



## TOFU FACTORY PRODUCTION ASSISTANCE TO INCREASE LOCAL ECONOMIC CAPACITY IN BATU GAJAH VILLAGE

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### Abstract:

*The tofu industry in Batu Gajah Village has great potential to support the local economy but faces challenges such as limited production technology, low labor efficiency, and a lack of marketing strategies. The production assistance program aims to enhance local economic capacity through technical training, business management, and more effective marketing strategies. Using the Asset-Based Community Development (ABCD) approach, this program helps business owners improve production skills, reduce costs, and implement more environmentally friendly waste management. As a result, production capacity increases, business income grows, and market access expands. This program also contributes to job creation and improves the welfare of the community. With sustainable assistance, the tofu industry in this village can continue to develop optimally and contribute to regional economic growth.*

**Keywords:** Production Assistance, Tofu Industry, Local Economy, Capacity Building, ABCD

### INTRODUCTION

Industry is a business in the processing of raw materials in the form of raw materials or semi-finished materials so that they can become high-value goods and be useful for a community. Industry is part of the process that can process a raw product into a finished product so that the finished product can bring a profit to the person who established an industry.

In the current era of regional autonomy, local governments are very interested in being able to create conditions to mobilize resources, capacities and skills that are available and owned by localities (regions) to be used for the achievement of quality and sustainable regional economic development. One of the economic resources is micro, small and medium enterprises in districts/cities which have a very important meaning and role for the economy in Indonesia (Mustapita dan Slamet, 2020). MSMEs (Micro, Small and Medium Enterprises) are productive business units that stand independently and are managed by individuals and business entities in various economic sectors. MSMEs have an important role in Indonesia's economic growth because they can absorb a lot of labor, thereby reducing the number of unemployed and helping the gross domestic product (GDP) growth process. However, MSMEs have low quality human resources, capital, marketing and access capabilities, and limited financial institutions (Ulfa'ngin dan Amri, 2022).

Indrustri tofu is one of the small and medium enterprises (SMEs) sector that has an important role in the local economy, especially in rural areas. Batu Gajah Village has great potential in tofu production, supported by the availability of raw materials and local labor. However, the industry knows that this village still faces various obstacles, such as production technology constraints, low labor efficiency, and lack of

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marketing strategies. As a result, production capacity is still low and the welfare of business actors is not optimal. The tofu industry is a human obligation to survive and develop talents and business skills in the midst of a social life. With the large number of people, the opportunity to get a job becomes smaller. For this reason, it is good for every human being to be able to stand alone with his efforts in survival. The business in survival includes opening new business land to be pursued, both in the form of group and individual businesses. By considering everything, including the availability of supporting facilities and infrastructure, which are not only created by business actors, but also to make it easier from an environmental aspect (Febriayu, 2024).

Tofu is one of the foods that are widely consumed by the Indonesian people. Tofu is the result of processing soybean agricultural products that have significant added value. The high public demand for tofu has encouraged many tofu industries to develop in the community, especially in Probolinggo Regency (Subandi et al., 2022). Tofu is a food made from soy milk deposits that undergo a coagulation process. This food originated in China and has become an important part of various Asian cuisines, including Indonesia. The process of making tofu begins by extracting soy milk, then coagulating it using coagulant materials such as vinegar or calcium sulfate, then filtering and molding it into a solid form. Tofu has various types, such as soft white tofu, yellow tofu that is often fried, silk tofu with a soft texture, tofu pong that is hollow inside, and milk tofu that is more savory. In addition to being delicious, tofu is also rich in vegetable protein, iron, calcium, and low fat, so it is good for health. Tofu can be processed in various ways, such as fried, sautéed, boiled, or used as the main ingredient in various Indonesian dishes such as tofu bacem, tofu gejrot, and fried tofu.

The tofu industry produces waste in liquid and solid form. Solid waste is produced from the filtration and coagulation process, while liquid waste is produced from the process of washing, boiling, pressing and printing tofu. (According to) tofu waste produced by tofu producers can be susceptible to degradation due to environmental factors and result in the emergence of compounds that give rise to unpleasant sour odors. This makes tofu waste a waste that has the potential to pollute the environment. The results of pre-research observations also found the fact that solid waste produced by tofu producers in Bendosari Village is sold unprocessed to farmers as food, while the liquid waste is discharged into rivers and into rice fields. Solid and liquid waste that is not treated clearly causes pollution disturbances for the surrounding environment (Subandi et al., 2022).

Production assistance is very important to increase local economic capacity because it helps business actors in optimizing the production process, improving product quality, and reducing operational costs so that businesses become more efficient and competitive. With the assistance, business actors can get training on the use of more modern technology, better production standards, and more effective marketing strategies to expand market reach. In addition, the assistance also encourages the creation of new jobs, which directly increases community income and economic welfare in the area. With better management and innovation in production, local industries can develop sustainably, strengthen village economic resilience, and provide long-term benefits to the community (Prihandoko et al., 2024).

The purpose of this PKM KKN service is to increase the local economic capacity in Batu Gajah Village through assistance in the production of tofu factories. This

program aims to provide business actors with an in-depth understanding of business management strategies, including raw material management, production efficiency, and marketing strategies so that businesses can develop sustainably. In addition, this service also focuses on improving technical skills in the tofu production process, such as more efficient soybean processing techniques, the use of modern production equipment, and the implementation of food hygiene and safety standards. To support business sustainability, the program will build collaboration with local stakeholders, including village governments and business communities, to strengthen business networks and market access. With this assistance, it is hoped that tofu business actors in Batu Gajah Village can increase productivity, expand marketing, and create greater economic opportunities for the local community.

Assistance in the production of tofu factories in Batu Gajah Village plays an important role in increasing local economic capacity. With the right guidance, productivity and production efficiency increase, resulting in quality products and more competitive in the market. In addition, assistance in business management helps industry players know how to manage finances and marketing better, thereby expanding distribution networks and increasing revenue. Wider market access also opens up new business opportunities for the community. This assistance also contributes to improving welfare by creating more jobs and reducing unemployment. Overall, this program has a positive impact on the economic growth of the village and needs to continue to be developed for long-term benefits.

## **RESEARCH METHODS**

The community service method used in this study is using the ABCD (Asset, Based, Community, and Driven) approach (Yuwana, 2022). This service activity is more focused on assisting the production of tofu factories to increase local economic capacity in Batu Gajah village. The role of this method is quite appropriate to facilitate training and assistance in making white tofu because the ABCD approach is used because it emphasizes community development based on the assets and potentials that already exist in the community itself, not based on its shortcomings or limitations. This approach aims to empower community members to make the most of their potential. The stages in this approach include:

1. Discovery

At the discovery stage, the service team conducted initial observations to identify the assets and potentials that exist in the tofu factory in Batu Gajah Village, such as production skills, availability of raw materials, and marketing networks that have been formed. Targeted group discussions (FGD) and interviews were conducted with tofu artisans and related parties to explore challenges and opportunities in increasing the production capacity and competitiveness of tofu products in the market.

2. Dream

In the dream stage, the service team explores the dreams and aspirations of tofu artisans in improving their quality and production capacity to improve economic welfare. Tofu artisans are invited to visualize the development of their business, both in terms of production, marketing, and product innovation.

The FGD is used as a medium to formulate a common vision about the contribution that tofu factories can make in improving the local economy.

3. Design

The design stage involves the preparation of a mentoring strategy that suits the needs of tofu craftsmen. In this stage, technical training is designed to improve production skills, business management, and marketing strategies. This training includes improving the quality of tofu production, diversifying products, more attractive packaging, and utilizing digital media for marketing.

4. Define

At the define stage, the strategy that has been prepared is tested in the initial implementation. Tofu artisans practice the skills they have learned by applying more efficient production techniques, product innovation, as well as broader marketing strategies. The evaluation is carried out to ensure that the strategies implemented are effective in increasing production capacity and product competitiveness in the market.

5. Destiny

The last stage, destiny, is the full implementation of the strategy of increasing tofu production and marketing capacity. The craftsmen independently implement the techniques and strategies that have been learned in managing their businesses. The service team conducted monitoring to assess the effectiveness of the strategies implemented and their impact in improving the economic welfare of the community in Batu Gajah Village.

## **RESULTS AND DISCUSSION**

This tofu making business started in 1999 This business is located in Samambirampak Kidul Village, Kota Anyar District, Probolinggo Regency. Yan is managed by Mr. Ahmad Junaidi, and 5 employees are employed, this business is carried out because of their own volition and also developing the skills in the tofu factory, tofu production that has easy access to raw materials, namely soybeans, at relatively affordable prices besides that the process of this tofu factory has been established for a long time, creating strong local skills. The high market demand for tofu, both at the local and outside the village level because tofu is a cheap source of protein and is favored by various groups (Ramadantica, 2024).

The tofu production scheme based on the results of the interview is described in the following stages:

1. The initial stage in the process is by selecting soybeans as the main raw material, separating good soybean seeds from poor soybean seeds to get the best quality soybeans in making tofu.



2. After getting quality soybeans, then continuing at the cleaning stage, the soybeans that have been selected must be washed first thoroughly to remove impurities mixed with soybeans, after which the soybeans are soaked in a drum with clean water for 15 minutes.



3. The next stage is grinding, after the soybeans are soaked then drained and put into a grinding machine to grind the soybeans so that a smooth texture is obtained and facilitates the process of extracting soybean juice



4. The next stage is the crushed soybean juice, then boiled using an iron drum or tube from a steam engine with water added for more than 15-20 minutes until cooked.





5. After the milled results are boiled, the next stage is to separate the soybean juice from the pulp by using a special tofu cloth, after which the pulp is separated and put into the cloth.



6. The addition of substances such as vinegar, filtered soybean water is added with ingredients such as vinegar which function as a coagulating agent or petrify the coagulation/sedimentation process to help coagulation or sedimentation.



7. The resulting results and deposits into the prepared wooden mold are then pressed for 5 to 15 minutes with a pile of stones to make it stronger to produce a flatter and flatter shape.



8. Cutting, after the tofu is printed with a mold size 100 cm long, 50 cm wide, the last step of making tofu is to cut tofu that can be made according to the size of P: 8 cm and L: 4 cm with an average thickness of 3 cm.



### **The impact of local economic assistance on the production of tofu factories in Batu Gajah village**

The production assistance of the tofu factory in Batu Gajah Village has a positive impact on the local economy, such as increasing production capacity through the use of more efficient technology and improving product quality to be more competitive in the market. In addition, this assistance helps reduce production costs, so that producers' profits increase and prices remain affordable. Another impact is the creation of new jobs for the surrounding community, which contributes to increasing the income and welfare of villagers. With a better marketing strategy, tofu from Batu Gajah Village can also reach a wider market, both inside and outside the region. In addition, better management of production waste helps maintain environmental cleanliness and creates new business opportunities, such as the use of waste as animal feed or organic fertilizer (Ummah, 2019).

Assistance to the production of tofu factories in Batu Gajah Village is also seen in social and sustainability aspects. The assistance provided not only focuses on

improving economic aspects, but also on improving the skills and capacity of human resources (HR) in the village. Through training and guidance, tofu producers can improve their technical and managerial skills, which allows them to manage their businesses more professionally and efficiently. Overall, the assistance provided made a significant contribution to improving the quality of life of the community in Batu Gajah Village, both in terms of economy, social, and environment. Increasing tofu factory production, better business management, and sustainable management of natural resources are positive results that can strengthen the village economy in the long term (Ulfa'ngin dan Amri, 2022).

The purpose of local economic development is to build the economic potential that exists in a certain area to improve the economic condition and quality of life for all in the future. In this process, the community, and partners from the private sector work collectively to create better conditions for regional economic growth and job creation

Tofu factories also have a significant social and economic impact on the community (Mustapita dan Slamet, 2020). From a social perspective, tofu factories can help improve people's welfare and nutrition through the provision of tofu products that are a good source of plant-based protein. From an economic perspective, tofu factories can help drive the local economy by creating a market for local soybeans, creating jobs, and increasing people's incomes.

Tofu factory is one of the small industries that has great potential in the economic development of the community. However, in the process, there are supporting and inhibiting factors that can affect the success of tofu factories in supporting the economic development of the community. The following will discuss some of the supporting and inhibiting factors for the economic development of the community through tofu factories:

a. Supporting Factors:

1. Easy to Get Raw Materials One of the main supporting factors for tofu factories is the availability of raw materials such as soybeans that are easy to get. This makes it easier for factory owners to produce tofu without too many obstacles.
2. Creativity and Innovation Tofu factory entrepreneurs who are creative and innovative in creating diverse and quality tofu products can support their business development. Innovations in production and marketing processes can help tofu factories to attract new consumers and expand market share.
3. Partnership with Local Farmers Good cooperation between tofu factory owners and local farmers in terms of providing raw materials can also be a supporting factor in maintaining the quality and availability of the raw materials needed.
4. The existence of support from the government in terms of providing infrastructure, entrepreneurship training, and policies that support small industries such as tofu factories can also be an important factor in the development of tofu factory businesses.



b. Inhibiting Factors:

1. Increasingly fierce market competition can be an obstacle for tofu factories to compete and develop. Factories need to continue to innovate in order to remain competitive in a dynamic market.
2. The availability of low-quality soybean raw materials can reduce the quality of the tofu products produced. This can affect the image and consumer trust in tofu factory products.
3. Ambiguous or convoluted regulations can be an obstacle for tofu factories in obtaining business licenses and following certain procedures. This can slow down the development process of the tofu factory business.
4. The difficulty of accessing capital and credit for tofu factory owners can be an inhibiting factor in business development and production expansion. Without adequate financial access, the factory knows it may be difficult to develop its business (Pratiwi, 2022).

## CONCLUSION

Assistance in the production of tofu factories in Batu Gajah Village has proven to be effective in increasing local economic capacity. Through the application of more efficient production technology and better marketing strategies, production capacity increases, product quality improves, and market reach is wider. This program also contributes to improving people's welfare by opening new jobs and increasing the income of business actors. In addition, better management of production waste supports environmental sustainability.

This assistance not only has an impact on the economic aspect, but also improves the skills of human resources in the village. With the right training and guidance, business actors can manage their businesses more professionally and efficiently. In order for this positive impact to continue, collaboration between the government, academics, and business actors is needed to develop production innovations and expand market access. Further research is also suggested to explore more effective mentoring methods as well as their long-term impact on the local economy.

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