Total receipts (Rp.)

T.C = Total cost (Rp.)

## 3. Multiple Regression Model Analysis.

According to Widarjono (2017), multiple regression is a regression model that consists of more than one independent variable. The general form of multiple regression can be written as follows:

$$Y = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + e_i$$

Where  $Y$  is the dependent variable and  $X_1, X_2$  etc. are the independent variables and  $e_i$  is the variable disturbance. Subscript  $i$  shows the  $i$ th observation for Cross-Section data. For  $\beta_0$  is called the intercept, while  $\beta_1, \beta_2$  etc. are called regression coefficients.

## 4. Hypothesis testing

In hypothesis testing, the F-test (simultaneous test) and t-test (partial test) are carried out (Soekardono, 2006). The null hypothesis ( $H_0$ ) is a hypothesis that is formulated as a statement to be tested. It is called the null hypothesis ( $H_0$ ), because this hypothesis has no difference (or zero difference) with the actual hypothesis. This null hypothesis is often also referred to as a statistical hypothesis, because it is used in statistical research, that is, it is tested using statistical calculations. The null hypothesis can state that there is no difference between two variables, or that there is no influence of variable  $X$  on variable  $Y$  (Iqbal Hasan, 2002:53).

The alternative hypothesis, symbolized  $H_a$  or  $H_1$ , is a hypothesis formulated as an opponent/counterpart to the null hypothesis. This alternative hypothesis states that there is a difference between two variables, or that there is an influence of variable  $X$  on variable  $Y$  (Iqbal Hasan, 2002:53).

## 5. Coefficient of Determination ( $R^2$ )

According to Widarjono, D Coefficient Testetermination ( $R$ -Squared) is a test to explain the proportion of variation in the dependent variable that is explained by the independent variable. Apart from that, the coefficient of determination test can also be used to measure how good the regression line we have is. If the coefficient value determination ( $R$ -Squared) in an estimate close to one (1), it can be said that the dependent variable is well explained by the independent variable. And conversely, if the coefficient of determination ( $R$ -Squared) is away from one (1) or close to zero (0), the less well the independent variable explains the dependent variable.

## 6. Simultaneous Test (F-Test)

The F test is used to test the influence of all independent variables on the dependent variable or is called a model significance test. The F test can be explained using analysis of variance (ANOVA). (Widarjono, 2018). Apart from looking at calculated F and critical F, the

decision to reject or fail to reject H0 can also be seen from the probability value of calculated F compared to the value  $\alpha$ . If the calculated probability  $F < \alpha$  value then rejects H0, which means there is a simultaneous influence of the independent variable on the dependent variable. And if the calculated F probability  $> \alpha$  value then it fails to reject H0, which means there is no simultaneous influence of the independent variable on the dependent variable.

- H0 : The factors of age, education, land area and farming experience simultaneously do not have a significant effect on the income of corn farmers in Kopang District.  $H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$
- Ha : The factors of age, education, land area and farming experience simultaneously have a significant effect on the income of corn farmers in Kopang District.  $H_a: \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq 0$

Examining the factors that influence farmers overall between all variables used F-test count with the formula:

$$F_{hitung} = \frac{R^2/k}{(1 - R^2)(n - k - 1)}$$

Information :

R<sup>2</sup> = Multiple determinant coefficient

n = Number of Samples

k = Number of independent variables

If F-count  $\leq$  F-table: H0 is accepted Ha is rejected, This means that the variables X1, X2, X3, and X4 have no real (not significant) effect on Y and vice versa, if F-count  $>$  F-table H0 is rejected, H1 is accepted, meaning that the variables X1, X2,

### Partial Test (t-test)

For the partial influence used is the calculated t-test, this test basically shows how far the influence of the explanatory (independent) variables individually is in explaining variations in the independent (dependent) variable. The calculated T-test formula is as follows (Sugiyono 2006).

$$t_{hitung} = \frac{\bar{X} - \mu_0}{\frac{s}{\sqrt{n}}}$$

Where :

t = Ncalculated t value

S = Sstandard deviation

$\bar{X}$  = Raverage X

n = Jnumber of sample members

$\mu_0$  = Nhypothesized value

T-test, carried out partially on b1, b2, b3, and b4 with procedures such as simple regression (Soekardono, 2006). H sound 0 and H1 For Partial coefficient testing (t-test) is as follows:

H0 : The factors of age, education, land area and partial farming experience do not have a significant effect on corn farming income in Kopang District.  $H_0 = \beta_i = 0$

H1: The factors age, education, land area and farming experience partially have a significant effect on corn farming income in Kopang District.  $H_1 = \beta_i \neq 0$

If t-count  $>$  t-table, then H0 is rejected. It means variable independent/independent (Xi) has a significant effect on the dependent variable (Y). If t-count  $<$  t-table, then H0 is accepted. This means that the independent variable (Xi) has no real effect on the dependent variable (Y).

## RESULT

### Respondent Characteristics

The respondents in this research were corn farmers in Kopang District, Central Lombok Regency. The total number of respondents was 30 people. The characteristics of the respondents observed included age, education level, number of family dependents, farming experience and land area.

### Respondent's Age

Table 1. Condition of respondents by age group

No	Age (years)	Number of people)	Percentage (%)
1	25 - 35	6	20.00
2	36 - 46	6	20.00
3	47 - 57	10	33.33
4	58 - 68	8	26.67
<b>Amount</b>		<b>30</b>	<b>100.00</b>

Source: Primary data processed, 2023

In table 1 it can be seen that the age of the corn farming respondents was in the range of 25-35 years as many as 6 people (20%), in the range 36-46 years as many as 6 people (20%), in the range 47-57 years as many as 10 people (33, 33%) and a range of 58-68 years as many as 8 people (26.67%) with an average age of respondents of 48.30 years. This shows that corn farmers in Kopang District are generally at a productive age. According to Simanjutak (1985), farmers who are in the productive age range, namely around 15-64 years, are considered to have the physical ability to manage farming businesses.

### Level of education

Table 2. Identity of Respondent Farmers Based on Education Level in Kopang District, Central Lombok Regency.

No	Education	Number of people)	Percentage (%)
1	Not completed in primary school	3	10.00
2	Completed elementary school/equivalent	14	46.67
3	Completed junior high school/equivalent	6	20.00
4	Completed high school/equivalent	7	23.33
5	Finished S1	0	0.00
<b>Amount</b>		<b>30</b>	<b>100</b>

Source: Primary data processed, 2023

The level of education referred to in this research is the level of formal education that the respondent farmers have taken. Based on table 2, it shows that the education level of the respondent farmers is 7 people (23.33%) have completed high school, 3 people (10%) have not completed elementary school, 14 people (46.67%) have completed elementary school/equivalent and 6 people (20%) have completed Middle school/equivalent.

### Number of Family Dependents

Table 3. Respondent's Condition Based on Family Dependencies

No	Family Dependents (Soul)	Number of people)	Percentage (%)
1.	0 - 2	6	20.00
2.	3 - 4	19	63.33
3.	5 - 7	5	16.67
<b>Amount</b>		<b>30</b>	<b>100.00</b>

Source: Primary data processed, 2023

Based on table 3, it can be seen that the number of family dependents Respondent farmers in the 0-2 range were 6 people (20.00%), then in the 3-4 range there were 19 people (63.33%), and in the  $\geq 5$  range there were 5 people (16.67%) with an average of the average number of dependents is 3.43 people. Those classified as small families are those with a number of family dependents between 1-2 people, medium families with a number of family dependents between 3-4 people, and large families with a number of family dependents of  $\geq 5$  people. Based on these criteria, corn farmers in Kopang District are classified as middle-class families.

#### Land area

Table 4. Condition of Respondents Based on Cultivated Land Area

No	Cultivated land area / LLG (Ha)	Number of respondents (people)	Percentage (%)
1.	< 0.50	16	53.33
2.	0.50 - 1.00	14	46.67
3.	>1.00	0	0
<b>Amount</b>		<b>30</b>	<b>100</b>

Source: Primary data processed, 2023

Table 4 shows that of the 30 respondent farmers, 16 respondent farmers (53.33%) have <0.50 ha of land and 14 respondent farmers (46.67%) have land between 0.50 - 1.00 ha. Farmers who have large areas of land will allow a high amount of production to be received. This is in accordance with the opinion of Suratiyah (2006:18) that viewed from an efficiency perspective, the larger the area of land cultivated, the higher the production and income per unit area.

#### Farming experience

Table 5. Respondent's Condition Based on Length of Farming

No	Length of farming (Years)	Number of people)	Percentage (%)
1.	0 - 10	11	36.67
2.	11 - 20	10	33.33
3.	21 - 30	8	26.67
4.	31 - 40	1	3.33
<b>Amount</b>		<b>30</b>	<b>100</b>

Source: Primary data processed, 2023

Based on table 5, it can be seen that the experience of 11 respondent farmers (36.67%) has been farming for 0-10 years, 10 respondent farmers (33.33%) have been farming for 11-20 years, 8 respondent farmers (26.67%) have been farming for 21-30 years and 1 farmer respondent (3.33%) has been farming for 31-40 years. Of course, this farming experience is also related to the age level of the respondent farmers. With long farming experience,

farmers then have the capacity to manage farming more maturely and are more careful in their actions.

### Analysis of Farming Costs and Income

In this research, the cost and income analysis focuses on the analysis of fixed costs, variable costs, production and production value in corn farming in Kopang District, Central Lombok Regency.

#### Fixed Costs

Table 6. Average fixed costs for corn farming in Kopang District, Central Lombok Regency.

No	Fixed cost type	Average LLG (0.46 ha) (Rp.)
1.	Tax (UN)	217.133
2.	Equipment depreciation value (NPA)	12,094
	- Hoe	10,861
	- Machete	3,996
	- Sickle	25,297
	- Sprayer	
<b>Number of NPAs</b>		<b>52,249</b>
<b>Total fixed costs</b>		<b>269,382</b>

Source: Primary data processed, 2023

Based on table 6, it shows that the fixed costs of corn farming in Kopang District, Central Lombok Regency include tax costs and equipment depreciation costs. The average tax fee is IDR. 217,133, and the average equipment depreciation cost is Rp. 52,249 so the average total fixed costs are Rp. 269,382,- with an average area of land cultivated by farmers of 0.46 Ha.

#### Variable Costs (Variable Cost)

##### a. Cost of Production Facilities (Saprodi)

Table 7. Cost of corn farming production facilities in Kopang District, Central Lombok Regency

No	Production Facilities	Unit	Average LLG (0.46 Ha)	
			Amount	Mark
1	Seed	Kg	8.83	882,666
<b>Amount</b>		<b>Kg</b>	<b>8.83</b>	<b>882,666</b>
2	Fertilizer			
	- Urea	Kg	216.83	672,533
	- NPK Phonska	Kg	154.17	506,375
<b>Amount</b>		<b>Kg</b>	<b>371.00</b>	<b>1,178,908</b>
3	Pesticide			
	- Herbicide	Bottle	1.40	199,500
	- Insecticide	Bottle	1.13	81,333
	- Fungicide	Bottle	0.63	36,666
<b>Amount</b>		<b>Bottle</b>	<b>3.17</b>	<b>317,500</b>
<b>Total Production Costs</b>				<b>2,379,075</b>

Source: Primary data processed, 2023

Based on Table 7 shows that the cost of production facilities for corn farming in Kopang District, Central Lombok Regency is the cost of purchasing corn seeds Rp. 882,666, fertilizer



purchase costs Rp. 1,178,908 and the cost of purchasing pesticides Rp. 317,500. The total cost of corn farming production facilities is IDR. 2,379,075,- with an average area of land cultivated by farmers of 0.46 Ha.

**b. Labor costs**

Table 8. Labor costs for corn farming in Kopang District, Central Lombok Regency.

No	Labor	Unit	Average LLG (0.46 Ha)	
			Amount	Mark
1.	Planting	HOK	8.47	296,333
2.	Fertilization I	HOK	9.90	349,500
3.	Fertilization II	HOK	9.90	349,500
4.	Spraying	HOK	2.37	118,333
5.	Harvest and Post-Harvest	HOK	9.37	387,666
<b>Amount</b>		<b>HOK</b>	<b>40.00</b>	<b>1,501,333</b>

Source: Primary data processed, 2023

Based on table 8, it shows that the average labor cost for corn farming with an average cultivated land area of 0.46 Ha in Kopang District, Central Lombok Regency is planting with an average number of HOK of 8.47 worth Rp. 296,333, fertilization I with an average HOK amount of 9.90 is worth IDR. 349,500, fertilization II with an average HOK amount of 9.90, the value is Rp. 349,500, spraying with a HOK amount of 2.37 is worth 118,333 and post-harvest harvesting with an HOK amount of 9.37 is worth Rp. 387,666. The total number of HOK in corn farming with a cultivated land area of 0.46 Ha is 40 with a value of Rp. 1,501,333.

**Corn Farming Production and Income**

The production referred to in this research is the amount of production corn produced in kg. Production value is the product of the amount of production and the production price per kg. Meanwhile, business income is the difference between production value and production costs in corn farming which is expressed in rupiah units. Corn farming income can be seen in table 4.3.

Table 9. Average Revenue and Income from Corn Farming in Kopang District, Central Regency in 2022.

No	Description	Average value (Rp). (0.46 Ha)
1.	Average production (Kg)	4,030.50
	Price (Rp)	1,880
	<b>Revenue (Rp)</b>	<b>7,629,900</b>
2.	Variable costs (Rp)	
	Production facilities	2,379,075
	Labor	1,501,333
	<b>Total variable costs</b>	<b>3,880,408</b>
3.	Fixed costs (Rp)	
	Equipment depreciation value (NPA)	52,249
	Land tax	217.133
	<b>Total fixed costs</b>	<b>269,382</b>
4.	Total cost (TC)	<b>4,149,790</b>
5.	Net income (Rp)	<b>3,480,110</b>

Source: Primary data processed, 2023

Based on table 9, it shows the average production of corn farming with an average area of cultivated land for corn farming of 0.46 Ha, which is 4,030.50 kg. The average sales price received by farmers is IDR. 1,880 per kg, so the average income from corn farming is IDR. 7,629,900,- is obtained from multiplying the average production amount, which is 4,030.50, with the average price of corn per kg, which is Rp. 1,880,-

Variable costs in corn farming in Kopang District consist of production facilities costs of Rp. 2,379,075,- and labor costs Rp. 1,501,333,- so the total variable costs are Rp. 3,880,408. Fixed costs for corn farming in Kopang District consist of equipment depreciation costs of Rp. 52,249 and land tax Rp. 217.133. The average total fixed costs of corn farming is Rp. 269,382.

#### Income Analysis

$$\text{Profit} = \text{TR} - \text{TC}$$

$$\text{Profit} = \text{Rp.}7,629,900 - \text{Rp.} 4,149,790 = \text{Rp.} 3,480,110,-$$

From the results of the income analysis of corn farming carried out in Kopang District, Central Lombok Regency with an average area of land cultivated by farmers of 0.46 Ha, the total average income was IDR. 7,629,900,- and the average total cost is Rp. 4,149,790, so farmers earn an average income of Rp. 3,480,110,-

#### Analysis of factors that influence corn farmers' income

Table 10. Coefficient of Determination

##### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.953a	.909	.894	678884.197

a. Predictors: (Constant), Experience, Land Size, Education, Age

Source: Primary data processed, 2023

Statistical data analysis using multiple linear regression produced a Multiple R value of 0.953, which means the correlation value between age (X1), education (X2), land area (X3) and farming experience (X4) is included in the very strong category with income ( Y) corn farmers in Kopang District, Central Lombok Regency. The value of the coefficient of determination or R Square (R<sup>2</sup>) from the regression equation of 0.909. That is, as much as 90.9% Variations or changes in the ups and downs of corn farmers' income are explained by variations in the factors of age, education, land area and farming experience. The remaining 9.1% is influenced by other factors not included in the research variables. Mathematically, the resulting multiple linear regression equation is as follows:

$$Y = -1.107+24.483X1-13.676X2+7.819X3-7.407X4$$

Based on the multiple linear regression equation above, a constant value of -1.107 is obtained, which means that if the factors age, education, land area and farming experience are 0, then the total income of corn farmers is -1.107. A positive sign on the coefficient value means that if there is an increase in the independent variable assuming the other independent variables are considered constant, then there will also be an increase in the dependent variable. The negative sign on the coefficient value means that if there is an increase in the independent variable with the assumption that the other independent variables are considered constant, then there will be a decrease in the dependent variable.

#### F Test (Simultaneous Test)

Factors that influence the income of corn farmers in Kopang District consist of age, education, land area and farming experience. To determine the influence of each of these

factors on corn farmers' income, statistical analysis was carried out using multiple linear regression. The results of the regression analysis for the factors age, education, land area and farming experience are presented in the following table:

Table 11. Results of F Test analysis (simultaneous test)

**ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.147E14	4	2.866E13	62,193	,000a
	Residual	1.152E13	25	4.609E11		
	Total	1.262E14	29			

a. Predictors: (Constant), Experience, Land Size, Education, Age

b. Dependent Variable: Income

Source: Primary data processed, 2023

To determine the effect of the independent variable (X) on the dependent variable (Y) simultaneously, the F-test is used. The results of the statistical data analysis carried out obtained an F-count value of 62.193 with a probability of 0.000. Because the probability is smaller than  $\alpha = 0.05$ ,  $H_0$  is rejected and  $H_a$  is accepted, meaning that simultaneously the independent variable (X) has a real effect on corn farmers' income (Y). This means that the factors age, education, land area and farming experience together (simultaneously) influence the dependent variable (corn farmer income) in Kopang District, Central Lombok Regency.

**t Test (Partial Test)**

After knowing the results of the F-test, a partial statistical test is then carried out to determine the effect of each independent variable on the dependent variable individually by proven hypothesis.

- $H_0$  accepted, if probability  $X_i > 0.05$ , the regression coefficient is not significant or has no real effect on the dependent variable.
- $H_0$  rejected, if the probability  $X_i < 0.05$ , the regression coefficient is significant or real effect on the dependent variable.

So that it can be explained that the influence for each variable independent (X) on the dependent variable, namely the income of corn farmers (Y) in Kopang District can be explained in the following table.

Table 12. Results of regression analysis of factors that influence the income of corn farmers in Kopang District

**Coefficientsa**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.107E6	876589.357		-1.263	.218
	Age	24483.883	16202.572	.133	1.511	.143
	Education	-13676.880	61084.294	-.017	-.224	.825
	Land area	7.819E6	565130.758	.922	13.836	.000
	Farming experience	-7407.716	19940.086	-.033	-.371	.713

Source: Primary data processed, 2023

**Age**

Based on the results of statistical data analysis calculations as shown in table 12 above, the age variable obtained a calculated t value of 1.511 with a probability value of 0.143, because the probability is greater than  $\alpha = 0.05$ , it can be concluded that H0 is accepted, so that the partial age regression coefficient (X1) does not have a significant influence on the income of corn farmers in Kopang District, Central Lombok Regency.

**Education**

For the education variable, the t-count value is obtained -0.224 with a probability of 0.825, because the probability is greater than  $\alpha = 0.05$  then H0 is accepted, meaning that the education regression coefficient (X2) does not have a significant influence on the income of corn farmers in Kopang District, Central Lombok Regency.

**Land area**

For the land area variable, the t-calculated value is obtained 13.836 with a probability of 0.000, because the probability is smaller than  $\alpha = 0.05$ , then H0 is rejected, meaning that the regression coefficient for land area (X3) has a significant influence on the income of corn farmers in Kopang District, Central Lombok Regency.

The results of this research show that land area has a positive and significant effect on the income of corn farmers in Kopang District, Central Lombok Regency. Corn farmers with a larger land area have a greater probability of obtaining a higher income, whereas corn farmers with a smaller land area have a smaller probability of obtaining a higher income.

**Farming experience**

For the farming experience variable, the t-count value was obtained -0.371 with a probability of 0.713, because the probability value is greater than  $\alpha = 0.05$ , then H0 is accepted, meaning that the regression coefficient for farming experience (X4) does not have a significant influence on the income of corn farmers in Kopang District, Central Lombok Regency.

**CONCLUSION**

The conclusions drawn from the research on corn farming in Kopang District, Central Lombok Regency, provide valuable insights into the profitability and factors influencing the income of local farmers. It is evident that cultivating corn on a 1.00 Ha land area in this region can yield positive financial returns. With total revenues exceeding costs, resulting in a net income of Rp. 7,565,457,-, corn farming emerges as a viable and profitable endeavor for the farmers.

The statistical analysis conducted through ANOVA and regression modeling further sheds light on the factors contributing to corn farming income. The regression model,  $Y = -1,107 + 24,483X_1 - 13,676X_2 + 7,819X_3 - 7,407X_4$ , provides a quantitative understanding of the relationships between age (X1), education (X2), land area (X3), and farming experience (X4) with income (Y). These variables collectively play a significant role in shaping the financial outcomes of corn farming in Kopang District.

Of particular note, the land area variable (X3) emerges as a significant determinant of corn farming income according to the t-test results. This underscores the importance of land ownership and land-use practices in influencing the financial success of corn farmers in the region.

In light of these findings, it is recommended that efforts be directed towards improving land ownership and land-use arrangements in Kopang District. By providing farmers with greater access to land resources, the income of corn farmers can be enhanced, ultimately benefiting the local agricultural economy. Furthermore, the research reaffirms that corn farming is a viable and profitable option for farmers in Kopang District, encouraging them to continue their commitment to corn cultivation as a reliable source of income. Consistency in corn farming practices can contribute to long-term financial stability for the agricultural community in the region.

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