

ANALYSIS IMPACT FACTORS ON THE EFFECT OF PRODUCTIVITY AND INCOME OF WOOD STATUE INDUSTRY IN THE DISTRICT OF UBUD, GIANYAR DISTRICT

Ni Putu Lola Ulianti and Ida Bagus Putu Purbadharmaja
Faculty of Economics and Business, Udayana University, Bali

ABSTRACT

The objectives to be achieved in this study are 1) to analyze the effect of capital, raw materials, labor quality and technology on wood peatung productivity, 2) to analyze the effect of capital, raw materials, labor quality, technology and productivity on income 3) to analyze the effect of productivity of wood sculpture craftsmen in mediating the effect of capital, raw materials, labor quality and technology on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency. This research was conducted in the District of Ubud, Gianyar Regency. The number of samples taken was 92 wood sculpture craftsmen. Data analysis technique used in this study is path analysis. The results of this study stated that 1) capital and technology had no significant effect on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency, raw materials had a negative and significant effect on the productivity of wood sculpture craftsmen, and the quality of labor had a positive and significant effect on the productivity of craftsmen wooden statues in Ubud Subdistrict, 2) capital, raw materials, labor quality, and technology on craftsman income have a positive effect but productivity has no significant effect on income and 3) productivity does not mediate the relationship of capital, raw materials, labor quality and technology on income wood sculpture craftsmen in Ubud District, Gianyar Regency.

KEYWORDS: capital, raw materials, labor quality, technology, productivity, income.

1. INTRODUCTION

The concept of this study analyzes the effect of Capital, Labor Raw Materials and Technology on Productivity and Income of Woodworkers in Ubud District, Gianyar Regency. The dependent variables in this study are Capital, Raw Materials, Labor and Technology. The mediating variable (intervening) in this study is the productivity of wood sculpture craftsmen.

Capital is one of the factors that influence income. In addition, capital also influences the production process which in turn will affect the level of income. Capital has a positive and significant effect on income (Maliha, 2018) and (Revathy, 2016). Capital as a production factor that affects productivity. The greater the capital owned by the craftsman, the productivity will increase, this will affect the level of income which is increasing. And vice versa if the capital owned by craftsmen is getting smaller or less then this will cause lower productivity, of course, the income received by craftsmen also decreases.

Martini Dewi (2012) states that raw materials are ingredients that form a comprehensive part of the finished product. The availability of sufficient quantities of raw materials, sustainable and affordable prices will facilitate production which will ultimately increase production and increase the amount of operating revenues obtained. As one of the factors of production, raw materials affect the level of productivity of craftsmen. Raw materials as the main factor have a positive influence on the productivity and income of craftsmen. Based on research conducted by Naomi Puspita (2017) in her research that discusses the influence of raw materials on income of silver craftsmen in Klungkung Regency, that the amount of raw materials has a positive significant effect on the income of craftsmen in Kamasan Village, Klungkung Regency.

Labor is an important factor affecting income. Labor has a positive effect on productivity in production (Nian Elly, 2017). Labor is another driving factor for input factors, without labor, other factors of production will not be meaningful. Position of labor factors is very dominant when compared with other factors of production in a production process. Labor is a portion of the total population that can potentially produce goods and services. Aldida's research results (2013) states in his research that labor has a significant effect on productivity. So, if the number of workers increases, productivity will also increase, this condition will also increase the income of craftsmen. Based on the results of research by Santi Virnayanti (2018), the workforce has a positive and significant effect on the production of wood sculpture craftsmen in Sukawati District, Gianyar Regency. In other words, the higher the number of workers the higher the amount of production produced.

The level of productivity will be influenced by the level of capital of raw materials, labor and technology used during the production process. Yuniartini's research results (2013) states that capital has a positive and significant effect on production. This shows that the more capital owned by someone, the higher the chance to produce more output. Labor has a positive effect on production output. Production factors such as capital, labor, raw materials, and technology have a positive relationship with productivity that can increase income.

The purpose of this study is described as follows.

- 1) To analyze the effect of capital, raw materials, labor quality and technology on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency.
- 2) To analyze the effect of capital, raw materials, labor quality, technology and productivity on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency.
- 3) To analyze the role of productivity in mediating the effect of capital, raw materials, labor quality and technology on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency.

Productivity Theory

Productivity is a comparison between output and input and reveals how to use both the source in producing an item or service (Coelli, 2005). Productivity is a ratio, measurement or mathematical comparison of a level of efficiency. Productivity can be defined as the relationship of inputs and outputs of a production system (Handoko, 2003). Solomon (2014) and Ferrnandes (2009) state that productivity also reflects the work ethic the good in terms of mental or the other.

Capital Theory

According to Michel Dietsch (1993) capital is the first step in production activities. According to Mankiw (2003: 43), capital is a set of means used by workers / laborers, which includes money in the company to buy machinery and other factors of production in the production process. According to Frydenberg (2011) capital is all forms of wealth that can be used directly or indirectly in the production process to increase output. Capital is an input (factor of production) that is very important in determining the level of income. But that does not mean it is the only factor that can increase revenue (Suparmoko in Firdausa 2012).

Theory of Raw Materials

Martini (2012) states that raw materials are ingredients that form a comprehensive part of the finished product. The availability of sufficient quantities of raw materials, sustainable and affordable prices will accelerate productivity, which in turn will increase production and increase the amount of operating revenues obtained (Pratiwi, 2014). Raw material is material that forms a comprehensive part of the finished product. The budget for raw material costs is called the standard raw material costs where the multiplication of the standard raw materials times the standard price of raw materials per unit (Nafarin, 2007: 360). The smooth running of a production process is determined by the availability and use of raw materials.

Labor Theory

Manpower is the executor of development programs that have been prepared. Woo and Hong (2010) stated that in general the population of a country is divided into two groups, namely labor and not labor. According to Simanjuntak (1985) in his book Introduction to Human Resource Economics, workers are residents who are already working and working, who are looking for work, and who are carrying out other activities such as attending school and managing the household.

Technology Theory

Technology is a change in the production function that appears in production techniques, and is a driving factor of the production function. Technology is a driver of the production function. A production will experience an increase even though the amount of human resources remains, in other words technology has an important role in the production process (Basavaraja et al, 2008). Technology is a tool used to accelerate productivity in a business. With this tool, it is very easy for workers to produce goods and will increase labor productivity, which in turn will affect the level of income (Tri Utari, 2014).

Theory of Income

Income according to economics is interpreted as the maximum value that can be consumed by someone in a period as before. Revenue is the result obtained by the craftsman from the difference between total revenue and total costs during the production process (Saleh, 2014). Income is one indicator to measure the level of prosperity and welfare of the community so that the size of economic income reflects economic progress. Income is part of the production function. The production function is a function that shows the relationship between output and input (Hyman, 2012). Household income is total income from each household member in the form of money or in kind obtained as salary or wages for household businesses or other sources. (Samuelson and Nordheus, 1995: 255).

2. METHODS

This research was conducted in the District of Ubud, Gianyar Regency. The choice of this location is because the District of Ubud is a tourist destination that is often visited by tourists. Ubud District is rich in art and culture which makes Ubud District one of the centers of art in Bali. Most of the residents in Ubud Sub-district work as artists who are already well-known to foreign countries. In addition, Ubud Sub-district is the biggest contributor of wood crafts in Gianyar Regency. Wooden sculpture crafts in Ubud Sub-district are no longer only sold in the Bali region but have reached foreign countries, even some craftsmen have already exported their wood crafts to various parts of the world in the world. This will certainly greatly affect the economic conditions of the community, especially in terms of community income.

The population in this study is the wooden sculpture industry in Ubud District. the number of samples taken was 92 wood sculpture industry in Ubud Subdistrict, Gianyar Regency. As for the wood craftsman in Ubud District consisted of large, medium and small industries. There were 92 wood craftsman industries which were classified as small industries, 20 wood crafts industries which were classified as medium and industrial industries. 8 woodworking industry which is classified as a large industry (Komet, 2019).

Method of Successive Interval (MSI) is a method used to convert ordinal data into intervals. In this study, it is used for the transformation of labor quality variables that are still in the form of ordinal data into interval data, using the Microsoft Excel program.

3. RESULTS AND DISCUSSION

In this study, the direct effect occurs between capital variables (X1), raw materials (X2), labor quality (X3), and technology (X4) on labor productivity (Y1) and indirect effects occur between capital variables (X1), raw materials (X2), labor quality (X3), technology (X4), and workforce productivity (Y1) to income (Y2). Based on the results of data processing using Eviews, it can be seen the relationships between variables which are path coefficients in this study. The results of the path analysis are presented in Table 1.

Table 1. Path Analysis Testing Result

| Effect | Standardized Coefficients | Std. Error | Probability t | Description |
|---------------------------------|---------------------------|------------|---------------|-------------|
| X ₁ → Y ₁ | -0,0000570 | 0,00000211 | 0,7878 | Not. Sig |
| X ₂ → Y ₁ | -0,1102 | 0,0211 | 0,0000 | Sig. |
| X ₃ → Y ₁ | 0,0688 | 0,0146 | 0,0000 | Sig. |
| X ₄ → Y ₁ | -0,0716 | 0,0148 | 0,0899 | Not. Sig |
| X ₁ → Y ₂ | 0,0000002 | 0,00000271 | 0,0000 | Sig. |
| X ₂ → Y ₂ | 0,0886 | 0,0309 | 0,0052 | Sig. |
| X ₃ → Y ₂ | 0,0599 | 0,0210 | 0,0055 | Sig. |
| X ₄ → Y ₂ | 0,1777 | 0,0544 | 0,0016 | Sig. |
| Y ₁ → Y ₂ | 0,2209 | 0,1373 | 0,1113 | Not. Sig |

Data Primer, 2019

Information:

- X1 = Capital
- X2 = Raw Material
- X3 = Quality of Labor
- X4 = Technology
- Y1 = Labor Productivity
- Y2 = Income

From the summary of the path analysis results shown in Table 1 the following structural equation can be stated.

The first structural equation is as follows:

$$\hat{Y}_1 = -0,00000570X_1 - 0,1102X_2 + 0,0688X_3 - 0,0716X_4$$

S.E = (-0,0716) (0,0211) (0,0146) (0,0418)

t hitung = (-0,2699) (-5,2359) (4,6898) (-1,7151)

Sig. = (0,7878) (0,0000) (0,0000) (0,0899)

R² = 0,4539

F = 18,079

Prob. F = 0,000

The second structural equation is as follows:

$$\hat{Y}_2 = 0,0000002X_1 + 0,0886X_2 + 0,0599X_3 + 0,1777X_4 + 0,2209Y_1$$

S.E = (0,0000271) (0,0309) (0,0210) (0,0544) (0,1373)

t hitung = (7,3994) (2,8662) (2,8506) (3,2638) (1,6087)

Sig. = (0,0000) (0,0052) (0,0055) (0,0016) (0,1113)

R² = 0,919482

F = 196,4161
Prob. F = 0,0000

Standard Error Value

To find out the value of e_1 that shows the number of productivity variable variants (Y1) that are not explained by capital (X1), raw materials (X2), labor quality (X3), and technology (X4), then it can be calculated using the following formula.

$$\begin{aligned} e_1 &= \sqrt{1 - R^2} \\ &= \sqrt{1 - 0,4539^2} \\ &= \sqrt{1 - 0,20602521} \\ &= \sqrt{0,79397479} \\ &= 0,8910 \end{aligned}$$

The standard error value of e_1 obtained is 0.8910, which means that 89.1 percent of the productivity variance cannot be explained by capital, raw materials, labor quality, and technology. Productivity is influenced by the work environment, management, work motivation, comfort, safety and much more. To find out the e_2 value which shows the variable variance of the income of wood sculpture craftsmen in Ubud District, Gianyar Regency (Y2) which is not explained by Capital (X1), Raw Materials (X2), Labor Quality (X3), Technology (X4), and Productivity (Y1) then it can be calculated using the following formula.

$$\begin{aligned} e_2 &= \sqrt{1 - R^2} \\ &= \sqrt{1 - 0,919482^2} \\ &= \sqrt{1 - 0,8454471483} \\ &= \sqrt{0,1545528517} \\ &= 0,393132 = 0,3931 \end{aligned}$$

The standard error value of e_2 obtained was 0.3931, which means 39.31 percent of income variance cannot be explained by capital, raw materials, labor quality, technology.

Model Validity

To check the validity of the model, there are indicators to carry out checks, namely the coefficient of total determination that can be calculated as follows.

$$R^2_m = 1 - (e_1)^2 (e_2)^2$$

$$\begin{aligned} &= 1 - (0,8910)^2 (0,3931)^2 \\ &= 1 - (0,794) (0,1545) \\ &= 1 - (0,122673) \\ &= 0,877327 = 0,8773 \end{aligned}$$

Information:

R²_m = coefficient of total determination

e₁, e₂ = Standard estimated error value

Based on the calculation of the total determination coefficient, the results obtained by 0.8773 which means that 87.73 percent of income variations are influenced by variations in capital, raw materials, labor quality, technology, and productivity, the remaining 12.27 percent is influenced by Other variables not included in the model.

The direct effect of capital on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency.

Based on calculations with E-views, the probability value is 0.7878. Thus, $0.7878 > 0.05$, it can be concluded that capital has no effect on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency. Based on the calculation above, it is known that capital has a negative and not significant effect on the productivity of wood sculpture craftsmen in Ubud District, which is indicated by the path coefficient of -0.00000570 and the non-significance value of $0.07878 > 0.05$. This means that capital does not directly affect the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency. This is not in line with research conducted by Sutiari and Suyana Utama (2019) which states that capital has a positive and significant effect on the productivity of wood sculpture craftsmen in Abiansemal District, Badung Regency. The insignificance of the direct effect of capital on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency shows that there are other factors that affect productivity more. Capital is a factor of production which is an input as well as an output of an economy (Samuelson and Nordhaus, 1994). Productivity reflects the work ethic of the workforce which is reflected in good mental attitude (Fernandes and Nuthall, 2009). Factors affecting labor productivity are work experience, technology, security and protection, good work atmosphere, promotion and organizational self-development (Parayitam, 2008).

The insignificance of capital owned by craftsmen on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency is caused by wood sculpture craftsmen also prioritizing the touch of art in making wooden sculptures, the craftsmen not only depend on how much amount of wooden statues they can produce with their capital have. Although the craftsmen have a large capital in running their business, but if the wood sculpture craftsmen do not have the expertise, skills, and artistic soul, capital will not affect the productivity of wood sculpture craftsmen in the District of Ubud, Gianyar Regency. The size of the capital owned by the craftsmen does not determine productivity significantly, this condition shows many factors outside the capital that affect the

productivity of wood sculpture craftsmen in the District of Ubud, Gianyar Regency. The craftsmen of wooden sculptures in Ubud District, Gianyar Regency are mostly married and they cannot be separated from traditional and religious activities. So it is not uncommon for wood sculpture craftsmen in Ubud District, Gianyar Regency to not work because they have to attend traditional activities. Moreover, customary activities that involve all Balinese people who often refer to it as ngayah cause wooden sculpture craftsmen in Ubud Subdistrict are required to attend. This condition will certainly affect the productivity of wood sculpture craftsmen in Ubud Subdistrict, Gianyar Regency (Juwita Candra Dewi, 2019).

The direct effect of raw materials on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency.

Based on calculations with E-views, the probability value is 0.0000. Probability value of 0.0000 <0.05, this means that H1 is accepted and H0 is rejected. This means that the raw material has a positive effect on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency. The raw material has a path coefficient of -0.1102 and a significance value of 0.0211 <0.05, the raw material has a significant effect on productivity. This means that for every increase in raw material of 1 unit of Likert, the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency will decrease by 0.1102 units / hour with the assumption that the other independent variables are constant.

This is supported by research conducted by Desinta Kusuma Wardani (2016) which states that raw materials have a significant effect on productivity. Research conducted by Santa Permata (2019) also states that raw materials have a significant relationship to productivity. This shows that raw materials as a factor of production have an important role in the production process. In the process of making wood sculpture the main raw material used is wood. As for some types of wood such as waru wood, sono wood, crocodile wood, jempinis wood and so forth. The negative influence between the raw materials used in the production process of wooden sculpture is influenced by several factors. Some of them are the availability of raw materials which are now increasingly difficult to obtain. The difficulty in getting raw materials makes the wood sculpture craftsmen process the wood very effectively and efficiently in order to minimize losses. In addition, the type of wood and the level of wood humidity greatly affect the production process of wood sculpture in the District of Ubud, Gianyar Regency. According to Wulandari, et al (2016) raw materials are important inputs in the production process. Even though labor is available, if there is no raw material to be processed and processed, the production process will not be able to run.

The variety of wood types and the size and shape of the wood vary greatly affect the productivity level of wood sculpture craftsmen. The negative relationship between raw materials and labor productivity shown in this study is due to the condition of the wood purchased by the craftsmen. Although the wood used as the main raw material in the manufacture of wooden sculptures looks smooth when purchased in a slond, it does not guarantee the condition of the wood inside. Mismatch

between the physical wood when buying and when processed into semi-finished goods causes a negative relationship between productivity and raw materials. Good quality raw materials can be seen from the outside but not when cut causing the productivity of craftsmen to decrease, and vice versa. The condition of wood that looks bad from the outside, when given a touch of art from the craftsmen are able to provide additional value compared to good types of wood that are not given a special touch of art. This condition causes a negative relationship between raw materials and the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency.

The direct effect of labor quality on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency

Based on calculations with E-views, the probability value is 0.0000. Probability value of 0.0000 < 0.05, this means that H₀ is rejected and H₁ is accepted. This means that the quality of labor has a positive and significant effect on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency. The quality of labor has a positive and significant effect on productivity, as indicated by the path coefficient of 0.0688 and a significance value of 0.0000 < 0.05. This means that each increase in the quality of education by 1 unit of Likert, the productivity of wood sculpture craftsmen will increase by 0.0688 units / hour with the assumption that the other independent variables are constant.

The results of this study are supported by research by Nur Herawati (2013) which states that labor quality has a positive and significant effect on productivity. Marhaeni and Dewi (2004: 202) revealed that education is an investment in life to increase productivity, it is hoped that after an investment is made, a person can obtain a high income and be able to reach a higher level of consumption as well. Research conducted by Aditya Dharma (2014) with the title "The Effect of Demographic Social Factors on the Productivity of Ikat Woven Women in Klungkung District" shows that partially working hours have a positive effect on the productivity of women ikat weavers in Klungkung Regency. The same thing was also expressed in a study conducted by Yuliarmi (2012) that partially the workforce had a positive and significant effect on wood carving production in Ubud District, Gianyar regency. Productivity in this study is closely related to the amount of production and working hours. The quality of labor can be seen from the level of education, sex, age of labor, hours of work and work experience. The quality of labor has a positive and significant relationship to the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency (Sinuhun Padmi, 2019). If the craftsman's work experience is getting longer, this makes it easier for craftsmen to make wooden sculptures because they have been used to working for years. However, as we get older, the productivity of wood sculpture carving craftsmen will decrease. This is due to the age of the craftsmen who are getting older and a decrease in endurance in production. The quality of labor has a positive and significant relationship to the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency (Sarawati, 2011).

The direct effect of technology on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency, with a hypothesis.

Based on calculations with E-views, the probability value is -0.0899 . The probability value is $0.0899 > 0.05$, this means that H1 is rejected and H0 is accepted. This means that technology has a negative and not significant effect on productivity. Technology has a negative and insignificant effect on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency, which is indicated by the path coefficient of -0.07716 and a significance value of $0.0899 > 0.05$. This means that there are differences in productivity of wooden sculpture craftsmen by 0.0716 , because the negative path coefficient indicates that wooden sculpture craftsmen using traditional technology have a greater productivity of 0.0716 units / hour compared to craftsmen who use modern technology in the process of making wooden sculpture assuming other free variables is constant. Different results found in research conducted by Ardhiaty Nurfiat (2018) stated that technology has a significant relationship to labor productivity in the furniture industry in the city of Denpasar. The same thing was stated in the research conducted by Jimbaran by Suresmiathi (2014) which states that technology has a positive and significant effect on productivity. This shows that modern technology can increase labor productivity.

The negative relationship between technology and productivity in this study is caused by several factors. One of these factors is the process of making wooden sculptures in Ubud District, Gianyar Regency, which cannot be separated from the use of traditional technologies such as chisels, carving tools, and so on. The use of modern technology in the process of making wooden sculptures only acts as an assistive technology in the production process. Most respondents still use traditional technology in making wooden sculptures. The modern technology used by respondents in making wood sculptures is still fairly sophisticated.

The direct effect of capital on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency

Based on calculations with E-views, the probability value is 0.0000 . Probability value of $0.0000 < 0.05$, this means that H0 is rejected and H1 is accepted. This means that capital has a positive and significant effect on income. Capital has a positive and significant effect on income, as indicated by the path coefficient of 0.0000002 and a significance value of $0.0000 < 0.05$. This means that for every capital increase of 1 child, income will increase by 0.0000002 rupiah assuming other variables are considered constant. Wijaya (2016) in his research also stated that capital has a positive and significant effect on income. This is consistent with research conducted by Journalists (2017) which states that capital has a positive and significant relationship to the income of wood sculpture craftsmen. This is reinforced by the results of research conducted by (Pratiwi, 2014) that capital has a positive and partially significant effect on production. this means that the higher the capital of a company, (Widya, 2018) then the level of use of production factors will be more numerous. The results of this study indicate that if the capital of wood sculpture production increases, the income of wood sculpture craftsmen in Ubud District, Gianyar Regency will automatically increase, and vice

versa. According to Michel Dietsch (1993) capital is the first step in production activities. Where capital can increase production by increasing production capacity. The use of large capital in the production process can increase the income that will be received by craftsmen, and vice versa if the capital used is small, the income earned by craftsmen will be small.

The direct effect of raw materials on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency.

Based on calculations using E-views, the probability value is 0.0052. Probability value of 0.0052 <0.05, this means that H1 is accepted and H0 is rejected. This means that raw materials have a positive and significant effect on income. Raw materials have a positive and significant effect on income, which is indicated by a path coefficient of 0.0886 and a significance value of 0.0052 <0.05. This means that for every increase in raw material by one unit of Likert, income will increase by 0.0886 rupiah assuming other variables are considered constant. The results of this study are in line with the reporters' study (2017) where raw materials have a direct and significant effect on the income of wood sculpture craftsmen in Sukawati District, Gianyar Regency. According to Sukartini (2013) Raw material is a factor of production that is needed in every production process. The greater the amount of raw materials owned, the greater the possibility of the number of products produced, so that the possibility of income received from the greater sales of production.

The direct effect of technology on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency

Based on calculations using E-views, the probability value is 0.0016. Probability value of 0.0016 <0.05, this means that H0 is rejected and H1 is accepted. This means that technology has a positive and significant effect on income. Technology has a positive and significant effect on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency, which is indicated by a path coefficient of 0.1777 and a significance value of 0.0016 <0.05. This means that the income of wood sculpture craftsmen in the Sub-district of Ubud, Gianyar Regency who uses modern technology in the process of producing wood sculpture is 0.1777 rupiah larger than the wood sculpture craftsmen who use traditional technology in the wood sculpture production process assuming other variables are considered constant .

This is supported by research conducted by Tri Utari (2006) which also states that technology has a positive and significant effect on income. This is because the use of modern technology in the process of producing wooden sculptures helps the craftsmen to streamline and make time efficient in the production process. Workers who involve the use of machines in the production process will generate more income than those who do not use modern technology such as machines in the production process.

The direct effect of productivity on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency

Based on calculations using E-views a probability value of 0.1113 was obtained. Probability value of $0.1113 > 0.05$, this means that H_0 is accepted and H_1 is rejected. This means productivity when positive and not significant effect on income.

Based on the calculation above, it is known that productivity has a positive and not significant effect on the income of wood sculpture craftsmen in Ubud District, which is indicated by the path coefficient of 0.2209 and the non-significance value of $0.1113 > 0.05$. This means that productivity does not directly affect the income of wood sculpture craftsmen in Ubud District, Gianyar Regency. This is supported by research conducted by Purnomo (2018) which states that female productivity does not have a positive effect on income, because the income owned does not depend on productivity, this shows that high productivity may not necessarily result in large incomes or vice versa . The insignificance of the productivity of wood sculpture craftsmen on income shows that there are factors other than productivity that can influence income.

The insignificant effect of the productivity of wood sculpture craftsmen on the income received by wood sculpture craftsmen is influenced by several factors such as price, product, marketing, demand, and promotion (Umi Saadah, 2017). Demand for wooden sculptures is now experiencing a decline, this condition certainly greatly affects the level of sales of wood sculpture craftsmen. The decline in demand and sales of wooden sculptures has decreased the income received by craftsmen. Demand for wooden sculptures is also influenced by sculpture designs, consumer tastes, types of sculpture, and much more. In addition, the income received by wood sculpture craftsmen is influenced by marketing. Marketing is one of the efforts made to maintain business continuity and a way to get profits / profits (Umi Saadah, 2017). The wider market that can be reached by artisans of course the possibility of product sales will increase.

The indirect effect of capital on the income of the wood sculpture industry in Ubud District, Gianyar Regency

$$S_{\beta_1\beta_9} = \sqrt{b_9^2 S_{b_1}^2 + b_1^2 S_{b_9}^2}$$

$$S_{\beta_1\beta_9} = \sqrt{(0,2209)^2(0,00000211)^2 + (-0,000000570)^2(0,1373)^2}$$

$$S_{\beta_1\beta_9} = 0,000091089$$

Calculate z value:

$$z = \frac{\beta_1\beta_9}{S_{\beta_1\beta_9}}$$

$$z = \frac{(-0,00000570)(0,2209)}{0,0000091089}$$

$$z = -0,00000126$$

Information:

Because Zhitung (0.00000126) is less than Ztable (1.96) this means that H0 is accepted and H1 is rejected. Thus, capital does not affect income indirectly through productivity, meaning that the productivity variable is not a mediating variable in the effect of capital on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency.

The indirect effect of raw materials on the income of the wood sculpture industry in Ubud District, Gianyar Regency

$$S_{\beta_2\beta_9} = \sqrt{b_9^2 S_{b_2}^2 + b_2^2 S_{b_9}^2}$$

$$S_{\beta_2\beta_9} = \sqrt{(0,2209)^2(0,0211)^2 + (-0,1102)^2(0,1373)^2}$$

$$S_{\beta_2\beta_9} = 0,0158$$

Calculate z value:

$$z = \frac{\beta_2\beta_9}{S_{\beta_2\beta_9}}$$

$$z = \frac{(-0,1102)(0,2209)}{0,0158}$$

$$z = 1,5407$$

Because Z value (1.5407) is less than Ztable (1.96) this means that H0 is accepted and H1 is rejected. Thus, raw materials do not affect income indirectly through productivity, meaning that the productivity variable is not a mediating variable in the effect of raw materials on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency.

The indirect effect of labor quality on the income of the wood sculpture industry in Ubud District, Gianyar Regency

$$S_{\beta_3\beta_9} = \sqrt{b_9^2 S_{b_3}^2 + b_3^2 S_{b_9}^2}$$

$$S_{\beta_3\beta_9} = \sqrt{(0,2209)^2(0,0146)^2 + (0,0688)^2(0,1373)^2}$$

$$S_{\beta_3\beta_9} = 0,0099$$

Calculate z value:

$$z = \frac{\beta_3\beta_9}{S_{\beta_3\beta_9}}$$

$$z = \frac{(0,0688)(0,2209)}{0,0099}$$

$$z = 0,0152$$

Because Z value (0.0152) is less than Ztable (1.96) this means that H1 is rejected and H0 is accepted. Thus, labor quality does not affect income indirectly through productivity, meaning that the productivity variable is not a mediating variable in the effect of labor quality on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency.

The indirect effect of technology on the income of the wood sculpture industry in Ubud District, Gianyar Regency

$$S_{\beta_4\beta_9} = \sqrt{b_9^2 S_{b_4}^2 + b_4^2 S_{b_9}^2}$$

$$S_{\beta_4\beta_9} = \sqrt{(0,2209)^2(0,0418)^2 + (-0,0716)^2(0,3139)^2}$$

$$S_{\beta_4\beta_9} = 0,0134$$

Calculate z value:

Because Z value (0.0158) is smaller than Ztable (1.96) this means that H1 is rejected and H0 is accepted. Thus, technology does not affect income indirectly through productivity, meaning that the productivity variable is not a mediating variable in the effect of technology on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency.

4. CONCLUSION

The tourism sector in Bali has become a leading sector that has resulted in the transformation of the structure of the Balinese economy. Gianyar Regency is one of the regencies / cities in the Province of Bali that also has several leading tourism sectors. Gianyar Regency is also famous for its art and culture. Tourism in Gianyar Regency is developing very well, even some regions and tourism objects are well known to foreign countries. The development of the tourism industry affects the development of the industrial sector.

One aspect that has developed in line with the development of the tourism industry is the wooden sculpture industry sector. The wooden statue is one of the industrial products that is developing in Ubud District, Gianyar Regency today. The development of the wooden sculpture industry in Ubud District, Gianyar Regency is due to the tourism industry in Ubud District, Gianyardiarerah on the development of natural and cultural tourism products that highlight artistic and cultural values. The incessant development and development of the tourism industry and the wooden sculpture industry must be balanced by the participation of the government so that the wooden sculpture industry which is one of the ancestral heritages and is one of the sources of income for some people to continue to grow and be known to foreign countries. In addition, the role of the government is needed to regulate

regulations and policies so that the development of the wood sculpture industry can also contribute to improving the village economy.

The focus in this study is to find out capital, raw materials, labor quality, and technology on the productivity and income of wood sculpture craftsmen in Ubud District, Gianyar Regency. The results of this study indicate that capital does not positively influence the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency, but raw materials, labor quality and technology have a significant effect on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency. This means that any capital in the wood sculpture business will not affect the productivity of wood sculpture craftsmen, although with more capital will encourage wood sculpture craftsmen to increase their productivity. But the fact is that in the field, capital is not the main factor affecting the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency.

This is because capital contributions are seen based on productivity. The productivity of wood sculpture craftsmen will not be able to increase only because of the increasing capital owned by the craftsmen, which can affect the size of the contribution of productivity is raw material, labor quality and technology that directly affects the productivity of wood sculpture craftsmen.

Raw materials and technology negatively affect the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency, but the quality of labor has a positive effect on the productivity of wood sculpture craftsmen in Ubud District, Gianyar Regency. The negative influence between raw materials on the productivity of wood sculpture craftsmen is caused by the possibility of wood with good quality from the outside when the wood is processed, the condition of the wood does not match what the craftsman wants, and vice versa. The condition of these raw materials is very difficult to predict by wood sculpture craftsmen. There is a need for creativity, new ideas to maximize the processing of wood raw materials in order to be able to produce wooden sculptures that are full of artistic value for craftsmen. The negative relationship between technology and the productivity of wood plumber craftsmen is caused by the work of wooden sculptures that are full of artistic and cultural values that cannot be separated from the use of traditional technology. The use of traditional technology in the process of making wooden sculptures provides artistic value and is able to enliven the soul that exists in these wooden sculptures. The fact is in the field, although there is modern technology developing at this time, the use of traditional technology in the process of making wooden sculptures cannot be separated completely from the process of making wooden sculptures. Capital, raw materials, labor quality and technology have a positive and significant effect on the income of wood sculpture craftsmen in Ubud District, Gianyar Regency. This shows that if the capital, raw materials, quality of labor and technology of wood sculpture craftsmen experience an increase, the income received by wood sculpture craftsmen also increases. Capital, raw materials, labor and technology are factors of production that have an important role in the production process of wooden sculptures. The role of production factors in the process of making wooden sculptures

greatly influences the income received by wood sculpture artisans in Ubud District, Gianyar Regency.

Productivity does not significantly influence the income of wood sculpture craftsmen in Ubud Subdistrict, Gianyar Regency, this is due to the increased productivity of wood sculpture craftsmen should increase the amount of wood sculpture production and increase working hours, thereby encouraging an increase in income received by wood sculpture craftsmen in Ubud District, Gianyar Regency. This condition shows that the productivity of wood sculpture craftsmen is not the only factor that determines the amount of income received by wood sculpture craftsmen in Ubud District, Gianyar Regency. The condition in the field shows that although the productivity produced by craftsmen is high, the sales of wooden statues have decreased. Wood sculpture craftsmen in Ubud Sub-district, Gianyar Regency also supply wooden sculptures that may later be sold in the market, this shows that although demand for wood sculptures has weakened, wood sculpture craftsmen remain productive in producing wooden ptung. The weakening of the market condition of the wooden statue will affect the income received by the craftsmen. Not many wood sculpture craftsmen market their products online. Only a few young craftsmen and craftsmen who already have a name in the market selling their products online.

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