



Improving Family Workforce Quality Through Training to Optimize Productivity of SME Tempeh Homes in Kertosari

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Abstract

Purpose: This study aims to analyze efforts to improve the quality of family labor through training in skills and abilities in small- and medium-sized tempeh businesses in Kertosari Village to optimize productivity.

Research Methodology: This study used a descriptive qualitative method, with data collection consisting of observations and detailed interviews with entrepreneurs and family members involved in the production process.

Results: The results showed that structured and unstructured training positively improved workers' knowledge, technical skills, and self-confidence. However, challenges such as limited production tools, market access difficulties, and barriers to innovation remain obstacles, highlighting the need for continuous support and effective production and marketing strategies.

Conclusions: The study shows that structured and unstructured training programs significantly improve the quality of family labor in home-based tempeh businesses. Training enhances knowledge, technical skills, and self-confidence, contributing to higher productivity and more effective production processes. However, psychological barriers such as fear of failure still limit full utilization of new techniques.

Limitations: The study is limited to qualitative methods using observations and interviews in one village, which may reduce generalizability to other regions or SME sectors.

Contributions: This study contributes practical strategies for improving SME family labor quality through training and skills development. The findings provide insights for policymakers and local governments to optimize productivity and sustainability of home-based SME businesses.

Keywords: Family Labor, Optimization, Productivity, Skills, Tempeh, Training

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1. Introduction

Small and Intermediate Enterprises (SME) are in the informal sector, and family labor plays a vital role in the national economy. A home-based tempeh business, managed by a family and serving as a primary source of income for the village community, is one example of a Small and Medium Enterprise (SME) developing in the village (Akhirudin & Purnomo, 2023; Nabilla & Soehaditama, 2023). One village that owns a home tempeh manufacturer is Kertosari, which has the potential for a large production of tempeh at home, but currently faces constraints on productivity and efficiency. The quality and capabilities of family labor, which still need to be optimized, are root problems (Lubis & Lubis, 2020; Sinta & Purnomo,

2023).

The productivity of Small and Medium Enterprises (SMEs) significantly influences the quality of their human resources. SMEs typically learn independently or pass on knowledge from previous generations to the next (Sudono, 2021; Supardi, 2023; Wijayanto & Purnomo, 2023). Therefore, structured training can improve technical and managerial skills and understanding of management issues. Sustainability is required for the perpetrator's business (Kuswanti & Purnomo, 2023; Magno & Lestari, 2023). Enactment With proper and focused training, family workers will not only be able to improve the quality of tempeh products but will also be able to apply simple technology and better business management (Ministry Cooperative And SMEs, 2022; Purnamasari & Riyadi, 2023).

To support village community empowerment programs, skills development, and training for Small and Medium Enterprises (SMEs) is a crucial strategy. This can be achieved by increasing production output, expanding business networks, and innovating the manufacturing and marketing processes (Gani & Daulay, 2021; Maheswara et al., 2023). This is in line with policy development of an economy inclusive of villages, which strive to realize community financial independence through strengthening MSMEs (Kalis et al., 2023; Winarko & Purnomo, 2023).

This study aimed to examine efforts to improve the quality of family labor through relevant training and skill development. Furthermore, the study will examine the impact of business optimization on tempeh productivity in Kertosari Village (Aryanta, 2023; Eritasari, 2023; Natonis, 2023). It is hoped that the findings of this study will contribute to the formulation of sustainable community empowerment strategies, particularly those based on capacity building. Source Power man in the business sector of small and intermediate (SMEs). This home-based economy is divided into small businesses with 1–19 employees, and medium-sized businesses with 20–99 employees (Giovani, 2021). In Indonesia, Small and Medium Enterprises (SMEs) contribute significantly to the economy, particularly at the village level, by creating jobs and supporting a decent standard of living. In Kertosari Village, one such SME is a home-based tempeh producer. The wrong food is easily found because it has become the mainstay of society in Indonesia, especially in rural communities (Andiana & Yuliarmi, 2021; Syahrial & Sudono, 2021).

Tempeh is typically made from soybean fermented with tempeh yeast. Tempeh is a staple food in Indonesia because of its high protein content. Every 300 g of tempeh contains 0.162 kcal, 15 g of protein, and 1.5 g of sodium, 0.009 g fat, 9 g carbohydrate, 0.0012 g manganese, 0.0024 g iron, 0.093 g calcium, 0.345 g potassium, and 0.224 g phosphorus. According to Aryanta (2023) and Berlian Rms and Wahyuningsih (2021), the benefits of tempeh for health are: improving the immune system, helping prevent various degenerative diseases (coronary heart disease, diabetes, cancer, etc.), lower risk of cardiovascular disease, prevent anemia, prevent osteoporosis, increase bone and tooth health, increase muscle health, prevent asthma, reduce the risk of Parkinson's disease, beneficial for pregnant mothers to increase the atmosphere of the baby's heart and intelligence, good for use as a diet menu, preventing premature aging, and improving digestive tract health (Afizah et al., 2024; Saputro & Soleha, 2021).

In Village Kertosari, Pack Muhtarom is one manufacturer of home-based tempeh. Having been involved in this business since 2010, Mr. Muhtarom is well known in the village community. The quality of tempeh is superior because of his experience of more than 15 years of making tempeh. Mr. Muhtarom is assisted daily by his wife, Mrs. Ni'mah, in the tempeh production. Together, they handle the entire tempeh production process, from selecting quality soybeans to processing them into tempeh, immersion, steaming, and distribution of tempeh to stalls around the village.

2. Literature Review

2.1 *Small and Medium Enterprises (SMEs) and Family Labor*

SMEs in the informal sector are vital to the national economy, particularly at the village level. Family labor forms the backbone of home-based SME businesses such as tempeh production in Kertosari Village (Supardi, 2023). Productivity and efficiency are often limited by the skill level and experience of family workers. Structured training can enhance technical and managerial competencies, improve quality, and promote sustainable business practices (Aflizah et al., 2024; Ministry Cooperative And SMEs, 2022)

In addition, family involvement in SMEs helps maintain continuity and knowledge transfer across generations. Family labor contributes to the operational sustainability of home-based businesses and supports local economic development. However, family workers often face challenges such as lack of formal training, limited technical knowledge, and resistance to modern production techniques, highlighting the need for targeted skill development initiatives (Tahir, 2023).

2.2 *Importance of Training for SME Productivity*

Training, both formal and informal, significantly impacts workforce quality. Direct, hands-on training allows workers to understand production processes and improve technical abilities. Skills development can lead to better product quality, enhanced production efficiency, and the ability to implement simple technological solutions (Andiana and Yuliarmi (2021); Lubis and Lubis (2020)).

Moreover, training strengthens workers' confidence and reduces fear when applying new techniques. Continuous and structured training programs ensure that employees can innovate, adapt to challenges, and increase overall productivity. Training is not only about technical skills but also includes managerial knowledge, problem-solving, and the ability to respond to market demands (Mulyati et al., 2023).

2.3 *Optimization Strategies in Home-Based Tempeh SMEs*

Home-based tempeh producers apply various strategies to optimize productivity, including adjusting yeast dosage, selecting high-quality raw materials, managing resources efficiently, and using traditional marketing channels (Ahmadun et al., 2023). Innovation, adaptive capacity, and effective management of family labor are key to business success. Government support, access to modern equipment, and development of marketing networks further enhance productivity and business sustainability (Giovani (2021); Aflizah et al. (2024)).

Additionally, SMEs adopt local knowledge and incremental innovations to improve product quality and operational efficiency. These optimization strategies not only improve financial performance but also strengthen the competitiveness of SMEs in local markets. By combining traditional methods with strategic innovations, SME owners can ensure product consistency and meet customer demand effectively (Saribanon et al., 2023; Widyastuti, 2023).

2.4 *Impact of Family Labor Development on Community Empowerment*

Improving the quality of family labor benefits individual SMEs and contributes to broader community economic empowerment (Rizkita et al., 2023). Training and skills development enable family workers to increase production, improve product quality, and strengthen income-generating capabilities. Continuous support from stakeholders, including the government, ensures sustainable growth and greater economic impact for SME households (Aryanta (2023); Ministry Cooperatives SMEs 2022 <empty citation>).

Furthermore, empowered and skilled family labor fosters social cohesion and encourages entrepreneurial initiatives within the village (Valentin et al., 2023). By increasing technical and managerial competencies, family workers become agents of economic development, enhancing the resilience of local SMEs. This empowerment strengthens community participation, promotes innovation, and contributes to sustainable

rural development ([Hernawan et al., 2023](#)).

3. Methodology

This study used a qualitative descriptive method. This method can explain the natural phenomena that occur in the field in depth. This method was implemented through skills and abilities training to investigate the quality of family labor in the effort development of home-based tempeh Small and Medium Enterprises (SMEs) in Kertosari Village.

Observation and in-depth interviews were used as data collection techniques in this study. Observations were conducted by visiting the home-made tempeh production location directly to determine how the tempeh is produced and the family's workforce involved in the production process. Interviews were conducted with business owners and family members involved in the home-based tempeh production process to gather information on their experiences, challenges, and the impact of training on business productivity.

This study employed triangulation techniques by comparing and verifying data from various sources and using various research methods to ensure their accuracy. The analysis was conducted in stages, starting with data collection, sorting relevant information, presenting the findings, and finally drawing conclusions or validating the truth. Through skills training for family workers, this approach is expected to provide a more comprehensive picture of the process and impact of efforts to increase the productivity of home-based tempeh businesses ([Nasution, 2003](#)).

4. Results and Discussion

4.1 Role and Constraint Power Work Family

Finding new customers presents a significant challenge for home-based tempeh businesses because of their limited market reach and income. One of the difficulties faced is the involvement of family members in the business, which is very important for sustainability. Other obstacles include a lack of focus on the business, which can cause a decline in production. In addition, the quality of water contaminated with soap hinders the process. The transition from the dry to rainy season also affects the fermentation process ([Aflizah et al., 2024](#)).

4.2 Experience and Impact of Training

Business actors have participated in formal training through webinars. In an informal manner, other businessmen are welcome to enter the tempeh-making field. Based on interviews, business actors received training materials that provided benefits on training manufacturing tempeh in a direct and comprehensive way, which also provided a greater understanding of the technique and product quality. However, the fear of failure moment experiment with new techniques becomes a challenge for perpetrator businesses, especially at the beginning of training ([Giovani, 2021](#)).

4.3 Effort Optimization Productivity

Home-based tempeh producers employ several strategies to optimize their businesses. Adjusting the yeast dosage based on the mixing time accelerated the fermentation process. becomes the Wrong One strategy, which is implemented by the perpetrator business. In addition, imported soybean raw materials were selected, which are believed to produce better tempeh products. In its operations, the perpetrator business always prioritizes efficiency and quality of results production with time and resource management in an independent way. Meanwhile, marketing is still being carried out in a traditional way, with the do system entrusting the sale to stalls in the surrounding village as the main approach ([Gani & Daulay, 2021](#)).

4.4 Hope and Development Business

Business owners hope to expand the marketing reach of tempeh so that the product becomes more widely known and increases the motivation and productivity of family workers. Furthermore, to increase production capacity, business owners hope to gain more modern equipment to make the process of producing tempeh easier. Although innovations in training have not yet been fully implemented, training is crucial for supporting business sustainability and progress (Lubis & Lubis, 2020).

5. Conclusions

The results of this study indicate that structured and unstructured training programs significantly improved the quality, knowledge, skills, and productivity of family labor in the home-based tempeh business sector. The training also helped business actors better control the tempeh production process, although psychological barriers such as fear of failure in applying new techniques still became challenges. Production techniques, adaptive capacity, and innovation were found to play an important role in optimizing the productivity of tempeh SMEs in Kertosari Village. However, limited access to modern production tools and market expansion remain major obstacles. Therefore, continuous support through training, capital access, and marketing network development is needed to achieve sustainable business growth and greater economic benefits.

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Author Contributions

MJF conceptualized the study, supervised data collection, and drafted the manuscript. MIR performed data analysis, prepared tables and figures, and contributed to manuscript editing. Both authors reviewed and approved the final manuscript.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this study. This research was conducted independently, and no financial or personal relationships influenced the results or interpretation of the findings.

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