UDC 331

FACTORS AFFECTING PRODUCTIVITY AND INCOME OF WEAVING WORKERS IN KLUNGKUNG REGENCY, INDONESIA

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ABSTRACT
The purpose of this study is to examine the effect of working hours, labor quality and incentives on the productivity and income of *endek* weaving workers in Klungkung District, Klungkung Regency. The sampling technique used is non probability sampling with the sample size determined using the Slovin formula. The number of samples is 114 workers out of 1,487 *endek* weaving workers in Klungkung District, Klungkung Regency. The method of analysis in this study is path analysis with the assistance of the SmartPLS software. The results show that working hours, labor quality and incentives have positive effects on the productivity of weaving workers. Working hours, labor quality and incentives do not have positive effects on income, but productivity has a positive effect on the income of weaving workers. Productivity mediates the effects of working hours, labor quality and incentives on the income of weaving workers in Klungkung District, Klungkung Regency.

KEY WORDS
Working hours, labor quality, incentives, productivity, income.

The development of the handicraft industry in Bali Province can be seen as a strategic effort considering that this business sector is very diverse and supported by Bali's potentials as a tourism hotspot. In order to meet the demands of tourism, the government and Balinese people have developed various handicraft industries that is originated from Balinese culture and traditions. The data in Table 1 shows that Klungkung Regency has the largest number of fabric weaving businesses compared to other regencies / cities in Bali Province with a total of 86 units which absorb the highest number of workers up to 2,253 person. However, in terms of productivity, Klungkung Regency's business productivity ranks third below Karangasem and Gianyar Regencies.

Table 1 – Number of Businesses, Labor, Investment Value, Production Capacity, Production Value and Productivity of Fabric Weaving SMEs by Regency in Bali Province 2018

	Regency	Number of Businesses	Number of Workers	Investment Value (IDR000)	Production Capacity (meters)	Production Value (IDR000)	Business Productivity (meter / unit)
1	Jembrana	43	233	688,000	7,724	2,334,900	180
2	Tabanan	-	-	-	-	-	-
3	Denpasar	16	193	2,040,700	70,387	5,984,000	4,399
4	Badung	2	13	8,675	7,800	440,230	3,900
5	Gianyar	10	304	959,956	89,520	4,110,000	8,952
6	Bangli	10	25	90,000	5,450	815,000	545
7	Karangasem	27	373	719,041	248,705	1,736,261	9,211
8	Klungkung	63	1,487	3,272,745	429,862	12,130,760	7,047
9	Buleleng	9	101	107,144	15,700	757,471	1,744
Bali Province		180	2,729	7,886,261	875,148	28,308,622	35,978

Source: Disperindag Bali Province, Directory 2018 (Data Proceed).

One of the factors that causes the relatively low productivity of the Klungkung weaving SME businesses is the technological factor where almost all the weavers in Klungkung still utilize traditional weaving tools or non-machine weaving tools. When compared to weavers in Gianyar Regency, which in 2017 received the assistance in form of large capacity yarn dyeing machine, they were able to produce between 45 - 50 kg of yarn per run with the drying process which only took one day with a dryer machine. The dyeing with traditional tools only yield around 5 kg of yarn per day with significantly more complicated process (Roy Sianipar, Directorate General of SME, Ministry of Industry, Republic of Indonesia, 2014).

The traditional fabric weaving industry in Klungkung Regency is spread across all of its districts. The weaving industry is mostly concentrated in Klungkung District, with 25 out of 63 weaving units in Klungkung Regency (Bali Province Industry and Trade Office, 2018). The SME weaving products in Klungkung Regency are dominated by the *endek* and the *songket / cagcag* fabrics (Padma, 2014). The productivity of weaving SMEs has also decreased from year to year, as seen in Table 2.

Table 2 – Number of Businesses, Labor, Investment Value, Production Capacity, Production Value and Business Productivity of Weaving Fabric SMEs in Klungkung Regency 2014-2018

Year	Number of Business	Labor (person)	Investment Value (IDR000)	Production Capacity (meter)	Production Value (IDR000)	Productivity (meter/unit)
2013	58	1,021	847,291	426,920	18,450,915	7,482
2014	60	1,067	938,464	459,083	21,460,455	7,651
2015	60	1,166	961,045	467,967	12,649,160	7,799
2016	62	1,185	973,745	469,717	13,339,160	7,576
2017	64	1,286	3,320,745	458,862	13,491,760	7,170
2018	63	1,487	3,272,745	429,862	12,130,760	7,047

Source: Disperindag Bali Province, Directory 2018 (Data Proceed).

The decline in production value over the past few years is thought to be due to low market demand. This can be seen by the quality of woven fabric products which tend to be less attractive to both Balinese and non-Balinese people. The woven fabric products in Bali, such as *endek* or *songket*, generally have good quality and thus sold in the market at relatively higher prices. In addition, there are more and more woven fabric products with Balinese weaving style that are produced outside of Bali with decent quality and are sold at relatively cheaper prices.

The decrease in productivity has resulted in a decrease of welfare of the weaving industry business owners and workers, especially in Klungkung Regency. Decreasing production and productivity can reduce the level of income of business owners and reduce the level of wages paid for workers. In order to increase the productivity and welfare of traditional weaving industry, appropriate strategies are needed to enhance the capacity of production factors including capital and human resources.

Community empowerment in the SME sector plays a very important role and aims to boost the capacity of an industry. Capacity enhancement in business capital, labor, education, age and experience of business owners and workers will be more productive and effective in supporting this empowerment process. Empowerment will be able to improve the skills and expertise of workers so that they can be more productive. Another empowerment benefit is an increased product quality as a result of increased productivity, efficiency and market-oriented competitiveness. Increased productivity, efficiency and competitiveness can be realized through the empowerment of SMEs supported by increased use of technology (Eka, 2005).

The development of the *endek* fabric industry in Klungkung Regency is slightly hampered by the culture and traditions at local community, low productivity levels, limited promotional facilities, sub-optimal access to capital, low use of technology in the production processes and limited human resource capacity. These factors can be observed in terms of the number of hours worked, labor quality and the provision of incentives as variables that affect productivity and related to the attainment of welfare for *endek* weaving workers.

From the description of the problems above, this study aims to examine the factors that affect the productivity and welfare of endek weaving workers in Klungkung District, Klungkung Regency. The development of the *endek* weaving industry in Klungkung District, Klungkung Regency, can serve as a means to help workers increase their household income and improve their welfare.

LITERATURE REVIEW

Production is an activity that adds value to an item. Schroeder (1999) states that production is an activity which is a transformation system that uses inputs to produce goods or services. Joesran and Fathorrozi (2003) state that a product is the end result of an

economic process or activity by utilizing several inputs. Production activities in an industry are always based on a certain production function, where inputs affect output. Production theory is a theory that discusses the relationship between input and output or the relationship between the production quantity and the quantity of production factors used to produce it (Amri, 2013).

Rosyidi (2005) in Sulistiana (2013) states that production is any effort that creates or increases the usability of goods. In order to be able to perform a production process, companies need labor, raw materials, capital in various forms as well as expertise or skills. All these elements are called factors of production. Meanwhile, production itself is an activity to increase the usefulness of an item. After the production process is carried out, the production output will be obtained. According to Machfudz (2007: 101), production output is the end result of a production process in utilizing (sacrificing) inputs. The creation of production output cannot be separated from the factors of production.

The basic assumption of the human capital theory is that a person can increase his / her income by increasing education and training. This theory assumes that the growth of a society is determined by individual productivity. If everyone has a higher income because of higher education and higher skills, then the economic growth of the society can be achieved. Human capital theory considers education and training as investments, both for individuals and society. Becker (1993) defines human capital as the result of a person's skills, knowledge and training including accumulated investment in educational activities, job trainings and migrations.

In relation to job opportunities, jobs will be more available to those who have higher levels of education and skills. This is due to the scarcity of educated or trained workers which leads to a lesser level of competition for certain jobs. The level of education also affects the level of income, those who have higher education tend to get higher incomes. Basically the higher incomes of those with higher education are not a direct result of expensive educational investments, but rather the result of a more complex set of factors.

Becker (1993) proposes a new approach to time allocation theory in form of activity cycles. Total time consists of productive time which is actual time used for work (productive working time) and productive time used for leisure such as watching TV and other activities. Becker distinguishes the use of time based on how much an activity costs per hour. He suggests that present time must be used more carefully than the past time.

According to Everson in Rochaeni (2005), the formula compiled by Becker (1993) basically sees household consumption behavior as a two-level process, namely: (1) Explaining household behavior in dealing with the production function where time and capital available in the household are used. to produce goods and services that it consumed. (2) Studying the consumption decision process of household members as individual behavior. Thus, household's attempt at maximizing their satisfaction is limited by constraints on production, time and income.

Income is a payment received by factors of production within a certain period of time. These remunerations can be in forms of rent, wages, salary, interest or profit. Income in form of remuneration for the utilization production factor is called distributed income. The income that comes from the remuneration in form of wages or salaries is called labor income. Meanwhile, income that comes from the remuneration of other than labor is called non-labor income. In addition, income also includes the types of income that does not come from the remuneration for the use of production factors. This kind of income is called transfer income. Transfer income can come from gifts or grants from individuals or institutions (e.g. government). This transfer income stream can be positive or negative depending on the amount of transfer payment and receipt within a certain period of time.

For people with low income, the payment for their work are limited to meeting their daily needs. For middle-income families, expenditures can be more focused on meeting proper basic needs such as food, clothing, housing, education and others. Meanwhile, for families with high and sufficient incomes, their incomes will be able to meet all the needs that ensure their level of welfare, especially related to consumption, education and health. People need a significant amount of money to ensure their state of welfare, so they need an adequate

amount of income.

Productivity and income are closely related to each other. According to Samuelson and Nordhaus (2003), productivity has a special meaning which is very important because of its relation to the growth of living standards. Productivity is the ratio of the amount of input involved in production activities to produce output which is calculated based on the number of units or rupiah values of goods and services produced. Paul Mali, quoted by Sedarmayanti (2001), states that productivity is how to produce the highest possible output of goods and services by utilizing resources efficiently.

Productivity in its measurement can be formulated in various ways. Productivity can be measured by calculating the ratio of output to labor input, the ratio of output to capital input, or the ratio of output to raw material input (Sawitri, 2016). In this study, the productivity of *endek* weaving workers was calculated using the ratio of output (meter of fabrics) to fixed time unit (per month).

The time spent working is the effort that a person puts in to achieve an economic goal. Population productivity can be seen as the amount of working hours spent by its members to carry out productive activities in order to fulfill their daily needs (Dewi, 2016).

The working hours dedicated by weavers will directly affect their income. *Endek* weavers are generally paid a wage according to the output / fabrics they produced. In addition, the wages of the weavers are also determined by the difficulty level of the fabric. *Endek* fabric with a high level of difficulty requires a longer time to complete, and vice versa. In other words, the amount of time that each weaver spends has a direct effect on the level of income they receive. However, this effect cannot be generalized among all weavers.

In a fabric weaving business, there are always senior / experienced weavers and novice ones. Weavers with longer work experience tend to complete the same job faster when compared to weavers who are beginners. However, novice weavers can still increase their productivity by devoting more time so that the output of their fabrics is equal to those of senior weavers. So it can be said that the amount of working hours can directly affect productivity and affect income, both directly and indirectly.

There are various dimensions of labor quality. In the *endek* fabric weaving industry, the labor quality can be seen primarily from indicators such as training, health and work experience. Both education and training are among the main indicators of the labor quality. Education, especially formal education, is very important, especially for employment in the formal sector or in medium and large scale companies. For the IKM sector, such as woven handicrafts, education is not a major consideration in labor recruitment. In a sector like this, job skills are prioritized in order to be able to perform tasks that are mostly labor-intensive and still use traditional technology. More skills in production are obtained from training, both structured and coaching by employees who are more senior to their juniors. In increasing productivity, the skill level must be increased through technical production training, such as providing training or courses in the manufacture of handicraft products (Sawitri, 2016).

Health is closely related to labor productivity and income. Besides that, health is also an indicator of the welfare of the workforce besides education and income. Income can meet various needs of daily life including health, so that if income increases, health will immediately get better (Sawitri, 2016). On the other hand, a good workforce's health is a prerequisite for them to work productively. This productivity in the end will also greatly affect the income received by workers. The health level of the workforce can be seen from the nutritional intake of food consumed, access to health services, availability of health insurance and the company's attention to employee health.

Work experience also greatly determines a person's income because work experience is an experience of real events experienced by someone at work. The longer the work experience or the more work experience a person has, the more skilled and faster he will be in completing the tasks that are his responsibility. Febiyanti (2012) states that there are several things that determine whether an employee is experienced or not, namely the length of time / work period, the level of knowledge and skills possessed and mastery of work and equipment.

Incentive can be formulated as proportionate remuneration for employees whose

performance exceeds the predetermined standards. Incentives are a driving factor for employees to work better so that their performances increase. Incentives are additional remuneration given to certain employees whose performance is above the standard performance. Basically, incentive is a form of encouragement for an employee to work better and to be more able to achieve a higher level of performance so that it can trigger employee's passion and motivation (Rahmanda et al, 2013).

In addition to a fixed base salary, employees receive additional income in form of bonuses or incentives. The amount of these incentives vary depending on the performance level and target fulfillment by the said employee. Business owners must pay more attention to the welfare of the workers by providing additional incentives according to their working hours and performance levels, aimed at stimulating the workers to work better and more responsibly (Sawitri, 2016).

Several studies have analyzed the influence of various factors on labor productivity and income. These factors include aspects such as time spent for work, quality of labor and provision of incentives. Research on the effect of working hours has been carried out by several researchers. Wicaksono (2011), in his research found that working hours spent has a direct relationship with income, while Dewi (2016) in her research on the contribution of women in improving family income in Jembrana Regency found that the working hours has a positive effect on family income. . Dharma and Ardhana (2014) also found that the working hours variable has a positive and significant effect on labor productivity. Wiangraini (2014) states that the amount of working hours has a positive and significant effect on income.
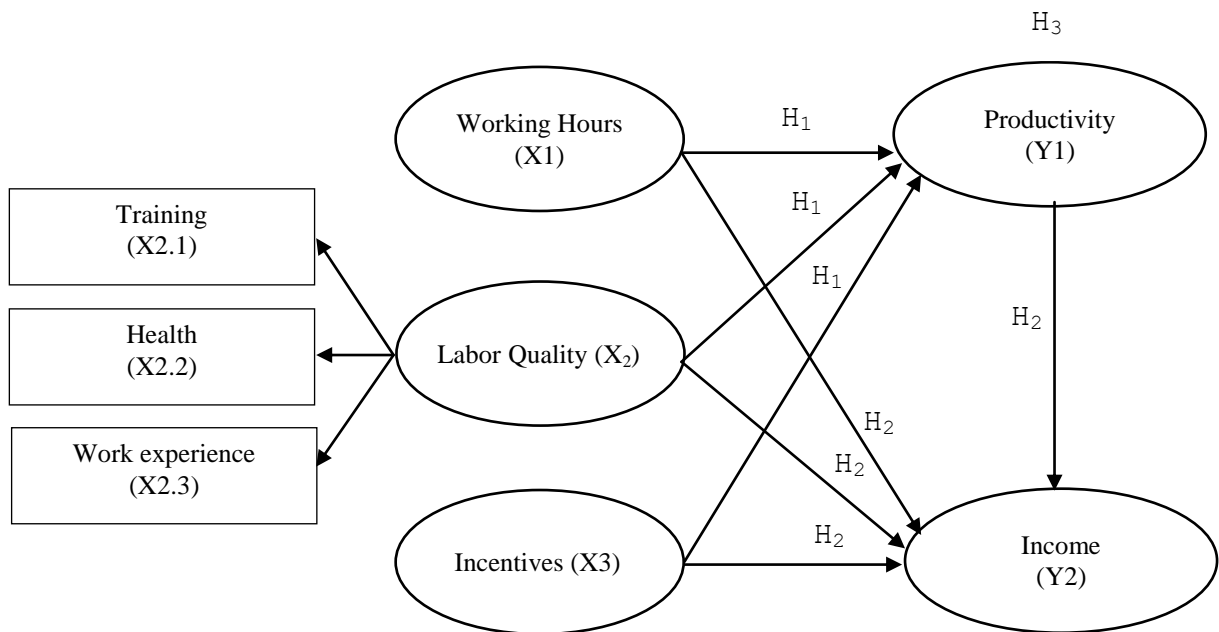

Figure 1 – Conceptual Framework (Source: Data processed, 2020)

The aspects of labor quality which is represented in this study by training, health and work experience have also been studied before with mixed results. Simanjuntak (2001) and Suryadi (1994) both found that education and training have an influence on the increase of labor productivity. It is expected that the improvement in education and training will also increase the income of workers. Sawitri (2016) found that work experience has a significant effect on the productivity and welfare of wood carving craftsmen in Ubud District, Gianyar Regency. Different results obtained by Dewi (2016) and Andriani (2000) who found that work experience did not have a significant effect on family income. Sedarmayanti (2001) states that labor productivity is influenced by the skills of the workforce which is represented by education and work experience.

Rahmanda (2013) found that the financial incentive and non-material incentive variables have a significant effect on employee performance, either directly or indirectly.

Ikram (2007) and Maharani (2009) also state that incentives have a positive effect on work motivation and performance. Sawitri (2016) in her research found that productivity has a significant effect on welfare and productivity plays a significant role in mediating the effect of social demographic factors on welfare in Ubud District, Gianyar Regency. Likewise, Sinungan (2008) and Widyastuti (2012) state that increased productivity increases income and overall family welfare.

Based on the descriptions above, the hypotheses in this study are as follows:

H1: Working hours, labor quality and incentives have positive effects on the productivity of weaving workers.

H2: Working hours, labor quality, incentives and productivity have positive effects on the income of weaving workers.

H3: Productivity is able to mediate the effects of working hours, labor quality and incentives on the income of weaving workers.

METHODS OF RESEARCH

This research was conducted using an associative approach. This research was conducted in Klungkung District, Klungkung Regency. The reason for choosing this location is due to the concentration of *endek* weaving businesses the area, which are mostly located in Klungkung District (25 out of 63 *endek* business units or 40%). The exogenous variables in this study are working hours, labor quality and incentives; while the intervening variable is worker productivity and the dependent variable is income.

The population in this study include all *endek* weaving workers in Klungkung District, amounting to 1,487 persons. Based on the calculation using the Slovin formula, the sample size obtained is 114 weaving workers.

The data in this study were collected using a survey method with questionnaires. This study employed path analysis with the Partial Least Square (PLS) method with assistance of SmartPLS 3.0 software.

RESULTS OF STUDY

Respondents in this study are workers of the weaving industry in Klungkung Regency. The distribution of questionnaires in this study was carried out in Klungkung District. Respondent characteristics are grouped by gender, age and education levels. The characteristics of the respondents in this study can be seen in Table 3.

Table 3 – Respondent Characteristics

No	Characteristics	Total	Percentage
1.	Gender		
	Female	114	100,0
	Male	0	0,0
	Total	114	100,0
2.	Age		
	20-29	9	7,9
	30-39	18	15,8
	40-49	26	22,8
	50-59	36	31,6
	≥ 60	25	21,9
	Total	155	100,0
3.	Education		
	Elementary school	44	38,6
	Junior high school	53	46,5
	Senior high school	14	12,3
	Diploma or above	3	2,6
	Total	155	100,0

Source: Data processed, 2020.

Test of the outer model in this study was done using SmartPLS 3.0 with the PLS Algorithm test in order to obtain path diagram as shown in Figure 2.

Table 4 – Descriptive Statistics

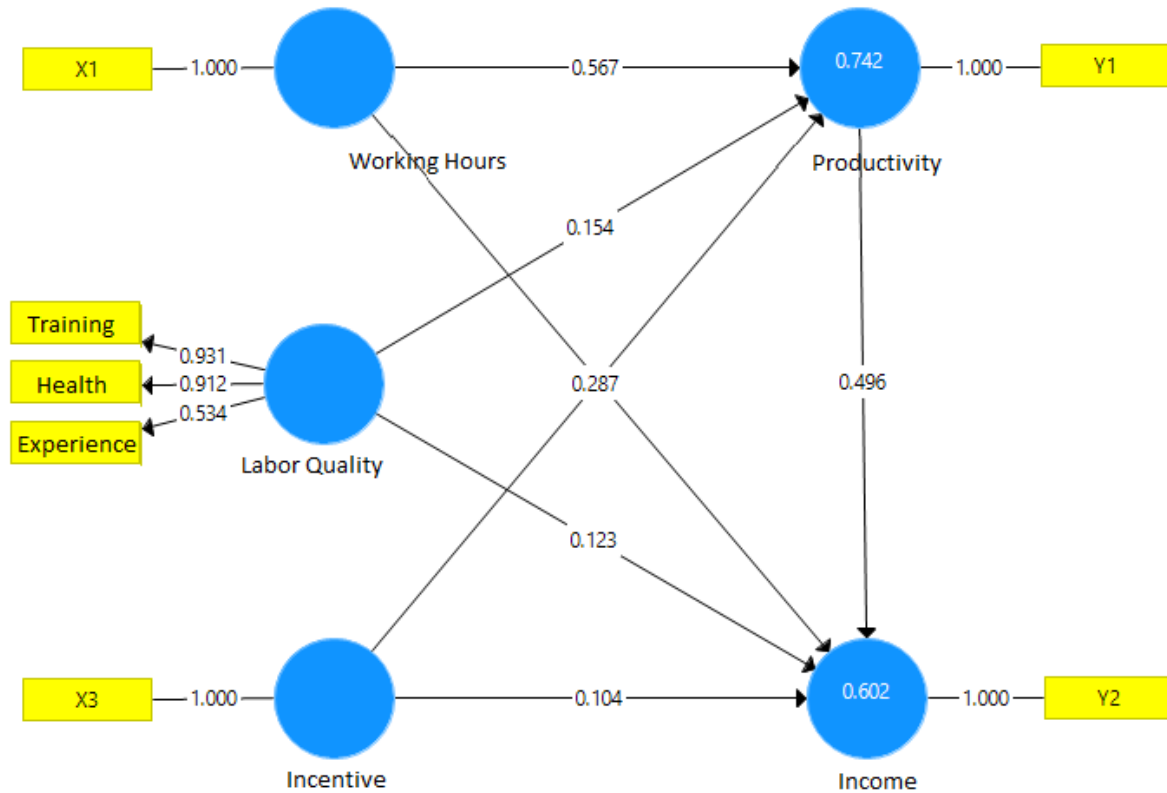| Variable	Mean	Median	Minimum	Maximum	Std. Deviation
Working hours	113.772	109	42	225	33.849
Health	3.918	3.8	2.4	5	0.426
Training	4.127	4	2	5	0.462
Work experience	3.053	3	1	5	1.050
Incentive	0.482	0	0	1	0.500
Productivity	31.377	30	10	65	10.154
Income	2.358	2.3	1	5.1	0.808

Source: Data processed, 2020.

Figure 2 – PLS Algorithm Test Results with SmartPLS 3.0 (Source: Data processed, 2020)

Based on Figure 2, two structural equations can be constructed as follows:

$$Y_1 = 0{,}567X_1 + 0{,}154X_2 + 0{,}287X_3 + e_1$$
$$Y_2 = 0{,}147X_1 + 0{,}123X_2 + 0{,}104X_3 + 0{,}496Y_1 + e_2$$

Where:

X1 = Working hours;
X2 = Labor Quality;
X3 = Incentives;
Y1 = Productivity;
Y2 = Income;
e1, e2 = errors.

The validity test was done using the convergent validity test which consists examines loading factor and the average variance extracted (AVE). Reliability test was done by looking at Cronbach's alpha and composite reliability. Convergent validity test was assessed by looking at the loading factor and Average Variance Extracted (AVE). The outer loading for each indicator can be seen in Table 5.

Table 5 – Outer Loading of Variable Indicators

Variable	Indicator	Outer Loading
Working hours		1.000
Labor Quality	Training	0.931
	Health	0.912
	Work experience	0.534
Incentives		1.000
Productivity		1.000
Income		1.000

Source: Data processed, 2020.

Based on Table 5, it can be said that all indicators used in this study have outer loading values above 0.5. These values indicate that the model formed is fit and the indicators used to measure the variables are valid.

Average Variance Extracted (AVE) is a measuring tool for assessing convergent validity. The model is said to be fit if the AVE values are greater than 0.5. AVE value for each variable can be seen in Table 6.

Table 6 – AVE Values of Research Variables

Variable	Average Variance Extracted (AVE)
Working hours	1.000
Quality of Labor	0.661
Incentives	1.000
Productivity	1.000
Income	1.000

Source: Data processed, 2020.

Based on Table 6, it can be seen that all variables used (exogenous and endogenous) have AVE values greater than 0.5. This means that all variables used are valid.

In SmartPLS, the measurement of reliability is conducted by using Cronbach's Alpha and Composite Reliability values. The construct is declared reliable if the Cronbach's Alpha and Composite Reliability values are above 0.70. The Cronbach's Alpha and Composite Reliability values of each variable can be seen in Table 7.

Table 7 – Cronbach's Alpha and Composite Reliability

Variable	Cronbach's Alpha	Composite Reliability
Working hours	1.000	1.000
Labor Quality	0.724	0.848
Incentives	1.000	1.000
Productivity	1.000	1.000
Income	1.000	1.000

Source: Data processed, 2020.

Based on Table 7, it can be seen that each variable has a Cronbach's Alpha and composite reliability values greater than 0.7, so it can be said that all variables used in this study are reliable. This means that these variables can be used repeatedly on different subjects with consistent results.

Test of the inner model or structural model was carried out using R-square and Q-square for endogenous constructs. Test of inner model in this study was done by processing data using SmartPLS 3.0 with the PLS Algorithm test as shown in Table 8.

Table 8 – R-square Values of Productivity and Income of Weaving Workers

Variable	R-square
Productivity	0.742
Income	0.602

Source: Data processed, 2020.

Based on Table 8, it can be said that the worker productivity variable has an R-Square value of 0.742 or 74.2%. The R-square value of the workers' income variable is 0.602 or 60.2%. In addition to using the R-square values, test of structural model also uses the Q-square value. The following is the result of the calculation for the Q-square value in this study.

$$Q^2 = 1 - (1 - R^2_1)(1 - R^2_2) = 0,897$$

Based on the calculation result, the Q-square value is 0.897 or 89.7%. This means that the overall model can explain 89.7% of income variables, and the remaining 10.3% can be explained by other variables outside the model. The Q-square result is close to 1, which means that the model has a very good predictive relevance.

Test of hypotheses is done by processing data using SmartPLS 3.0 with a bootstrapping test as shown in Figure 3.
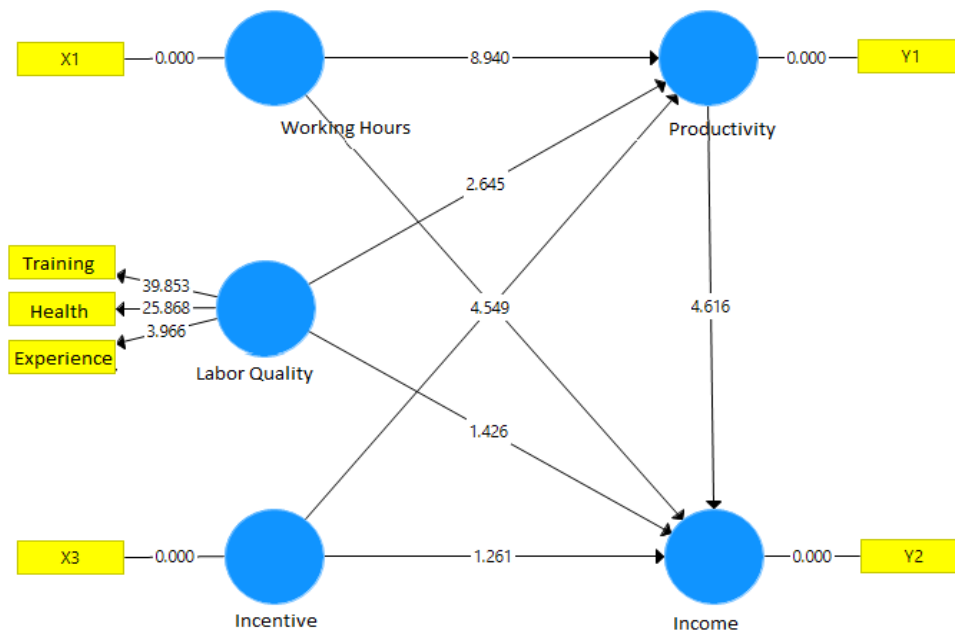

Figure 3 – Bootstrapping Test Results with SmartPLS 3.0 (Source: Data processed, 2020)

The direct effect analysis in this research model can be seen from the path coefficient values along with the t-statistics and p-values. This study used a confidence level of 95% or an alpha of 5%. This means that if the path coefficient value is positive and the t-statistic is greater than 1.96 or the p-value is less than 5%, the hypothesis can be accepted. The path coefficients, t-statistics and p-values for the direct effects in this study are presented in Table 9.

Table 9 – Direct Effects Between Variables

Path	Path Coefficient	T Statistics	P Values	Information
Working Hours-> Productivity	0.567	8.940	0.000	
Labor Quality -> Productivity	0.154	2.645	0.008	H1 accepted
Incentives -> Productivity	0.287	4.549	0.000	
Working Hours -> Income	0.147	1.156	0.248	H2 rejected
Labor Quality -> Income	0.123	1.426	0.154	
Incentives -> Income	0.104	1.261	0.298	
Productivity -> Income	0.496	4.616	0.000	

Source: Data processed, 2020.

Based on the results of the resampling bootstrapping test with SmartPLS 3.0, the path coefficients for all direct effects on productivity are positive and significant, meaning that H1 in this study is accepted. However, the path coefficients for the direct effects of working

hours, labor quality and incentives on income is not significant, which means that H2 in this study is rejected.

The indirect effects in this study are mediated by the productivity variable that connects the indirect effects between variables. The path coefficients, t-statistics and p-values for the indirect effects in this study are presented in Table 10.

Table 10 – Indirect Effect Between Variables

Path	Path Coefficient	T Statistics	P Values	Remark
Hours Spread -> Productivity -> Income	0.281	3.878	0.000	
Labor Quality-> Productivity-> Income	0.076	2.298	0.022	H3 be accepted
Incentives -> Productivity -> Income	0.142	3.530	0.000	

Source: Data processed, 2020.

Based on Table 10, it can be seen that the number work hours, labor quality and incentives have indirect effects on the income of weaving workers through productivity as shown by the positive and significant path coefficient values. This means that productivity mediates the relationships between working hours, labor quality and incentives with the income of weaving workers. Based on these results, it can be said that H3 is accepted.

The strength mediation effects can be measured by calculating the VAF (Variance Accounted For) values for each relationship between exogenous and endogenous variables. VAF calculations for the two indirect effects in this study can be seen in Table 11.

Table 11 – VAF Calculation Results

Variable	Indirect Effect	Total Effect	VAF (%)
Working Hours -> Productivity -> Income	0.281	0.428	65.65
Labor Quality-> Productivity-> Income	0.076	0.199	38.19
Incentives -> Productivity -> Income	0.142	0.246	57.72

Source: Data processed, 2020.

Based on Table 11, it can be seen that the effects of working hours, labor quality and incentives on income are partially mediated by productivity as seen from the VAF values which fall in the range of 20 - 80%.

DISCUSSION OF RESULTS

The results of this study provide evidence that working hours have a positive direct effect on worker productivity. The more working hours a worker devotes, the higher the level her productivity. The results of this study reinforce previous research by Dharma and Ardhana (2014) which found that working hours variables have a positive and significant effect on labor productivity. The results of this study also support the theory which explains that the normal working hours are 40 hours a week, but weaving workers have higher flexibility in terms of working hours due to the nature of the work which is more of a side job. The number of working hours is also influenced by external factors such as fluctuations in market demand so that the demand for working hours may also fluctuate. Workers sometimes only work less during low seasons, but can also work overtime when there is a big demand.

The labor quality also has a positive direct effect on worker productivity. Workers who have attended training, having high work experience and are in good health tend to have higher productivity than workers who are not. This is in accordance with the theory previously described that improving labor quality through training will increase labor productivity. If the quality of labor increases, labor productivity will also increase because for the same period of time workers can produce more output (Adianto and Ferdryansyah, 2018; Sultana et al., 2012). Simanjuntak (2001), Suryadi (1994), Sawitri (2016) and Sedarmayanti (2001) state that labor productivity is influenced by labor skills obtained from training and work experience. This is supported by the research of Duti and Suresmiathi (2013) which state

that the quality of labor directly has a positive and significant effect on work productivity.

Health condition also greatly affects productivity. Excellent health will make workers focus more on work, have greater energy to complete their works, and prevent them from distractions such as taking day offs due to illness or working sub-optimally due to health problems. Employers can take part in maintaining the health of workers by ensuring the work environment is safe and clean, the availability of medicines for first aid in case of accidents or other health problems, and providing assistance with medical expenses if they must receive medical attention from doctor or hospital. The results of this study are in line with research by Budiharjo, et al. (2017) which states that health has a positive and significant effect on productivity. Njihia, et al. (2017) states that occupational health has a positive effect on productivity in manufacturing employees. Prabowo (2018) also states that occupational health has a positive and significant effect on employee's work productivity.

Incentives also have a positive direct effect on worker productivity. Providing incentives will increase work productivity because incentives are an additional income when workers reach certain performance targets. This will spur workers to achieve these targets which will also increase their productivity. On the other hand, providing incentives will also ensure a sense of justice for workers where the company will reward their works fairly and proportionally. The higher their performance achievement, the more incentives they will get. The results of this study support previous researches from Ikram (2007), Maharani (2009) and Rahmanda (2013) which found that financial incentive and non-financial incentives have significant effects on worker productivity.

The results of this study proved evidence that working hours, labor quality and incentives do not have a positive effect on workers' income. On the other hand, worker productivity has a positive effect on workers' income. A higher the number of working hours is not automatically followed by an increase in workers' income. High working hours may not result in higher productivity, partly due to the lack of skills or insufficient experience. On the other hand, income is also not solely determined by the number of hours worked, but is calculated based on the amount of output produced. Some workers who are senior or skilled often earn higher incomes even though the working hours are relatively low. This is because senior workers are valued for their loyalty or senior workers can also take on additional responsibilities such as supervising juniors or providing coaching for new weaving workers. This phenomenon is not in accordance with the results of research by Wicaksono (2011) stating that the working hours spent in a business has a direct relationship with income. This study also does not support the research from Sri Wiangraini (2014) which states that working hours have a positive and significant effect on income.

The labor quality which is represented by work experience, training and health also do not have a direct positive effect on workers' income. This can be explained partly due to the fact that income is not determined solely by the quality of workers. The income of workers is greatly influenced by the consumer demands for woven products. If the demand in a business decreases, then the income of all workers in it will also decrease. On the other hand, a qualified worker is not necessarily productive in producing woven fabrics so that their income can be lower than other workers. This is related to the part-time characteristic of the weaving work so that workers can leave their jobs if there are other more urgent errands. This is not in accordance with the findings from Hidayat (1998) and Korompis, (2005) who suggest that human resource development related to education and training / skills will increase workers' income. From the health side, this research is also not in line with the findings from Subramanian, Belli, & Kawachi (2002) which state that health as a form of human capital is very important for economic improvement.

The provision of incentives also does not directly have a positive effect on the income of weaving workers. This can again be explained due to fact that the income of weaving workers is very dependent on the consumer demand. Income can only increase if there is sufficient demand according to existing production capacity. Another possibility is that the provision of incentives is still not commonly practiced and when practiced, the amount may insignificant. This makes incentives unable to encourage workers to increase their productivity so that their income does not increase. Yuniarsih and Suwatno (2008) argue that

incentives are rewards given to motivate employees / members of an organization so that their motivation and work productivity are high, they are not permanent or occasional in nature. The results of this study are inconsistent with research conducted by Zaputri et al. (2010) which found a significant effect of incentives on employee income.

Productivity is the only variable that directly has a positive effect on workers' income. This means that the productivity of the workers tends to be in line with the income received. If productivity increases, there will be an increase in the amount of income received by workers. The results of this study support the research conducted by Lilik (2011) which explains that productivity has a positive and significant effect on labor income in Labuapi Village. This phenomenon is also in line with the research results of Sawitri (2016), Sinungan (2008) and Widyastuti (2012) which state that increased productivity increases income and increases overall family welfare.

The results of the study prove that the effect of working hours, labor quality and incentives on workers' income can be mediated by productivity. As described above, the number of working hours, labor quality and the provision of incentives have no positive effect on the income of weaving workers. However, after mediated by productivity, the total effects of these variables changed from insignificant to positive on workers' income.

Productivity is able to mediate the effect of working hours on income. This means that the more working hours accompanied by increased productivity, the more income will be earned. This can only happen if the skills of workers and consumer demand are sufficient. The high working hours from skilled workers will certainly increase their output and income. High consumer demand also allows workers to devote more time to production. The results of this study are in line with the research from Dharma and Ardhana (2014) which found that working hours variable has a positive and significant effect on labor productivity. Sawitri (2016), Sinungan (2008) and Widyastuti (2012) also state that increased productivity increases income and increases overall family welfare.

Productivity is able to mediate the effect of labor quality on income. This means that higher labor quality followed by increased productivity will increase income earned. This can only happen if there is an adequate consumer demand and labor quality can be utilized in production activities, and not for other activities such as supervision, administration or coaching of junior workers. High quality labor followed by high productivity will certainly increase income. High and stable consumer demand also allows workers to devote more time into production. The results of this study are in line with the research from Simanjuntak (2001), Suryadi (1994), Sawitri (2016) and Sedarmayanti (2001) which state that labor productivity is influenced by the skills (quality) of the workforce represented by education and work experience. Lilik (2011) also explains that productivity has a positive and significant effect on labor income.

Productivity is able to mediate the effect of incentives on income. This means that providing incentives followed by increased productivity will lead to increased income. This can only happen if there is sufficient consumer demand and there is a significant amount of incentive to spur the performance of weaving workers. Providing half-hearted and inconsistent incentives will actually make workers discouraged and feel betrayed. A high and stable consumer demand also allows workers to achieve production targets and obtain incentives so that their income increases. The results of this study support previous research from Ikram (2007), Maharani (2009) and Rahmanda (2013) who found that financial and non-financial incentives have significant effects on worker productivity. Lilik (2011) explains that productivity has a positive and significant effect on labor income.

The implication of this research is this research can be usefull for weaving workers and policy makers. Working hours, labor quality and incentives do not have positive effects on income, but productivity has a positive effect on the income of weaving workers. Policymakers can make a regulation which in turn can help weaving workers increase their productivity. Productivity is influenced by the skills (quality) of the workforce represented by education and work experience, so that this research can be useful as a basis for training and policies that can be useful for weaving workers and in preserving weaving.

CONCLUSION AND SUGGESTIONS

Based on the results of data analysis and discussion, several conclusion can be drawn from this study as follows working hours, labor quality and incentives have positive effects on the productivity of weaving workers in Klungkung District, Klungkung Regency. Working hours, labor quality, and incentives do not have a direct effects on income, but productivity has a positive effect on the income of weaving workers in Klungkung District, Klungkung Regency. Productivity mediates the effects of working hours, labor quality and incentives on the income of weaving workers in Klungkung District, Klungkung Regency.

Based on the results, discussion and conclusions in this study, there are several suggestions that can be made, the government needs to carry out efforts to develop the skills of weaving workers such as providing training to increase their productivity. The government can also help promote Balinese *endek* fabrics to foreign markets in order to increase market demand as and productivity of weaving workers. Business owners can carry out training / coaching efforts so that worker's skills and productivity increase. Employers also need to formulate an effective incentive scheme that can boost the performance of weaving workers. Business owners can also independently continue to actively carry out promotions through exhibitions, roadshows and online promotions.

The limitation of this study is that this research was only conducted in the Bali region and so the results of this study do not represent the overall results so that further research can expand the research object to cover one regency or province. Other variables related to worker productivity can be included in the model such as socio-demographic factors or product promotion.

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