

## **Analysis of Value Added and Contribution of Broom Craft Business to Household Income (Case Study of Kajongan Village, Purbalingga Regency)**

By

Sultan Ahmad Ivana Jasetra\*), Neni Widayaningsih  
Faculty of Economics and Business, Jenderal Soedirman University  
\*)Corresponding Author: ivanasultan99@gmail.com

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### **ABSTRACT**

This research was conducted in Kajongan Village, Purbalingga Regency. This study aims to analyze the value added and contribution of the broom craft business to the household income of entrepreneurs in a period of one year. The types of brooms that were studied are *Gelagah* brooms, *Ijuk* brooms, and hamada (brooms made from wheat plants). Respondents in this study amounted to 34 broom entrepreneurs. Data collection techniques were carried out through questionnaires and interviews. The analytical method used is the hayami method value added analysis and income contribution analysis. This study is a development from previous research that uses the Hayami method to analyze the value added from craft products. Based on the results of the study, it can be concluded that the highest value added ratio is produced by the production of hamada brooms. Then the second highest is produced from the production of *Ijuk* brooms. The production of *Gelagah* brooms contributes the lowest value added and value added ratio. Meanwhile, the largest to the smallest income contribution was generated from the production of hamada brooms, *Gelagah* brooms, and *Ijuk* brooms, respectively. The implication is that entrepreneurs need to choose the best raw materials and provide innovations to improve product quality so that the value added can be increased. In addition, entrepreneurs need to expand the market so that the number of sales can be increased. In the end, this will have an impact on increasing the household income of entrepreneurs.

**Keywords:** Value Added Craft, Broom Craft, Income Contribution

### **ABSTRAK**

*Penelitian ini dilakukan di Desa Kajongan, Kabupaten Purbalingga. Penelitian ini bertujuan menganalisis besaran nilai tambah dan kontribusi usaha kerajinan sapu terhadap pendapatan rumah tangga pengusaha dalam periode waktu satu tahun. Jenis kerajinan sapu yang diteliti yaitu sapu Gelagah, sapu Ijuk, dan hamada (sapu berbahan tanaman gandum). Responden dalam penelitian ini berjumlah 34 orang pengusaha sapu. Teknik pengumpulan data dilakukan melalui kuesioner dan wawancara. Metode analisis yang digunakan adalah analisis nilai tambah metode hayami dan analisis kontribusi pendapatan. Penelitian ini merupakan pengembangan dari penelitian-penelitian terdahulu yang menggunakan metode Hayami untuk menganalisis nilai tambah dari produk kerajinan. Berdasarkan hasil penelitian dapat disimpulkan bahwa nilai tambah dan rasio nilai tambah tertinggi dihasilkan produksi sapu hamada. Kemudian tertinggi kedua dihasilkan dari produksi sapu Ijuk. Produksi sapu Gelagah menyumbang nilai tambah dan rasio nilai tambah terendah. Sedangkan kontribusi pendapatan terbesar hingga terkecil secara berturut-turut dihasilkan dari produksi sapu hamada, sapu*

*Gelagah, dan sapu ijuk. Implikasinya adalah pengusaha perlu memilih bahan baku dengan kualitas terbaik dan melakukan inovasi untuk meningkatkan kualitas produksi sehingga nilai tambah dapat ditingkatkan. Selain itu pengusaha perlu memperluas pasar agar jumlah penjualan meningkat. pada akhirnya hal tersebut dapat berdampak pada peningkatan pendapatan rumah tangga pengusaha.*

**Kata kunci:** Nilai Tambah Kerajinan, Kerajinan Sapu, Kontribusi Pendapatan

## INTRODUCTION

The existence of Micro, Small, Medium Enterprises (MSMEs) in Indonesia has an increasingly important role in the process of national economic development. The existence of MSMEs is considered a source of employment and the main driver in regional economic development in rural areas. As the largest business actor, then having a contribution to high employment, the formation of gross domestic product, and the creation of fixed capital or investment shows that the role of MSMEs in the Indonesian economy is very important (Ministry of Cooperatives and MSMEs, 2015).

According to data from the Central Statistics Agency (BPS) in 2016, there were a total of 26,263,649 units of non-agricultural MSMEs. Non-agriculture MSMEs play a big role in the Indonesian economy (Indrajoto, 2018). The sector provides business fields so that it can absorb labor (Kapantow, 2017). The following is data on the distribution of non-agricultural SMEs in Indonesia in 2016:

Table 1. Distribution of Non-Agricultural SMEs in 2016

No	Line of Bussines	Total (Unit)	Distribution (Percent)
1	provision of accommodation, foods and drinks	4,446,436	16.93
2	Wholesale and retail trade	12,152,190	46.27
3	Processing industry	4,372,898	16.65
4	Freight and warehousing	1,302,677	4.96
5	Other business fields	3,989,448	15.19
Total		26,263,649	100.00

Source: BPS, 2016

Table 1 is BPS data on the 2016 economic census related to the distribution of non-agricultural SMEs. Based on the table above, the distribution of wholesale and retail trade is the business sector with the largest distribution level, followed by the business of providing accommodation and providing food and drink. Then the business sector with the third largest distribution is the processing industry, which is one of the business sectors that contributes quite a lot to state revenue.

The processing industry is one of the business fields with extraordinary potential because it can generate value added. According to BPS (2020), the processing industry is an economic activity in the form of changing a basic good mechanically, chemically, or by hand (non-machine) so that it becomes finished/semi-finished goods and/or goods that have less value into higher value, and are closer to the end user. In Indonesia, the wood and woven craft sector also have a reasonably large distribution, namely 19.9 percent of all business units (BPS, 2016).

In Central Java Province, the processing industry has the largest contribution to the regional economy with a value of IDR 308.82 trillion or 34.42% of the total GRDP (BPS, 2018). The contribution of the manufacturing sector has made Central Java's economic growth surpass the national economic growth. A large number of processing industries show that private investment in Central Java is quite good. According to Jamaliah (2015), the number of private investments will have a positive impact in the form of an increase in the number of outputs and employment opportunities. The following is the distribution data of the processing industry and the number of workers in the processing industry in Central Java:

Table 2. Distribution of Processing Industries in Central Java

No	Regency/City	Unit	Labor
1	Kebumen	66,552	135,307
2	Banyumas	63,118	133,183
3	Purbalingga	55,667	142,797
4	Jepara	54,948	167,516
5	Cilacap	54,648	115,586
6	Kabupaten/Others City	726,398	2,447,728
Total		1,021,331	3,142,117

Source: BPS, 2016

Table 2 is data on five districts/cities with the highest number of processing industries in Central Java. Although Kebumen is the district with the most significant number of processing industries in Central Java, Jepara Regency absorbs the most labor from the processing industry.

Purbalingga Regency is one of the regencies in Central Java with many potential industries. This district is directly adjacent to Banyumas Regency, Pemalang Regency, and Banjarnegara Regency (BPS, 2017). According to the BPS report (2020), the population of Purbalingga reaches 998,561 people. Purbalingga is famous for its worldwide industry, namely the wig and exhaust industry. The processing industry, which is also commonly found in Purbalingga is the handicraft industry. The famous handicraft industry is the broom industry in Kajongan Village, Bojongsari District.

The broom craft business in Kajongan Village has existed since 1969 by producing various products, and the most famous is the Hamada broom which is exported to Japan. The number of broom craft entrepreneurs in Kajongan Village is 37 entrepreneurs (Kajongan Village Government, 2020). An entrepreneur is a person who runs a broom craft production business by empowering the surrounding community as labor. At the same time, the workforce in this case is the broom craftsmen.

According to Amalia (2020), the amount of production in the broom industry of Kajongan Village from 2017-2019 has continuously increased. Even in 2019, the total production of brooms reached 84,000 units. The resulting broom products are then exported to several countries. The country that is subscribed to the export of products from the broom craft center in Kajongan Village is Japan. As for the domestic market, demand comes from various big cities such as Bandung, Bali, Yogyakarta, and other cities.

Broom entrepreneurs in Kajongan Village use reed grass, wheat stalks (hamada broom), and palm fiber to become brooms that have attractiveness and generate value added. Like other processing industries, the broom craft industry in Kajongan Village also generates value added. The value added is obtained from the use of materials such as reed grass, wheat stems, and palm fibers which were originally less valuable and less useful. This change in value will later become income for entrepreneurs and broom craft workers in Kajongan Village. The existence of a broom industry in Kajongan Village has a great influence. This is because this broom craft is known as a source of household income, both for people who are entrepreneurs of broom crafts, workers, and other related parties. However, many of the broom entrepreneurs do not know the amount of value added and its contribution to their household income. Therefore, this study aims to analyze the value added and contribution of the broom craft business made from reed, palm fiber, and wheat plants to the household income of broom entrepreneurs.

## METHODS

This research is included in the type of quantitative research because it uses primary data regarding the value added, profit, and contribution to income. According to the Kajongan Village Government (2020), the broom craft entrepreneurs in Kajongan Village, Purbalingga Regency (2020) only number 37 people, so they do not need samples because the numbers are not too many. The respondents who will be studied are 34 people because there are three entrepreneurs who are no longer actively running a broom production business. Data was collected through questionnaires and interviews.

The analytical method used in this research is the value added analysis of the hayami method and the income contribution analysis. Both calculations are based on the average value of each type of broom, and all respondents based on the type of broom are produced within a period of one year. The following is a calculation framework in finding the value added of the hayami method according to Sudyono (2004:153)

Table 3. Framework for Calculation of Value Added by the Hayami Method (For the Business of Hamada Broom, *Gelagah* Broom, and *Ijuk* Broom)

No	Output, Input, Price	Formula
1	Production output (units/period)	A
2	Raw material (kg/period)	B
3	Labor (HOK/period)	C
4	Conversion factor	A/B=M
5	Labor coefficient	C/B=N
6	Product Price (Rp/unit)	D
7	The average wage (Rp)	E
Income		
8	Price of raw materials (Rp/kg)	F
9	Price of additional materials (Rp)	G
10	Product value (Rp/kg)	K=MxD
11	a. Value added (Rp/kg)	L=K-F-G
	b. Value added ratio (%)	H=(L/K)
12	a. Direct labor reward (Rp/kg)	P=NxE
	b. Direct labor reward ratio (%)	Q=(P/L)
13	a. Profit (Rp/kg)	R=L-P
	b. Profit rate (%)	I=(R/L)
Remuneration for factors of production		
14	Margin (Rp/kg)	S=K-F
	a. Direct labor income (%)	T=(P/S)
	b. Other input contribution (%)	U=(G/S)
	c. Entrepreneur's profit (%)	V=(R/S)

Source: Sudyono (2004:153)

In calculating the value added, the unit used for raw materials is kilograms. At the same time, the unit for the product is the unit. The data obtained is the average data of each type of broom and all respondents based on the products they produce. Then to analyze the contribution of income from the broom craft business using the following formula:

$$\text{Contribution} = \frac{\text{Business Income}}{\text{Total Income (Households Income)}} \times 100\%$$

Based on the income contribution formula, before it can be calculated, it is necessary to have information on business income and non-business income from entrepreneurs. Operating income is obtained from the reduction between total revenue and costs in the production of brooms. The data obtained is the average data of each type of broom and all respondents based on the products they produce.

## RESULTS AND DISCUSSIONS

Purbalingga is known for its industrial products, namely Sawangan Village which many exhaust manufacturers meet. Then Karangbanjar Village which produces hair product such as wigs and false eyelashes. In addition, there is Kajongan Village which is famous as a broom production center in Purbalingga Regency. As is the case with the production from Sawangan and Karangbanjar Villages, Broom products in Kajongan Village have also penetrated foreign markets. Many broom products are sent to Japan and Korea. So that it is interesting to research, and Kajongan Village is the location of this research.

Kajongan Village is a village in Bojongsari District, Purbalingga Regency, which is about 4 kilometers from the capital city of Purbalingga Regency. Kajongan Village is bordered by Bojongsari Village to the north, Karangbanjar Village to the north, Brobot Village to the south, and Gembong Village to the east. It covers an area of 197 hectares consisting of settlements, agricultural land, and others.

According to data from the Kajongan Village government in 2019, the total population of Kajongan Village is 5,642 people, consisting of 2,835 males and 2,807 females. A total of 1,756 inhabitants of Kajongan Village are classified as poor people. The majority of the population works in the agricultural sector, which includes farmers, farm laborers, ranchers, and fisheries. The number of people working in this sector is 816 people. Then there are 503 people who work as private employees, 129 people as construction workers, and 124 people as craftsmen. The majority of these craftsmen produce cleaning tools, especially brooms. Respondents in this study were broom entrepreneurs made from reeds, fibers, and wheat in Kajongan Village, Purbalingga Regency. The following is the grouping of respondents based on age:

Table 4. Characteristics of Respondents by Age

No	Age (year)	Total (People)	Percentage (Percent)
1	28-35	5	15
2	36-43	15	44
3	44-51	7	21
4	52-59	1	3
5	60-67	2	6
6	68-75	3	9
7	76-83	1	3
Total		34	100

Source: Primary data (processed), 2021

Based on the table above, the majority of respondents are in the 36-43 age group. Although this age group is classified as productive age, it is considered a young age. The youngest respondent is 28 years old, while the oldest is 81 years old. Meanwhile, if the respondents are grouped based on education level, it is as follows:

Table 5. Characteristics of Respondents Based on Education Level

Education Level	Number (People)	Presentation (Percent)
Elementary School	15	44
Junior High School	12	35
Senior High School	7	21
Total	34	100

Sumber: Primary data (processed), 2021

Based on Table 5 above, respondents are dominated by entrepreneurs with the last elementary school education level. At the same time, the level of Senior high school education is the least. There is not a single broom entrepreneur with a bachelor's last education level. It means the level of education is relatively low.

**Hayami Method Value Added Analysis**Table 6. Results of Analysis of Value Added Methods of Hayami *Gelagah*, *Ijuk*, and Hamada Brooms

No	Output, Input, Price	<i>Gelagah</i>	<i>Ijuk</i>	Hamada
1	Production output (units/period)	47,284.00	12,570.20	29,900.00
2	Raw material (kg/period)	7,880.70	2,514.00	5,840.00
3	Labor (HOK/period)	1,699.80	906.20	4,966.50
4	Conversion factor	6.00	5.00	5.00
5	Labor coefficient	0.22	0.36	0.85
6	Product Price (Rp/unit)	11,412.00	13,400.00	51,667.00
7	The average wage (Rp)	35,765.00	30,900.00	43,544.00
Income				
8	Price of raw materials (Rp/kg)	22,529.00	10,240.00	26,000.00
9	Price of additional materials (Rp)	25,650.00	32,009.50	48,829.40
10	Product value (Rp/kg)	68,472.00	67,000.00	258,335.00
11	a. Value added (Rp/kg)	20,293.00	24,750.50	183,505.60
	b. Value added ratio (%)	29.60	36.90	71.03
12	a. Direct labor reward (Rp/kg)	7,868.30	11,124.00	29,395.80
	b. Direct labor reward ratio (%)	38.80	44.90	16.00
13	a. Profit (Rp/kg)	12,424.70	13,626.50	154,109.80
	b. Profit rate (%)	61.20	55.10	84.00
Remuneration for factors of production				
14	Margin (Rp/kg)	45,943.00	56,760.00	232,335.00
	a. Direct labor income (%)	17.10	19.60	12.70
	b. Other input contribution (%)	55.80	56.39	21.00
	c. Entrepreneur's profit (%)	27.00	24.00	66.30

Source: Primary data (processed), 2021

The value added of 1 kg of broom raw materials in the form of reeds after going through the production process becomes six units of brooms, amounting to Rp20,293.00. At the same time, the value added ratio is 29.60%. The profit obtained by the *Gelagah* broom entrepreneur for every 1 kg of raw material when it has gone through the production process into a broom is Rp. 12,424.70 with a profit rate of 61.20%. The value added of broom raw materials in the form of 1 kg of palm fiber after going through the production process becomes five units of palm *Ijuk* broom, which is Rp. 24,750.50. The profit level obtained by the entrepreneur is Rp. 13,626.50 or 55.10%. The profit level obtained by the entrepreneur is Rp. 13,626.50 or 55.10%. The value added of 1 kg of raw material for hamada brooms in the form of wheat plants after going through the production process becomes five units of brooms, which is Rp. 183,505.60. At the same time, the value added ratio for wheat after being produced into brooms is 71.03%. Then the profit obtained by the Hamada broom entrepreneur from every 1 kg of wheat is Rp. 154,109.80 with a profit rate of 84%.

**Revenue Contribution Analysis**

Income contribution calculation requires data on business income, non-business income, and total income from the broom entrepreneur who in this case is the respondent. Operating income is obtained from total revenue minus production costs. Meanwhile, total income is the sum of operating income and non-business income.

The following is the calculation of the contribution of the *Gelagah* broom craft business income to the entrepreneur's household income in one year:

$$\begin{aligned} \text{Contribution} &= \frac{94,790,161.5}{99,219,573.3} \times 100\% \\ &= 95.53 \% \end{aligned}$$

The calculation above shows that the operating income from producing *Gelagah* brooms is Rp. 94,790,161.5. Then non-business income amounted to Rp4,429,411.8. Meanwhile, the total income was Rp.99,219,573.3. So when calculated based on the formula above, the value is 95.53%. This means that 95.53% of the total income of *Gelagah* broom entrepreneurs in one year comes from the *Gelagah* broom production business they run.

The following is the calculation of the contribution of the *Ijuk* broom craft business income to the entrepreneur's household income in one year:

$$\begin{aligned} \text{Contribution} &= \frac{32,421,735.4}{35,932,935.4} \times 100\% \\ &= 90.23 \% \end{aligned}$$

The calculation above shows that the operating income from producing *Ijuk* brooms is Rp. 32,421,735.4. Then the non-business income of Rp3,511,200. Meanwhile, the total income was Rp. 35,932,935.4. So when calculated based on the formula above, the value is 90.23%. This means that 90.23% of the total income of *Ijuk* broom entrepreneurs in one year comes from the *Ijuk* broom production business they run.

The following is the calculation of the contribution of the Hamada broom craft business income to the entrepreneur's household income in one year:

$$\begin{aligned} \text{Contribution} &= \frac{904,814,386.1}{911,216,386.1} \times 100\% \\ &= 99.30 \% \end{aligned}$$

From the calculation above, it is known that the operating income from producing Hamada brooms is Rp. 904,816,386.1. Then non-business income of Rp. 6,400,000. Meanwhile, the total income was Rp.911,216,386.1. So when calculated based on the formula above, the value is 99.30%. This means that 99.30% of the total income of Hamada broom entrepreneurs in one year comes from the Hamada Broom production business they run.

Hamada brooms provide the largest revenue contribution compared to the other two types of brooms. The ratio of the value added generated from hamada brooms is the highest at 71.30%. Other types of brooms only have a ratio of 29.64% (*Gelagah* brooms) and 36.94% (*Ijuk* brooms). This means that for every Rp. 100 the value of the Hamada broom product produces the value added of Rp. 71.03 while the reed broom is Rp. 29.64 and Rp. 36.94 for the palm fiber broom. In addition, the Hamada broom has a wider market. This type of broom has covered foreign markets.

The results of this study are in line with research from Mesiyani & Suprehatin (2020), which shows that there is value added in the production process of handicraft products. The value added is obtained from the value of the product minus the price of raw materials and the price of additional raw materials. In addition, this study is also in line with research from Giyanto (2014), Wulandari *et al.* (2015), Sianturi and Tyas (2018), Aprianingsih and Kurniawan (2019), Erfani *et al.* (2020), Khasanah and Asytuti (2020), Sutrisna (2021) which concludes that there is value added and a large contribution to household income from the production of a craft. Furthermore, research from Amalia (2020) is also in line with this research which shows that the broom craft business in Kajongan Village has a major contribution to the economy of the Kajongan Village community. However, the focus of this research is more on the contribution to the household income of broom entrepreneurs.

## CONCLUSIONS

Based on the results of the analysis in this study which aims to analyze the value added and contribution of the broom craft business to the household income of entrepreneurs in Kajongan Village, it can be concluded as follows:

- (1) In this study, the broom product that has the greatest value added is the hamada broom. The broom is made from the wheat plant as the main raw material. Then the broom product that has the second largest value added is the *Ijuk* broom. Meanwhile, the broom product that has the least value added is the *Gelagah* broom.
- (2) The biggest contribution of the broom craft business to household income is when it produces hamada brooms. Then the second largest contribution came from the business of producing *Gelagah* brooms. While the smallest contribution when compared to the other two types of brooms comes from the business of producing *Ijuk* brooms. However, the broom craft business in Kajongan Village is the main source of income for almost all respondents who are broom entrepreneurs. Even the business of the three types of brooms contributes greatly to household income because the contribution is more than 90%.

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