Factors of Affecting the Income of Farmers in the Village of Perean Tengah, Baturiti District, Tabanan Regency, Bali

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Abstract
Indonesia is an agricultural country which is famous for its abundant natural wealth. The agricultural sector plays an important role for some developing countries. This can be seen from the role of the agricultural sector in meeting food needs in the country, this agricultural sector can also provide employment opportunities for the population. To get maximum agricultural yield, this is influenced by factors of education level and age of farmers. The objectives of this study were 1) to determine the effect of education level and age to have a positive and significant partially significant effect on income of farmers, 2) to determine the effect of education level and age simultaneously on the income of farmers in Central Perean Village. The data analysis technique used in this study was multiple linear regression analysis techniques to determine the effect of education level and age on income. The research results from the tests that have been conducted show that education has a positive and significant effect on income, age has a negative and significant effect on income of farmers, and the level of education and age simultaneously affects the income of farmers. The level of education should be paid more attention, with the knowledge gained from education so that it can be applied in agriculture. Improve facilities to increase agricultural yield. For researchers who have the desire to examine the same variables, it is hoped that they can develop this research further and better by considering other variables that have not been tested in this study.

Keywords: Education Level, Age, Income

1 | INTRODUCTION

Indonesia is an agricultural country which is famous for its abundant natural wealth, Indonesia develops with the agricultural sector which is supported by its natural wealth. Indonesia’s natural resources for agriculture are very abundant, but this potential will be useful if human resources are to process them properly and be utilized as much as possible without destroying these natural resources. Indonesia has a strategic location between the equator and has a tropical climate, this is one of Indone-
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Baturiti District is one of 10 Districts in Tabanan Regency, located in the northernmost part and has a mountainous geographical area. Tourism and agriculture are mainstays in Baturiti District. Food crops are the main product in Baturiti District, such as rice production and are supported by horticultural crops such as vegetables, one of the largest producers of food and horticultural production is Central Perean Village, which produced 4465.25 tons of food crops and horticulture in 2019, with has a land area of ±213 Ha with an altitude of ±450 meters above sea level with a rainfall of 247.45 mm with an average air temperature of 27°C, which puts Perean Tengah Village in 4th of 12 villages in Baturiti District, Tabanan. This can be seen in the following Table 1: the results of agricultural production can be influenced by several factors: the level of education and age is an important factor, so that human resources can manage resources well, the level of education is a stage of education is defined by the level of development of learners, objectives to be achieved and the will developed, a higher level of education will make it easier for a person to absorb information and implement it in his behavior and lifestyle.

Based on the above background, the authors are interested in further researching about the farmers who are part of the population of Central Perean Village, many factors affect income of farmers, in this study the researcher is interested in taking two factors that affect farmer income, namely the level of education and age of the farmer, then the problem in this study is “The Effect of Education Level and Age on Farmers’ Income in Perean Tengah Village, Baturiti District, Tabanan Regency”

Problem Formulation

Definition of Income
Revenue is remuneration received by a person within a certain period of time. The remuneration can be in the form of rent, wages / salaries, interest or profit. Personal income can be defined as all types of income, including income obtained without providing any activity, which is received by residents of a country (Sukirno, 2004: 37).

Definition of Level of Education
Educational in the Big Indonesian Dictionary (2008), namely the process of changing attitudes and behavior of a person or group of people in an effort to mature humans through teaching and training efforts.

The Definition of Age
Age is a unit of time that measures the time the existence of an object or creature, both living and dead. Age level is one of the factors that affect the production level of farmers who are at productive age who have optimal conditions in carrying out production activities in an effort to increase production results (Asni, 2016). For example, a age human’s is said to be fifteen years, measured from the time he was born until the time that age is calculated. Therefore, age is measured from a person’s birth to the present.

1. What are the level of education and age partially positive and significant effect on income of farmers in Perean Tengah Village, Tabanan Regency?
2. What are the level of education and age simultaneously significant effect on the income of farmers in Perean Tengah Village, Tabanan Regency?

2 LITERATURE REVIEW

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2 LITERATURE REVIEW

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TABLE 1: Planted Area, Harvested Area, and Production of Food Crops and Horticultural Commodities in Baturiti District in 2019

| Village       | Planting Area (Ha) | Harvested Area (Ha) | Production (Tons) |
|---------------|--------------------|---------------------|------------------|
| Bangli        | 1015.5             | 1015.5              | 20405.11         |
| Angseri       | 404.41             | 404.41              | 6071.31          |
| Mekarsari     | 361                | 361                 | 5949.75          |
| Middle East   | 239.5              | 239.5               | 4465.25          |
| Apuan         | 1648.48            | 1632.09             | 3335.93          |
| Perean        | 343                | 343                 | 2311             |
| Perean Kangin | 341.5              | 341                 | 2257.6           |
| Antapan       | 317.5              | 310.65              | 2172.75          |
| Luwus         | 252                | 252                 | 1763.3           |
| Baturiti      | 140                | 140                 | 1484.4           |
| Batunya       | 158.5              | 156.45              | 1201.93          |
| Candikuning   | 103.05             | 103.05              | 1142.8           |

Source: BP3K Baturiti District (processed 2020)

In general, someone who is at the productive age will get a bigger income than someone who is non-productive.

**HYPOTHESES**

Based on various theses were discussed in the previous chapter, the hypothesis or provisional estimates from this study are:

1. It would be unlikely that the partial level of education and age positive and significant impact on the income of farmers in the Perean Central, Tabanan regency

2. is assumed that Education and age have a positive and significant effect simultaneously on income of farmers in Perean Tengah Village, Tabanan Regency.

**3 | METHODOLOGY**

**Research Location**

The research location used in this study is in Central Perean Village which consists of four traditional banjars, namely: Banjar Selat, Banjar Tuka, Banjar Berteh and Banjar kukub. The object used in this study is the effect of education level and age on income of farmers in Perean Tengah Village, Baturiti District, Tabanan Regency.

**Definition of Research Variables**

The operational definition is a description of the limits of the variable in question, or about what is measured by the variable in question (Fatkhian, 2018).

In this study, the operational definition referred to is:

1. **Education Level (X1)**

   In this study, education level is an independent variable, education level is the ability of farmers to develop or improve their agricultural products seen from the farmers’ education. Education in the Big Indonesian Dictionary (2008) is the process of changing attitudes and behavior of a person or group of people in an effort to mature humans through teaching and training efforts

2. **Age (X2)**

   In this study age is an independent variable, age is defined as how capable a farmer is in carrying out agricultural activities. Age is a unit of time that measures the time the existence of an object or creature, both living and dead. For example, a human’s age is said to be fifteen years, measured from the time
he was born until the time that age is calculated. Therefore, age is measured from a person born to the present (present).

2. Income (Y)

In this study, income is the dependent variable, namely the variable that is the result of the independent variable. In this study, income is the income that farmers get as a result of the gardens or rice fields that have been developed. Income is remuneration received by the factors of production within a certain period of time. The time remuneration can be in the form of rent, wages/salary, interest or profit.

Description of Research

The locations used in this study were in Perean Tengah Village which consisted of four traditional banjars, namely: Banjar Selat, Banjar Tuka, Banjar Berteh and Banjar Kukub. Perean Tengah Village is a village that stretches from north to south with a length of ± 3,500 meters, located 13 km from the sub-district capital, which is the southernmost village in Baturiti District, Tabanan Regency which has village boundaries, north of Luwus Village, south of Kuwum Village, east of Perean Kangin Village, and west of Perean Village.

4 | RESULTS AND DISCUSSION

Multiple Linear Regression Analysis

In this study, the data analysis technique used is the Multiple Linear Regression Analysis technique, which is used to determine the effect of independent (independent) variables on the dependent variable (dependent) on changes in any increase or decrease in independent variables that will affect the dependent variable. Multiple regression analysis in this study was carried out by including two independent variables and one dependent variable. With the help of the SPSS application, the results of multiple linear regression tests are obtained as follows:

Based on the results of multiple linear regression analysis in Table 2 it can be seen that for variable $X_1$, a significance value of 0.000 is obtained less than 0.05 (0.000 < 0.05), variable $X_2$ has a significance value of 0.000 less than 0.05 (0.000 < 0.05), so the regression model is obtained:

$$Y = 2275692,151 + 219928,349X_1 - 34904,508X_2$$

The interpretation of the equation is:

1. Constant value ($\alpha$) amounting to 2275692,151. This constant value is positive, meaning that with the level of education ($X_1$), and age ($X_2$) is equal to zero, the farmer’s income (Y) is 2275692.151 units.

2. The value of $\beta_1$ at the educational level is 219928.349. The regression coefficient which is positive means that if the level of education ($X_1$) increases by 1 year, the farmer’s income (Y) will increase by 219928,349 thousand rupiah, assuming age ($X_2$) is constant.

3. The value of $\beta_2$ at the age of the farmer ($X_2$) is -34904.508. The age coefficient is negative, which means that if the age of the farmer ($X_2$) increases by 1 year above the productive age, the farmer’s income will decrease by 34904.508 thousand rupiah, assuming the level of education ($X_1$) is constant.

5 | RESULTS AND DISCUSSION

This section describes the results of research and hypothesis testing. The results discussed are the results of statistical analysis on 2 independent variables, namely education level and age. As well as one dependent variable, namely income. The discussion of the test results of the three hypotheses is presented as follows.

The effect of education level on income of farmers in Central Perean Village.

Based on the results of the tests that have been conducted, it shows that the level of education has a positive and significant effect on income in Central Perean Village. This means that if the level of education is high it will result in higher income for
The effect of age on the income of farmers in Central Perean Village.

Based on the results of the tests that have been done, it shows that age has a negative and significant effect on the income of farmers in Central Perean Village. This means that the younger the farmers are, the greater the income they get. The regression equation obtained from the results of multiple linear regression analysis is as follows:

\[ Y = 2275692,151 + 219928,349 X_1 - 34904,508 X_2 \]

This shows the \( X_1 \) coefficient of 219928.349 states that every increase in age is 1 year then there will be a decrease in the income of farmers in Central Perean Village by 34904.508 units. The probability value smaller than 5%, namely 0.000 < 0.05, identifies that age has a significant effect on the income of farmers in Central Perean Village.

Based on the results of tests that have been carried out, it shows that age has a negative and significant effect on the income of farmers in Central Perean Village. This happens because the age that increases above the productive age will result in farmers getting less income.

The Effect of Education Level and Age on Income of farmers in Central Perean Village

Based on the results of the tests that have been done, it shows that the level of education and age simultaneously or jointly affect the income of farmers in Central Perean Village. The regression equation obtained from the results of multiple linear regression analysis is as follows:

\[ Y = 2275692,151 + 219928,349 X_1 - 34904,508 X_2 \]

This shows the \( X_2 \) coefficient of -34904.508 states that each increase in age is 1 year then there will be a decrease in the income of farmers in Central Perean Village by 34904.508 units. The probability value smaller than 5%, namely 0.000 < 0.05, identifies that age has a significant effect on the income of farmers in Central Perean Village.
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This shows the regression coefficient $X_1$ of 219928.349 states that each increase in the level of education is 1 unit, there will be an increase in income of 219928.349 units and the X coefficient 2 of -34904.508, which states that every 1 unit increase in age will decrease the income of farmers in Central Perean Village by 34904.508 units. From the simultaneous test, it can be seen that the significance value for the effect of education level and age simultaneously on Y is equal to 0.000 <0.05 and the F value counts 204.996 > F Table 2 which means education level and age simultaneously or together on income farmers in Central Perean Village.

6 | CONCLUSIONS AND SUGGESTIONS

Conclusions

Based on the results of data analysis and discussion in the previous chapter, the following conclusions can be drawn:

1. The level of education has a positive and significant effect on income in Central Perean Village. The higher the level of education, the higher the income of farmers. Age has a negative and significant effect on income of farmers. The more productive the age of the farmer, the greater the income earned, while the older the farmer is above the productive age, the smaller the income, this is because the older a person is, the less his physical ability to work will decrease, this causes the income earned will also decrease.

2. Education level and age simultaneously or jointly affect the income of farmers in Central Perean Village. From the simultaneous test, it can be seen that the significance value for the effect of education level and age simultaneously on Y is equal to 0.000 <0.05 and the F value of 204.996 > F Table 2 which means that education level and age have a significant effect simultaneously or together. The income of farmers in Central Perean Village.

Suggestions

1. For farmers in Perean Tengah village

The level of education should be paid more attention, with the knowledge from that education so that it can be applied to farmers in Central Perean Village. By using sophisticated facilities or tools to increase agricultural yields. Farmers should be more active in farmer groups in Central Perean Village, and follow counseling on agriculture, so that more agricultural products can be obtained.

2. For further research.

For future researchers who want to conduct research on education level and age on income in order to develop this research further and better by considering other variables that have not been tested in this study, such as capital and agricultural land area.

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