

Income Analysis Of The Tofu Industry In Sugihwaras Village, Wonomulyo Sub-District

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ABSTRACT

This study aims to analyze the income levels and the influencing factors of tofu enterprises in Sugihwaras Village, Wonomulyo Sub-district, Polewali Mandar Regency. The tofu industry represents a form of household-scale enterprise that continues to thrive amid the dynamic rural economy. This research employs a descriptive quantitative approach, utilizing data collection techniques such as observation, questionnaires, and documentation from 15 tofu business owners. The results show that the average net income of tofu entrepreneurs is IDR 9,149,655 per month, with a total production cost of IDR 140,220,345 and total revenue of IDR 149,370,000. The main factors influencing income include fluctuations in the price of raw materials (soybeans), efficient use of family labor, and traditional marketing strategies. Despite its modest operations, this industry significantly contributes to household economies and has potential for development through the application of simple technologies and managerial strengthening. This study is expected to serve as a basis for policy formulation aimed at strengthening local food MSMEs in rural areas..

INTRODUCTION

The tofu industry, as part of the micro, small, and medium enterprises (MSMEs) sector, plays a vital role in supporting the people's economy, especially in rural areas. This business not only provides nutritious and affordable food but also absorbs local labor and supports household income. Amidst the volatility of raw material prices and market challenges, tofu entrepreneurs continue to survive through hard work and perseverance passed down through generations.

According to the Ministry of Cooperatives and MSMEs (2021), MSMEs contribute over 61% to Indonesia's Gross Domestic Product (GDP) and employ up to 97% of the national workforce. At the local level, tofu processing businesses in villages like Sugihwaras serve as an economic pillar that cannot be overlooked. This is in line with Wahyudi et al. (2023), who stated that “household-scale tofu processing enterprises have proven resilient due to flexible costs and direct distribution models to traditional markets.”

Tofu, as a soybean-based processed product, holds high economic and nutritional value. Its consumption has become a household habit among Indonesians across social classes. According to Melaniya (2021), tofu contains a relatively high amount of plant-based protein, making it a healthy and affordable food alternative for the community. On the other hand, the tofu industry is vulnerable to raw material price fluctuations, particularly soybeans, which are largely imported.

Research by Hartono (2021) indicated that “a 10% increase in soybean prices can reduce tofu producers’ profit margins by up to 15%,” especially for micro businesses with limited capital. In Sugihwaras Village, Wonomulyo Sub-district, Polewali Mandar Regency, the tofu industry serves as a

primary economic activity for many households. This business has been passed down through generations; however, academic documentation regarding income levels and the challenges faced remains scarce.

Interestingly, despite being in a rural area, tofu producers in Sugihwaras demonstrate a high level of business resilience. They manage to produce tofu consistently despite rising raw material prices, limited equipment, and competition from outside the region. This condition reflects the strength of microeconomies rooted in the hard work and adaptability of rural communities. Sugihwaras Village is one of the tofu production centers in Wonomulyo Sub-district, West Sulawesi. The tofu industry here has grown organically through generational practices and serves as a primary source of livelihood for many families. Although categorized as a home industry, its economic activity has a significant impact on the local economic cycle.

Data from the Central Bureau of Statistics (BPS) of Polewali Mandar (2023) show that small-scale processing industries remain the main contributors to household income structures in rural areas. This demonstrates that tofu processing industries not only serve as food producers but also act as resilient microeconomic drivers.

However, the sustainability of the tofu business in Sugihwaras faces various complex challenges, including high soybean price fluctuations, limited access to modern production equipment, and weak marketing networks. A study by Wahyuni (2022) emphasized that “MSMEs in rural areas tend to be resilient but are vulnerable in terms of access to innovation and business financing.” This situation accurately reflects the conditions faced by tofu entrepreneurs in Sugihwaras.

Other important factors affecting income include business scale, labor efficiency, and basic management skills. Field findings show that most tofu entrepreneurs in the village have a basic educational background and operate manually with help from family members. This character reflects both the strength and the limitations in developing business productivity.

Therefore, a comprehensive study is needed to measure the income levels of tofu industry players and identify the variables that influence them. This research not only provides quantitative data but also offers insights into the real challenges faced by small-scale entrepreneurs in sustaining their businesses in an increasingly dynamic competitive environment.

It is hoped that the findings of this research will provide a deeper understanding of the potentials and barriers faced by tofu business operators. The results may serve as a reference for policymakers in designing targeted intervention programs and inspire other entrepreneurs to develop local food industries based on domestic resources.

MSMEs are a sector with a high capacity for labor absorption and serve as the backbone of the national economy. According to data from the Ministry of Cooperatives and MSMEs of the Republic of Indonesia (2021), MSMEs contribute more than 61% to the country’s Gross Domestic Product (GDP) and employ over 117 million people, accounting for approximately 97% of the total national workforce. At the local level, MSMEs play a significant role in creating employment opportunities, increasing community income, and advancing village economies in a sustainable and independent manner.

Wahyuni (2022) noted that “MSMEs in rural areas tend to have high flexibility but often face challenges in accessing technology, capital, and broader markets.” Therefore, strengthening business capacity and developing local innovations are necessary for MSMEs to survive amidst economic pressures and modern transformations.

The tofu industry belongs to the category of household-based food processing industries that rely on soybeans. The production process is usually manual or semi-manual, involving simple technology and family labor. According to Lestari & Sari (2021), the tofu industry operates on a daily production cycle, starting from soaking soybeans to molding tofu. This indicates that despite its small scale, the industry requires persistence, labor efficiency, and skilled production techniques.

Tofu is known as an affordable, nutritious food accessible to all levels of society. As a source of plant-based protein, tofu also supports a healthy dietary pattern among Indonesians (Melaniya, 2021).

However, in practice, tofu producers often face difficulties in maintaining consistent quality and production output due to the availability of raw materials and processing techniques.

The price of soybeans the main raw material tends to fluctuate, as Indonesia is still highly dependent on imports. According to BPS data (2022), more than 80% of the national soybean supply is imported. An increase in soybean prices directly impacts production costs and reduces the income of business operators. Hartono (2021) stated that “a 10% increase in soybean prices can reduce profit margins in the tofu industry by up to 15%.”

Most tofu producers in rural areas still rely on traditional equipment, which lacks efficiency and capacity. This affects both the quality and quantity of output. Arif et al. (2025) emphasized that “inadequate equipment can prolong production time, increase labor costs, and reduce product competitiveness.”

Tofu businesses face competition from products originating outside the region, which often come with more attractive packaging and longer shelf life. A lack of marketing strategies is a common weakness among MSMEs. Nurhayati (2020) highlighted that “traditional business operators need to adopt digital approaches to expand their market reach.”

In simple terms, business income is the difference between total revenue and total costs incurred during the production process. Sukirno (2021) stated:

"Net income (π) can be calculated using the formula:

$\pi = TR - TC$, where TR is Total Revenue and TC is Total Cost."

In MSME-based research, income analysis is crucial for measuring business efficiency and viability. A study by Yuliani & Firmansyah (2023) suggested that “income analysis helps business owners in designing efficient production strategies and determining optimal selling prices.”

Based on the literature above, tofu business income is influenced by several factors:

- Cost of raw materials (soybean prices),
- Labor and energy costs,
- Production scale and equipment efficiency,
- Marketing strategies,
- Availability of skilled human resources.

This study aims to analyze the relationship between these factors and the income of tofu producers in Sugihwaras Village using a descriptive quantitative approach.

RESEARCH METHOD

1. Type and Approach of the Study

This study employs a **descriptive quantitative approach**, which aims to systematically and accurately describe facts, characteristics, and relationships among the variables studied. The descriptive quantitative method is selected to present numerical data regarding income, costs, and the factors affecting tofu businesses in a measurable way (Waruwu et al., 2025).

This research does not utilize inferential analysis but instead focuses on describing and calculating the economic aspects of tofu businesses in the local context, specifically in Sugihwaras Village, Wonomulyo Sub-district.

2. Research Location and Duration

The research was purposefully conducted in Sugihwaras Village, Wonomulyo Sub-district, Polewali Mandar Regency, due to its significant concentration of household-scale tofu producers. These businesses have been inherited across generations and are among the dominant economic activities in the area.

The research was carried out over a three-month period, from May to July 2025. This period included primary data collection through field observation, questionnaire distribution, and documentation.

3. Population and Sample

The population in this study consisted of all tofu business operators in Sugihwaras Village, totaling 15 business units. Given the relatively small and homogeneous population, a **census method** (total sampling) was used, in which the entire population was treated as the research sample (Waruwu et al., 2025).

4. Types and Sources of Data

The data used in this study consisted of:

- a. **Primary Data:** Obtained directly from business owners through questionnaires, interviews, and observations of tofu production activities.
- b. **Secondary Data:** Sourced from relevant institutions such as the Central Statistics Agency (BPS), sub-district reports, scientific journals, and other relevant literature.

5. Data Collection Techniques

a. Observation

Direct observations were conducted at the business locations, with the researcher acting as a passive observer. The researcher did not participate in business activities but recorded the production process, tools used, and social interactions within the work environment (Hikmah et al., 2024).

b. Questionnaire

The questionnaire consisted of both closed- and open-ended questions covering variables such as costs, production, income, and influencing factors. The questionnaire was distributed to all tofu business respondents.

c. Documentation

Documentation was used to collect supporting data such as photos of production activities, equipment, and business financial records. This method also served to strengthen field findings and analysis (Revilda, 2025).

6. Data Analysis Techniques

a. Income Analysis

The main analysis in this research involves calculating the **net income** earned by tofu business operators. The calculation uses the following formula:

$$\pi = TR - TC$$

Where:

- π = Net Income (in IDR)
- TR = Total Revenue (in IDR)
- TC = Total Production Cost (in IDR)

Total costs consist of:

- **Variable Costs:** raw materials (soybeans), labor, energy, packaging
- **Fixed Costs:** depreciation of equipment and tools

This analysis aims to determine the amount of income received by the business after deducting all operational costs.

b. Descriptive Quantitative Analysis

Collected numerical data were presented in the form of tables, diagrams, and averages, along with narrative explanations. The main goal was to provide an objective picture of the tofu business condition, including the factors affecting income such as production scale, labor availability, and marketing.

RESULTS AND DISCUSSION

RESULTS

Respondent Characteristics

A total of 15 tofu business operators in Sugihwaras Village participated as research respondents. The majority were male, with education levels ranging from elementary to secondary school. The duration of business operation varied between 7 and 25 years, indicating that tofu production has long served as a main and intergenerational livelihood.

Table 1. Characteristics of Tofu Business Respondents in Sugihwaras Village

Category	Number of Respondents	Percentage (%)
Gender		
- Male	10	66.7
- Female	5	33.3
Education		
- Elementary	6	40.0
- Junior High	5	33.3
- Senior High	4	26.7
Years in Business		
- 7–15 years	9	60.0
- 16–25 years	6	40.0

Source: Processed primary data, 2025

Cost Structure of Production

Production costs consist of two types:

- **Variable costs:** including soybeans, packaging plastic, labor, electricity, and firewood, amounting to IDR 135,511,749 per month.
- **Fixed costs:** derived from depreciation of equipment such as grinding machines, pans, basins, filters, tofu molds, and others, totaling IDR 4,708,596 per month.

Revenue and Net Income

With a monthly tofu production of 9,958 kg and a selling price of IDR 15,000 per kg, total revenue reached IDR 149,370,000. After subtracting the total cost (both variable and fixed) of IDR 140,220,345, the **net income** earned was **IDR 9,149,655 per month**.

Factors Influencing Income

- **Raw Material Prices**

Soybean price is the largest cost component. Price fluctuations lead entrepreneurs to adjust tofu size or reduce production volume to avoid losses. This finding supports Hartono (2021), who stated that soybean price fluctuations significantly affect profit margins.

- **Labor**

Each business employed between 2–7 workers. Those with more workers tended to have higher production volumes. Family labor was the main workforce, reducing costs and strengthening business resilience.

- **Marketing**

Most respondents marketed their tofu directly to traditional markets and local stalls. Businesses with wider distribution networks enjoyed more stable income. However, lack of packaging innovation and promotional strategies remained common weaknesses.

Table 2. Average Production Costs, Revenue, and Income of Tofu Businesses in Sugihwaras Village

Component	Value (IDR)
Total Variable Costs	135,511,749
Total Fixed Costs	4,708,596
Total Production Costs	140,220,345
Total Revenue	149,370,000
Net Income	9,149,655
R/C Ratio	1.07

Source: Processed primary data, 2025

Business Efficiency

The findings show that the average revenue of tofu businesses in Sugihwaras Village is IDR 149,370,000 per month, with total production costs of IDR 140,220,345. The resulting **net income** of IDR 9,149,655 per month indicates that the business is financially profitable and viable.

Business efficiency is reflected in the **Revenue/Cost (R/C) Ratio**, calculated as:

$$R/C = \frac{\text{Total Revenue}}{\text{Total Cost}} = \frac{149,370,000}{140,220,345} \approx 1.07$$

Since the R/C ratio is greater than 1, the tofu business is considered economically feasible and profitable. This means that for every IDR 1 spent, the business generates IDR 1.07 in revenue. This result confirms that tofu producers are managing their operations in a productive and sustainable manner.

DISCUSSION

The research findings indicate that although tofu businesses operate in a simple and manual manner, they are capable of generating a promising level of income. The stability of raw materials and the efficiency of labor utilization are key factors contributing to this success. However, challenges persist in marketing strategies and fluctuations in raw material prices.

From a microeconomic perspective, the difference between total revenue and total costs reflects business income. Cost efficiency and increased production capacity are strategic measures to enhance the profitability of tofu businesses in the future.

Therefore, strengthening human resources, production innovation, and expanding market networks are essential to ensure the sustainability of tofu enterprises in Sugihwaras Village.

The discussion confirms that the net income earned by tofu producers in Sugihwaras (IDR 9,149,655 per month) reflects cost efficiency in production management, even at a small business scale. This finding aligns with Yuliani and Firmansyah (2023), who emphasized that home-based food MSMEs can remain resilient through cost efficiency and close social ties with consumers.

Another notable strength is the use of family labor, which is flexible and low-cost. This is consistent with Wahyuni's (2022) study, which found that rural micro-enterprises tend to utilize internal labor that is more loyal and affordable.

However, limitations in marketing and production equipment remain significant barriers to increasing income. The lack of technology adoption prevents entrepreneurs from meeting higher market demand. According to Arif et al. (2025), "modernizing production equipment is a crucial starting point to accelerate efficiency and improve the quality of local food products."

Considering these data and references, it can be concluded that the tofu business in Sugihwaras still holds significant development potential, particularly through empowering entrepreneurs in managerial skills, digital marketing, and access to production technology.

Moreover, the analysis reveals that despite using simple tools and traditional processes, tofu producers have been able to sustain their businesses consistently. This indicates a strong cultural and social attachment to tofu production in Sugihwaras. Family support, close relationships with consumers, and trust in local markets serve as important social capital, equally essential as financial capital.

Nonetheless, the sustainability of this business also faces challenges related to generational succession and access to financing. Most entrepreneurs are older generations who inherited the business from their parents, while younger generations show little interest due to low perceived prestige or income potential. Therefore, it is important to initiate training and digitalization-based interventions to help the tofu industry transform and attract younger entrepreneurs.

This condition demonstrates that rural economic development should not only focus on capital assistance but must also address human capacity development, the adoption of appropriate technology, and market network expansion. This study affirms that locally based small-scale enterprises remain vital to household economic resilience when supported by inclusive and well-targeted policies.

CONCLUSION

This study reveals that the tofu industry in Sugihwaras Village serves not only as a source of household income but also as a pillar of the local economy that is resilient to external pressures. An average net income of IDR 9,149,655 per month shows that, with simple and family-based management, small businesses can still generate decent profits.

The main determinants of income include the price of raw materials (soybeans), labor management strategies, and the effectiveness of marketing channels. Despite limitations in production equipment and market challenges, entrepreneurs demonstrate strong adaptability through generationally inherited practices.

Overall, the tofu industry in Sugihwaras has promising prospects for development if supported by access to appropriate technology, managerial training, and digital marketing initiatives. This research also

emphasizes the importance of policy support for local food MSMEs, which have long served as the backbone of the rural economy.

REFERENCE

- Arif, M., Muhammad, A., & Rizky, R. (2025). Efisiensi tata letak fasilitas produksi pada usaha kecil. *Jurnal Rekayasa Industri*, 9(2), 112–120.
- Badan Pusat Statistik (BPS) Kabupaten Polewali Mandar. (2023). *Desa dalam Angka: Kecamatan Wonomulyo 2023*. Polewali Mandar: BPS.
- Hartono, A. (2021). Dampak fluktuasi harga kedelai terhadap keberlanjutan usaha tahu. *Jurnal Agroindustri*, 11(2), 115–126.
- Hikmah, A. N., Dambe, J., Hamsiah, H., Ansyar, A., & Hamsah, H. (2024). Analisis faktor-faktor yang mempengaruhi fluktuasi harga cabai rawit di Kabupaten Polewali Mandar. *Agriculture and Socio-Economic Journal*, 1(3), 83–92.
- Lestari, D., & Sari, N. (2021). Karakteristik usaha tahu di wilayah perdesaan. *Jurnal Teknologi Pangan dan Agroindustri*, 9(1), 44–51.
- Melaniya, S. I. (2021). *Efektivitas penggunaan bawang putih dan garam dalam pengawetan tahu* (Tugas akhir, Poltekkes Yogyakarta).
- Nurhayati, R. (2020). Strategi pemasaran UMKM di era digital. *Jurnal Ekonomi Kreatif*, 8(1), 22–30.
- Revilda, E. (2025). *Implementasi nilai-nilai dakwah pada IRMA di Karanganyar* (Skripsi, Universitas Islam Negeri).
- Sukirno, S. (2021). *Pengantar teori mikroekonomi*. Jakarta: Rajawali Pers.
- Wahyuni, T. (2022). Tantangan dan strategi UMKM di era digital. *Jurnal Ekonomi dan Kewirausahaan*, 16(1), 10–20.
- Waruwu, M., Samosir, B., & Tobing, H. L. (2025). Metode penelitian kuantitatif: Konsep, jenis, tahapan dan kelebihan. *Jurnal Ilmiah Profesi Pendidikan*, 10(1), 917–932.
- Yuliani, A., & Firmansyah, D. (2023). Analisis pendapatan UMKM: Studi industri kedelai. *Jurnal Akuntansi Mikro*, 8(1), 22–31.