

## **ANALYSIS OF FACTORS AFFECTING TRADITIONAL ARAK PRODUCTION IN KUBU DISTRICT, KARANGASEM REGENCY**

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### **Abstract**

This study aims to analyze the factors that affect traditional arak production in Kubu District, Karangasem Regency. The variables examined in this study include capital, raw materials, labor, and work experience as production factors that are assumed to have the effect on the level of traditional arak production. This study is important because Kubu District is one of the largest centers of arak producers in Karangasem Regency, yet it still faces diverse production dynamics among business actors. By understanding the variables that play a role in increasing production, this study is expected to serve as a basis for strengthening the local economy based on the community's traditional potential and local wisdom. This study employs a quantitative approach using multiple linear regression analysis to examine the effect of capital, raw materials, labor, and work experience, both simultaneously and partially, on the level of traditional arak production. The research sample consists of 83 arak producers selected using the proportionate stratified random sampling method. The results show that capital, raw materials, labor, and work experience have a significant effect on traditional arak production, both simultaneously and partially. These findings confirm that increasing production capacity can be optimized through the provision of stable raw materials, capital support, labor absorption, and skill improvement through experience.

**Keywords:** Traditional Arak Production, Capital, Raw Materials, Labor, Work Experience.

## INTRODUCTION

Economic development is a multidimensional process aimed at increasing per capita income, improving community welfare, and achieving sustainable structural transformation. In developing countries such as Indonesia, this process is strongly affected by the performance of the agricultural sector as a driver of regional economic growth based on local potential. In Bali Province, the agricultural sector continues to play a strategic role despite the dominance of tourism, particularly in Karangasem Regency, which has a leading subsector in the form of traditional arak production. Traditional arak is a product based on coconut, sugar palm, and lontar sap that possesses not only economic value but also strong socio cultural significance. Kubu District has become the main center of arak production with cross generational community involvement, making arak an economic adaptation strategy amid limited wetland agriculture and formal employment opportunities. Along with legal recognition through Bali Governor Regulation Number 1 of 2020, opportunities for developing arak as a regional leading commodity have become increasingly open, including improved market access and increased product value added. However, traditional arak production still faces productivity challenges due to technological limitations, fluctuations in raw materials, and labor quality. Therefore, a comprehensive understanding of production factors is required to encourage efficiency, increase arak producers' income, and strengthen local community empowerment toward the development of a sustainable and competitive Balinese arak industry.

One of the important factors supporting production is raw materials. The availability of raw materials in sufficient quantity and quality contributes directly to production output. Theoretically, when the marginal production of raw materials is higher than the average production, productivity will increase. Conversely, if marginal production is lower, productivity will decline. This is consistent with the findings of Adnyani and Darsana (2019), which prove that raw materials have a positive and significant effect on production productivity.

In addition, capital also plays a central role in the production process. Mankiw (2003) states that capital includes all facilities used in the production process, including funds for procuring materials, equipment, and paying labor. Insufficient capital can limit production capacity and reduce productivity. Research by Ariyanti et al. (2021) strengthens this view by showing that capital and labor simultaneously have a positive and significant effect on productivity. With adequate capital support, producers are able to manage all aspects of production more optimally, which ultimately increases the resulting output.

Labor is also an important element that supports the continuity and quality of production. Labor not only carries out the production process but also determines the effectiveness of processing raw materials into finished products. Pratama and Purwanti (2021) conclude that labor has a close relationship with productivity and business income. An increase in the quantity and quality of labor has been proven to increase production volume while improving operational efficiency.

In addition to these three factors, work experience also has a significant contribution to productivity. Experience reflects an individual's ability to understand

work processes more deeply, which is obtained through continuous learning and practice. Experienced labor tends to be more efficient in utilizing time and resources and more responsive in dealing with production constraints. Research by Wirayuda and Arka (2024) shows that work experience has a positive and significant effect on farmers' productivity, which is also relevant to the context of traditional arak production. Thus, work experience becomes an important factor that needs to be considered in efforts to increase overall production results.

In this context, this study focuses on analyzing the productivity of traditional arak production in Kubu District, Karangasem Regency, to identify the factors that play a role in production efficiency and to formulate development strategies based on local potential. The results of this study are expected to provide a tangible contribution to regional economic development, cultural preservation, and the strengthening of community based economies rooted in local wisdom. The results are also expected to serve as a basis for formulating strategies to increase productivity based on local potential and traditional wisdom.

## **RESEARCH METHOD**

This study employs a quantitative approach with an associative research design aimed at analyzing the effect of capital, raw materials, labor, and work experience on the level of traditional arak production. The research location is Kubu District, Karangasem Regency, as this area is one of the main centers of arak production in Bali that has developed across generations and constitutes an important part of the community's economic activities. The relatively dry and rocky geographical conditions encourage the community to utilize local resources in the form of coconut and lontar sap as the main raw materials for arak production. The object of this study includes the variables of capital ( $X_1$ ), raw materials ( $X_2$ ), labor ( $X_3$ ), work experience ( $X_4$ ), and traditional arak production ( $Y$ ), which is measured in liters per month (Sugiyono, 2019; Yuliarmi and Marhaeni, 2019; Bali Province Central Bureau of Statistics, 2023).

The population in this study consists of all traditional arak producers in Kubu District, totaling 486 business units. The determination of the sample size was conducted using the Slovin formula with an error rate of 10 percent, resulting in 83 respondents. The sampling technique applied was proportionate stratified random sampling to ensure proportional representation from each village, followed by accidental sampling during data collection in the field. The data used consist of quantitative data in the form of capital, raw materials, labor, work experience, and production volume, as well as qualitative data in the form of supporting information related to the production process. Data sources include primary data obtained through observation and structured interviews with arak producers, as well as secondary data derived from literature, scientific journals, and relevant institutions (Sugiyono, 2022; Office of Cooperatives, Small and Medium Enterprises, and Trade of Karangasem Regency, 2023).

Data analysis techniques include descriptive statistical analysis to describe the characteristics of each research variable and multiple linear regression analysis to examine the effect of capital, raw materials, labor, and work experience on traditional arak production. Prior to hypothesis testing, the regression model was tested using

classical assumption tests, including normality, multicollinearity, and heteroskedasticity tests, to ensure the feasibility of the model. Hypothesis testing was conducted using a simultaneous test (F test) to determine the effect of independent variables collectively, as well as a partial test (t test) to examine the effect of each variable individually on traditional arak production (Sugiyono, 2022; Ghozali, 2021).

## RESULTS AND DISCUSSION

### General Description of the Research Location

Kubu District is located in the eastern part of Karangasem Regency, Bali, within the northern coastal area that is dominated by dry and rocky land, making it less suitable for wetland agriculture. However, the area has substantial potential in the fisheries sector, coastal tourism, and traditional arak production. Most of the population depends on dryland agriculture, livestock farming, and arak distillation using coconut or lontar sap, which has been carried out across generations using traditional techniques that produce a distinctive taste. The arak industry not only serves as the main source of community income but also represents local wisdom that is currently being developed legally as a high economic value product in line with the policies of the Bali Provincial Government. Supported by a population of approximately 41,000 people and its proximity to the Tulamben tourism area, Kubu District has strong human resource and market potential, making it a relevant location for research on traditional arak production and the factors that affect it.

### Respondent Characteristics

#### 1) Respondent Characteristics Based on Gender

**Table 1. Respondent Characteristics Based on Gender**

No.	Gender	Frequency	Percentage (%)
1	Male	49	59
2	Female	34	41
<b>Total</b>		<b>83</b>	<b>100</b>

Source: Primary data (2025)

Table 1 shows the respondent characteristics based on gender. Based on the analysis results, it is known that male respondents total 49 people (59%), while female respondents total 34 people (41%). This indicates that traditional arak production activities in Kubu District are still dominated by men.

This male dominance occurs because the arak production process, especially at the stages of sap tapping and distillation, requires greater physical strength and technical skills that are generally mastered by men. Nevertheless, women also play an important role in this business activity, such as assisting in the filtering, packaging, and marketing of arak products. Thus, it can be concluded that the arak production business in Kubu District is a family based economic activity that involves the active roles of both men and women in supporting business sustainability.

## 2) Respondent Characteristics Based on Age

**Table 2. Respondent Characteristics Based on Age**

No.	Age	Frequency	Percentage (Percent)
1	32-36	12	15
2	37-41	18	22
3	42-46	17	20
4	47-51	17	20
5	52-56	8	10
6	57-61	9	11
7	62-66	2	2
<b>Total</b>		<b>83</b>	<b>100</b>

Source: Primary data (2025)

Based on Table 2, it can be seen that respondents aged 37–41 years constitute the largest group, totaling 18 people (22%), followed by the age groups of 42–46 years and 47–51 years, each totaling 17 people (20%). Meanwhile, the 32–36 year age group consists of 12 people (15%), while the 52–56 year and 57–61 year age groups consist of 8 people (10%) and 9 people (11%), respectively. The oldest age group, namely 62–66 years, consists of only 2 people (2%).

This distribution indicates that most traditional arak business actors in Kubu District are in the productive age range, namely between 37 and 51 years. This condition shows that arak production activities in the area are still dominated by individuals who possess adequate physical ability and work experience. Although the number of business actors from the older age group is relatively small, they play an important role in transmitting traditional skills and knowledge in the arak production process. Thus, the combination of younger and senior generations in this business becomes a strength that supports the sustainability of traditional arak production in Kubu District.

## 3) Respondent Characteristics Based on Business Actor Status

**Table 3. Respondent Characteristics Based on Business Actor Status**

No.	Business Actor Status	Frequency	Percentage (Percent)
1	Business owner	48	58
2	Manager/Person in Charge	30	36
3	Permanent Labor Production	5	6
<b>Total</b>		<b>36</b>	<b>100</b>

Source: Primary data (2025)

Based on Table 3, it can be seen that most respondents are business owners, totaling 48 people (58%). This indicates that the majority of traditional arak business actors in Kubu District carry out their production activities independently and use their own equipment at home. In addition, there are 30 people (36%) who act as managers or persons in charge of production, namely individuals entrusted to regulate the production process, including sap tapping, distillation, and distribution of production results. Meanwhile, only 5 people (6%) have the status of permanent labor, namely those who assist business owners in the daily production process.

From these data, it can be concluded that the structure of traditional arak businesses in Kubu District is still dominated by small scale household based enterprises, in which business owners are directly involved in all stages of production. This pattern reflects the distinctive characteristics of traditional Balinese community businesses that rely on family labor and intergenerational skills to maintain the sustainability of arak production.

### Description of Research Variables

This study aims to analyze the factors that affect traditional arak production in Kubu District, Karangasem Regency. The variables used in this study include capital, raw materials, labor, work experience, and arak production as the dependent variable.

The data used are primary data obtained through interviews and questionnaires administered to 83 traditional arak business actors spread across several villages, namely Baturingggit, Dukuh, Kubu, Sukadana, Tianyar, Tianyar Tengah, and Tulamben. The results of this data collection are described in detail to provide a clearer overview of actual field conditions related to the characteristics and relationships among the variables examined.

#### 1) Capital Variable

**Table 4. Distribution of Respondents by Capital Variable**

No.	Capital (Rupiah)	Frequency	Percentage (Percent)
1	6,800,000 – 7,949,999	11	13
2	7,950,000 – 9,099,999	17	21
3	9,100,000 – 10,249,999	21	25
4	10,250,000 – 11,399,999	14	17
5	11,400,000 – 12,549,999	10	12
6	12,550,000 – 13,699,999	6	7
7	13,700,000 – 14,850,999	4	5
<b>Total</b>		<b>83</b>	<b>100</b>

Source: Primary data (2025)

Based on Table 4, it is known that the business capital used by traditional arak business actors in Kubu District varies between IDR 6,800,000 and IDR 14,850,000 per month. The majority of respondents are in the capital group of IDR 9,100,000–10,249,999, totaling 21 people (25%), followed by the capital group of IDR 7,950,000–9,099,999 at 21%. Meanwhile, the highest capital group, namely IDR 13,700,000–14,850,000, is used by only 4 respondents (5%).

This variation in capital levels indicates differences in production capacity among business actors. Business actors with larger capital generally have greater volumes of raw materials and labor, enabling them to produce arak in larger quantities. In contrast, business actors with smaller capital tend to produce arak on a household scale using simple equipment and limited labor.

#### 2) Raw Material Variable

**Table 5. Distribution of Respondents by Raw Materials Variable**

No.	Raw Materials (Liters)	Frequency	Percentage (Percent)
1	3,050 – 3,834	7	8
2	3,835 – 4,619	19	23
3	4,620 – 5,404	21	25

4	5,405 – 6,189	21	<b>25</b>
5	6,190 – 6,974	7	<b>8</b>
6	6,975 – 7,759	5	<b>6</b>
7	7,760 – 8,544	3	<b>4</b>
<b>Total</b>		<b>83</b>	<b>100</b>

Source: Primary data (2025)

Based on Table 5, it is known that the amount of raw materials used by traditional arak business actors in Kubu District varies between 3,050 and 8,544 liters per month. The largest group is found in the interval of 4,620–6,189 liters, totaling 42 respondents (50%), indicating that most business actors use raw materials in moderate to medium quantities. Meanwhile, the group with the highest raw material usage, namely 7,760–8,544 liters, is used by only 3 respondents (4%).

These results illustrate that most arak producers in Kubu District still rely on raw materials at a household scale with limited production capacity. However, a small proportion of business actors operate with larger raw material capacities, which are generally supported by a greater number of distillation equipment units or managed collectively.

### 3) Labor Variable

**Table 6. Distribution of Respondents by Labor Variable**

No.	Labor (People)	Frequency	Percentage (Percent)
1	2	11	<b>13</b>
2	3	26	<b>31</b>
3	4	24	<b>29</b>
4	5	16	<b>19</b>
5	6	6	<b>7</b>
<b>Total</b>		<b>83</b>	<b>100</b>

Source: Primary data (2025)

Based on Table 6, it can be seen that most traditional arak business actors in Kubu District employ 3–4 workers, totaling 50 respondents (60%). This indicates that most arak production activities are conducted on a small scale household basis, which typically involves family members in the distillation process. A total of 22 respondents (27%) employ 5–6 workers, indicating the presence of business groups with larger production capacity. Meanwhile, only 11 respondents (13%) operate their businesses with 2 workers, which are generally managed by husband and wife pairs or immediate family members only.

These results indicate that labor plays an important role in determining production capacity and efficiency. Arak businesses with a larger number of workers tend to produce higher output, both due to more effective task division and larger production scale.

### 4) Work Experience Variable

**Table 7. Distribution of Respondents by Work Experience Variable**

No.	Work Experience (Years)	Frequency	Percentage (Percent)
1	4 – 6	19	<b>23</b>
2	7 – 9	28	<b>34</b>
3	11 – 12	16	<b>19</b>

4	13 – 15	9	11
5	16 – 18	6	7
6	19 – 21	4	5
7	22 – 24	1	1
<b>Total</b>		<b>83</b>	<b>100</b>

Source: Primary data (2025)

Based on Table 7, it can be seen that most traditional arak business actors in Kubu District have work experience ranging from 7 to 9 years, totaling 28 respondents (34%). This group indicates that many arak producers have been engaged in this business for a considerable period and therefore possess adequate skills in managing the production process. The next group, with work experience of 4–6 years, consists of 19 respondents (23%), while those with work experience of 11–12 years total 16 respondents (19%). Respondents with work experience exceeding 18 years are relatively few, totaling only 11 respondents (13%).

These results show that the majority of arak business actors in Kubu District fall into the category of moderate work experience, reflecting a balance between technical capability and productive motivation. This condition also indicates that traditional arak businesses are still actively managed by productive generations who not only preserve tradition but also have the potential to develop the business toward a more modern and competitive direction.

##### 5) Production Variable

**Table 8. Distribution of Respondents by Production Variable**

No.	Production (Liters)	Frequency	Percentage (Percent)
1	610 – 699	10	12
2	700 – 789	16	19
3	790 – 879	19	23
4	880 – 969	18	21
5	970 – 1,059	8	10
6	1,060 – 1,149	9	11
7	1,150 – 1,239	3	4
<b>Total</b>		<b>83</b>	<b>100</b>

Source: Primary data (2025)

Based on Table 8, it can be seen that the volume of traditional arak production in Kubu District ranges from 610 to 1,239 liters per month. Most respondents have production levels in the range of 790–969 liters, totaling 37 respondents (44%). This indicates that most business actors are still categorized within the medium production level, reflecting household scale production capacity with limited distillation equipment.

Meanwhile, only 3 respondents (4%) have high production levels of 1,150–1,239 liters per month, which generally come from business groups with larger capital and more labor. In contrast, 10 respondents (12%) have production levels below 700 liters per month, which are typically arak producers with simple equipment and limited raw materials.

These results indicate that the level of traditional arak production is strongly affected by the amount of capital, the number of labor, and experience in business management. The greater the production capacity owned, the higher the opportunity for business actors to increase income and expand market reach.

### Data analysis

The data processing in this study began with descriptive statistical analysis, which aims to provide a general overview of the characteristics of the research data. Following this, multiple linear regression analysis was conducted to examine the effect among the variables studied. Prior to performing the regression analysis, the data were first tested through a series of classical assumption tests, including normality test, multicollinearity test, and heteroscedasticity test, to ensure that the data met the validity and reliability requirements for further analysis.

### Descriptive Statistics Results

**Table 9. Descriptive Statistics Test Results**

	N	Minimum	Maximum	Mean	Standard Deviation
Capital (X1)	83	6800000.00	15000000.00	10042168.6747	1970954.97974
Raw Materials (X2)	83	3050.00	8540.00	5255.1807	1180.94976
Labor (X3)	83	2.00	6.00	3.7590	1.13256
Experience Work (X4)	83	4.00	23.00	10.0361	4.32927
Production (Y)	83	610.00	1220.00	869.0361	141.31451
Valid N (listwise)	83				

Source: Primary data (2025)

In this study, descriptive statistical analysis was used to provide a general overview of the characteristics of each research variable based on sample size, minimum value, maximum value, mean, and standard deviation. The sample consisted of 83 respondents, who are traditional arak producers in Kubu District, Karangasem Regency.

The Capital variable (X1) has a minimum value of IDR 6,800,000.00 and a maximum value of IDR 15,000,000.00, with a mean of IDR 10,042,168.67 and a standard deviation of IDR 1,970,954.98. This indicates a considerable variation in capital among arak producers, reflecting differences in business scale.

The Raw Materials variable (X2) has a minimum of 3,050 liters and a maximum of 8,540 liters, with a mean of 5,255.18 liters and a standard deviation of 1,180.95. The average shows that most arak producers use around 5,255 liters of sap per month in the production process.

The Labor variable (X3) ranges from 2 to 6 persons, with an average of 3.76 persons and a standard deviation of 1.13. This indicates that on average, arak producers employ approximately 3 to 4 workers per production cycle, reflecting a small-scale or household-based business.

The Work Experience variable (X4) has a minimum of 4 years and a maximum of 23 years, with a mean of 10.04 years and a standard deviation of 4.33. This shows that most respondents have considerable experience in producing traditional arak, giving them adequate skills in managing the production process.

The Production variable (Y) ranges from 610 to 1,220 liters, with a mean of 869.04 liters and a standard deviation of 141.31. This indicates that on average, arak producers in Kubu District are able to produce approximately 869 liters of arak per month, with relatively small variations in production levels among respondents.

### Multiple Linear Regression Analysis Results

**Table 10. Multiple Linear Regression Analysis Results**

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	164,984	9.104		18,122	0.000
Capital (X1)	6.207E-5	0.000	0.866	30,667	0.000
Raw Materials (X2)	0.007	0.002	0.061	3,626	0.001
Labor (X3)	8,511	2,653	0.068	3,208	0.002
Work Experience (X4)	1,042	.497	0.032	2,095	0.039

Source: Processed primary data, 2025

$$\hat{Y} = 164.984 + 6.207 \times 10^{-5}X_1 + 0.007X_2 + 7.871X_3 + 8.511X_4 + e$$

Description of Variables:

Y = Production (Liters) X1 = Capital (Rupiah)

X2 = Raw Materials (Liter) X3 = Labor (People)

X4 = Work Experience (Years)

The Capital coefficient (X1) of  $6.207 \times 10^{-5}$  indicates that each additional one rupiah of capital will increase production by 0.00006207 liters, assuming other variables remain constant. The significance value of 0.000 ( $< 0.05$ ) shows that capital has a positive and significant effect on traditional arak production. This means that the greater the capital owned, the higher the production level.

The Raw Materials coefficient (X2) of 0.007 indicates that each additional liter of raw materials will increase arak production by 0.007 liters, assuming other variables are constant. The significance value of 0.001 ( $< 0.05$ ) shows that raw materials have a positive and significant effect on production. Adequate availability of raw materials contributes directly to increasing output.

The Labor coefficient (X3) of 8.511 indicates that the addition of one worker will increase arak production by 8.511 liters, assuming other variables remain constant. The significance value of 0.002 ( $< 0.05$ ) shows that labor has a positive and significant effect on production. This implies that more labor involvement leads to more optimal production processes.

The Work Experience coefficient (X4) of 1.042 indicates that each additional year of work experience increases traditional arak production by 1.042 liters, assuming other variables remain constant. The significance value of 0.039 ( $< 0.05$ ) shows that work experience has a positive and significant effect on production. This

demonstrates that more experienced producers tend to be more efficient and productive.

### Classical Assumption Test Results

#### 1) Normality Test

**Table 11. Normality Test Results**

	<i>Unstandardized Residual</i>
<b>N</b>	73
<i>Test Statistic</i>	0,064
<i>Asymp.Sig. (2-tailed)</i>	0.200

Source: Processed primary data, 2025

Based on Table 11, the significance value (Asymp. Sig. 2-tailed) is 0.200. Since the Kolmogorov-Smirnov significance value is greater than 0.05, it can be concluded that the residuals in the regression model are normally distributed.

#### 2) Multicollinearity Test

**Table 12. Multicollinearity Test Results**

<b>Variable</b>	<b>Tolerance</b>	<b>VIP</b>	<b>Information</b>
Capital (X1)	0.143	6,979	Free from multicollinearity
Raw Materials (X2)	0.404	2,472	Free from multicollinearity
Labor (X3)	0.252	3,960	Free from multicollinearity
Work Experience (X4)	0.492	2,031	Free from multicollinearity

Source: Processed primary data, 2025

Based on Table 12, the multicollinearity test results indicate that all independent variables have tolerance values above 0.1 and Variance Inflation Factor (VIF) values below 10. Specifically, Capital (X1) has a tolerance of 0.143 and VIF of 6.979, Raw Materials (X2) has a tolerance of 0.404 and VIF of 2.472, Labor (X3) has a tolerance of 0.252 and VIF of 3.960, and Work Experience (X4) has a tolerance of 0.492 and VIF of 2.031. These results show that the regression model is free from multicollinearity issues.

#### 3) Heteroscedasticity Test

**Table 13. Heteroscedasticity Test Results**

<b>Variables</b>	<b>Prob.</b>	<b>Information</b>
Capital (X1)	0.086	Free of heteroscedasticity
Raw Materials (X2)	0.076	Free of heteroscedasticity
Labor (X3)	0.590	Free of heteroscedasticity
Work Experience (X4)	0.772	Free of heteroscedasticity

Source: Processed primary data, 2025

Based on Table 13, the heteroscedasticity test results show that all independent variables have probability values (Prob.) greater than the significance level of 0.05. Capital (X1) has a probability of 0.086, Raw Materials (X2) 0.076, Labor (X3) 0.590, and Work Experience (X4) 0.772. This indicates that the regression model is free from heteroscedasticity problems, confirming the suitability of the model for further analysis.

### Simultaneous Regression Coefficient Test (F Test) Results

**Table 14. Simultaneous Significance Test of Regression Coefficients (F Test)**

Model	Sum of Squares	df	MeanSquare	F	Sig.
Regression	1622939.037	4	405734.759	2170.024	0.000b
Residual	14583.854	78	186,972		
Total	1637522.892	82			

Source: Processed primary data, 2025

Based on Table 14, the F-value is 2,170.024 with a significance level of 0.000. Since the significance is less than 0.05, the regression model is considered fit and appropriate for analysis. This indicates that the independent variables—Capital (X<sub>1</sub>), Raw Materials (X<sub>2</sub>), Labor (X<sub>3</sub>), and Work Experience (X<sub>4</sub>)—together have a significant effect on the dependent variable (Traditional Arak Production). The combination of these four independent variables explains the variation in production, confirming the validity and relevance of the regression model.

### Partial Regression Coefficient Test (t Test) Results

**Table 15. Partial Significance Test of Regression Coefficients (t Test)**

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	164,984	9.104		18,122	0.000
Capital (X <sub>1</sub> )	6.207E-5	0.000	0.866	30,667	0.000
Raw Materials (X <sub>2</sub> )	0.007	0.002	0.061	3,626	0.001
Labor (X <sub>3</sub> )	8,511	2,653	0.068	3,208	0.002
Work Experience (X <sub>4</sub> )	1,042	.497	0.032	2,095	0.039

Source: Processed primary data, 2025

#### 1) The Effect of Capital on Production

The regression coefficient for Capital (X<sub>1</sub>) is  $6.207 \times 10^{-5}$  with a significance value of 0.000, indicating a positive and significant effect of capital (in rupiah) on traditional arak production (in liters) in Kecamatan Kubu. This means that an increase of Rp1 in capital will increase arak production by 0.00006207 liters, assuming other variables remain constant. Adequate capital allows producers to purchase more raw materials, improve distillation equipment, and hire additional labor, thus increasing overall productivity.

#### 2) The Effect of Raw Materials on Production

The regression coefficient for Raw Materials (X<sub>2</sub>) is 0.007 with a significance value of 0.001, showing a positive and significant effect of raw materials (in liters) on arak production (in liters). This implies that each additional liter of raw material increases production by 0.007 liters, assuming other variables remain constant. This result demonstrates that the availability of raw materials, especially nira as the main ingredient, strongly determines the final production output.

#### 3) The Effect of Labor on Production

The regression coefficient for Labor (X<sub>3</sub>) is 8.511 with a significance value of 0.002, indicating a positive and significant effect of labor (in persons) on traditional

arak production (in liters). This means that adding one worker increases production by 8.511 liters, assuming other variables remain constant. Labor plays a critical role in tapping, distillation, and packaging processes. More labor involvement leads to more efficient and faster production.

#### **4) The Effect of Work Experience on Production**

The regression coefficient for Work Experience ( $X_4$ ) is 1.042 with a significance value of 0.039, indicating a positive and significant effect of work experience (in years) on arak production (in liters). This means that each additional year of experience increases production by 1.042 liters, assuming other variables remain constant. Producers with longer experience have better skills and efficiency in managing the production process, resulting in higher production volume and better product quality.

### **Discussion of Research Results**

The results of this study indicate that the variables of Capital, Raw Materials, Labor, and Work Experience have a positive and significant effect on traditional arak production in Kecamatan Kubu. Based on the multiple linear regression analysis, all independent variables have significance values (Sig.) below 0.05 and t-values greater than the t-table, indicating that each variable has a statistically meaningful relationship with the increase in arak production.

Among the variables studied, Capital ( $X_1$ ) has the most dominant effect on production. This shows that the greater the capital owned by the business actor, the higher the production capacity that can be achieved. This finding aligns with the theory proposed by Sukirno (2016), which states that capital is one of the main factors of production that plays a crucial role in expanding business scale and increasing production efficiency. Adequate capital enables business actors to purchase more raw materials, upgrade distillation equipment, and expand business capacity.

Furthermore, the Raw Materials variable ( $X_2$ ) also has a positive and significant effect on production. The availability of raw materials, particularly nira, is crucial in determining the volume of arak that can be produced. This is consistent with Sadono (2017), who explains that raw materials are the primary input in production activities; without adequate raw material availability, the production process cannot run optimally. In the context of traditional arak enterprises in Kecamatan Kubu, the assured supply of nira from coconut or lontar farmers is a key factor in business sustainability.

The Labor variable ( $X_3$ ) also has a positive and significant effect on arak production. Labor plays a direct role in every stage of production, from tapping nira to distillation and packaging the final product. This result supports Hasibuan's theory (2019), which states that labor productivity is directly correlated with production output. The more labor involved, the higher the production capacity, especially in household-scale businesses that still rely on manual labor.

In addition, the Work Experience variable ( $X_4$ ) is also proven to have a positive and significant effect on traditional arak production. Business actors with longer experience possess better technical skills and efficiency in the distillation process as well as in raw material management. This finding aligns with Mankiw (2018), who

states that work experience can enhance an individual's productivity through learning and habituation in performing tasks.

## CONCLUSION

Based on the data analysis and discussion conducted in the previous chapters, the following conclusions can be drawn:

- 1) Capital, Raw Materials, Labor, and Work Experience simultaneously have a significant effect on traditional arak production in Kecamatan Kubu.
- 2) Capital, Raw Materials, Labor, and Work Experience partially have a positive and significant effect on traditional arak production in Kecamatan Kubu.

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