Improving Packaging and Marketing of Local Products Through the Application of Technology and Packaging Innovation to Increase Community Income in Opak Village

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ABSTRACT

Community service activities in the national combination program were conducted in Waqf Village, Sukaratu Village, and Majasari Pandeglang District, targeting partner groups of opak food craftsmen and waqf farmer groups. The problem with fostered partners is that no one needs to be able to implement business management, online marketing, or apply innovative technology in standard production processes. Community service in the national service program aims to increase the knowledge and skills of fostered partners in implementing business management, online-based marketing, and technological innovation in the production process. Activity methods include the socialization of national programs, the application of technology in the production process, training, mentoring, and evaluation. The results of this activity show that the two fostered partners can apply business management, online marketing (e-commerce), and the application of packaging technology with nitrogen injection as well as the application of production with solar dome dryers to dry opaque patches, which is very helpful during the rainy season, can still production. There was an increase in the business of the two fostered partners to reach 80%.

1. INTRODUCTION

People's income is a very important indicator in measuring the level of economic welfare of a country or region. People's income reflects their ability to meet basic needs, improve living standards, and participate in economic activities. Community income includes not only individual income but also the income of families, communities, or even a country as a whole (Muslih, Etica, Rosanti, Hastuti, & Mubarok, 2020; Wardany, Sari, & Mariana, 2020). The concept of community income is not only limited to income from formal employment but also includes various other sources of income such as dividends, bank interest, rent, and social assistance (Rarassari, Wijayanti, Dwinanti, Mukti, & Yonarta, 2021; Wardany et al., 2020). Apart from that, people's income can also be influenced by various economic, social, and political factors, including the inflation rate, unemployment rate, fiscal policy, and fair distribution of income (Firmansyah,
The importance of people’s income lies not only in the economic aspect but also in its broad impact on social welfare, political stability, and sustainable development. People with high incomes tend to have better access to health services, education, and infrastructure, thereby improving their quality of life and increasing overall economic productivity (Febrian & Febrian, 2020; Maryani, 2021).

People’s income determines people’s welfare, so the government must make various efforts to increase people’s income. Increasing people’s incomes is about economic growth and ensuring a fair distribution of wealth and opportunity across society (Indratmi, Zalizar, & Sujono, 2020; Nopi, Sulaiman, & Sujadmi, 2021). Increasing people’s income can be achieved through various means, including appropriate economic policies, infrastructure development, quality education and training, and promotion of entrepreneurship and innovation. These efforts aim to increase individual or family income directly and create an environment that supports inclusive economic growth (Adawayah, Redha, Adriani, Syifa, & Habibie, 2021; Tanan & Dhamayanti, 2020).

The Kosabangsa program is a funding program from the Directorate General of Higher Education through DRTPM to bridge cooperation in the development and application of science and technology produced by universities to be used for community needs. In particular, the Kosabangsa Program prioritizes disadvantaged areas and extreme poverty priorities, which are called Kosabangsa priority areas. The Kosabangsa program is implemented within a maximum activity period of 8 (eight) months. The Kosabangsa program prioritizes 4 (four) focus areas: food security, health independence, new renewable energy, and economic independence. The Kosabangsa program is implemented in Waqf Village (Opak Village), RT.01.02, RW.11, with a population of 222 people. One hundred two families are incorporated in Sukaratu Village, Majasari District, Pandeglang Regency, Banten. Waqf Village is an area of rice fields and plantations that produces many palawijaya products, such as rice, bananas, cassava, coconut, and melinjo. Waqf Village is categorized as a poor area because some of the people are members of the PKH group.

Two business groups need to be developed in the Waqf Village: the Opak Food Craftsmen Group and the Waqf Farmers Group, which manages agricultural and plantation products. First Partner: Opak Food Craftsmen Group is an association of business people who make opak food located in the Waqf Village of Sukaratu Village, Pandeglang Regency, which has received the nickname “Opak Food Industry Village” because most of the population, the majority of whom are mothers aged 30 to 50 years is an opaque food maker, as a livelihood in helping the family’s economic needs. This group is chaired by Mrs Askah, founded in 2015, with approximately twenty active members, some of whom are members of the Waqf Village community, Sukaratu Village, Majasari Pandeglang District. First Partner Problem: The Opak Craftsmen Group has been unable to carry out the production process according to standard SOPs for raw materials, has not been able to carry out the drying process correctly, and the product packaging needs to be more attractive and of better quality not implementing innovative technology. It still needs to be able to implement business management.

Second Partner: Waqf Farmers Group, which manages agricultural and plantation product businesses in the Waqf Village itself. As is known, Waqf Village is an agricultural area that produces lots of rice, bananas, cassava, coconut, and melinjo. The Waqf Farmers Group processes it into banana chips, crisps, cassava, emping melinjo, and processed foods made from rice and coconut. Second Partner Problem: members of the waqf farmer group have yet to implement quality product production and packaging processes according to SOP standards, have not been able to apply technology and innovation, and have not been able to implement business management. So they also need help marketing their products. If this situation continues, it will greatly impact people’s income. Apart from that, the village still needs to progress because it uses traditional production methods. So, a solution is needed to increase productivity and community income.

Solutions that can be implemented to overcome this problem are through partners: training and assistance in business management, training and assistance in information technology-based marketing (ecommerce), and training and assistance in applying innovative technology in production, packaging, and drying processes using solar dome equipment. The use of superior technology and innovation in local products will have great potential to compete in the global market (Niati, Nurhayati, Annajmi, & Wahyuningsih, 2023; Wahyudi & Nurcahyo, 2022). Implementing improved packaging and marketing of local product technology and innovation is important in introducing these products to a wider market (Ekasari, Hasanah, Siregar, Sari, & Nifita, 2019; Muslim et al., 2020). Packaging and marketing can influence product perception and sales (Lestari, Fulazzaky, & Jumiono, 2023; Sawitri, Kariyana, Sudiyani, & Dewi, 2023). Packaging not only acts as a physical container for products but also as a means to convey brand messages and product values and communicate the advantages offered. On the other hand, marketing plays an important role in introducing products to potential consumers, creating brand awareness, and influencing purchasing decisions (Farodisah, Hidayat, & Negoro, 2023; Putro, Rusmaniah, Jumriani, Handy, Hadi Kurniawanto / Improving Packaging and Marketing of Local Products Through the Application of Technology and Packaging Innovation to Increase Community Income in Opak Village
With the right marketing strategy, local products can communicate their unique value to consumers and differentiate themselves from competitors.

Previous research findings state that the application of technology and innovation influences the development of micro businesses (Jariyah, Dijaji, & Priyanto, 2021; Wahyuningsih & Rahmawati, 2021). This can be seen from the increase in technology and packaging innovation, which impacts production productivity (Adaway et al., 2021; Lestari et al., 2023). Other research says that training on packaging technology and innovation can improve the quality and creativity of business owners (Nurendah, Mekaniwati, & Khim, 2021; Wahyuningsih & Rahmawati, 2021). Previous research states that the application of agricultural innovation technology plays a role in increasing the productivity of agricultural businesses so that it can improve the welfare (Ekasari et al., 2019; Noviandy & Sutrisno, 2021). The research results show that most farmers in rice fields have intensively implemented the technological innovation of the Legowo row system, and farmers in dryland villages have done quite well. Intensively implementing innovative intercropping systems and processing agricultural products (on farms). The application of this technology is positively correlated with the food security conditions of farming households; Farmers who apply technological innovation more intensively have better levels of food security. Community service in the kosabangsa program aims to increase the knowledge and skills of the fostered partners, in this case, the oak artisans group and farmer groups, in carrying out business management, information technology-based marketing (e-commerce), and the application of information technology. Innovative production, packaging, and drying technology uses a solar dome device to dry opaque slices during the rainy season.

2. METHOD

This training was carried out through several stages: first, analysis of the situation, conditions, and socialization of national program activities. This activity began with the socialization of community service activities, the Kosabangsa program, the Opak food artisans group, and the waqf farmer group. The aim of this socialization is the hope that the Opak food artisans group and the waqf farmer group can understand the objectives of the Kosabangsa program’s community service activities so that the aim of the Kosabangsa program can help the activities of the Opak artisans group and farmer groups in managing their business. Second, training and assistance in business management. The activity is aimed at opak food artisans groups and waqf farmer groups, hoping that opak artisans groups and waqf farmer groups can apply business management to run their businesses. Third, the next activity is training and assistance in applying innovative technology. This activity hopes that opak artisans and waqf farmer groups can apply innovative technology to run their businesses. The resource persons in this activity were Sigit Auliana, Jaka Wijaya Kusuma from Bina Bangsa University, and Tjahja Muhandri Nugraha Edhi Suyatma from the Bogor Agricultural Institute (IPB). They can assist during the rainy season. Fourth, further training and mentoring activities for internal information technology.

Implementing processed product marketing from opak artisans groups and waqf farmer groups. So far, the marketing carried out by both partners has only implemented a conventional system if there are new orders for production and marketing in stalls or shops using a consignment system that has just been paid for, thus affecting the sustainability of their business. Given these problems, providing information technology training to resource persons, such as Sigit Auliana and Jaka Wijaya Kusuma, is necessary—and fifth, evaluation and monitoring.

Empowering unclear groups of craftsmen and farmers is very important. In community service activities in the national service program with the theme: Improving Packaging and Marketing of Local Products Through the Application of Technology and Packaging Innovation to Increase Community Income in Opak Pandeglang Village, Banten, with evaluation and monitoring we can find out whether the training and mentoring program is successful or not. In this case, the Opak artisans group and farmer groups in the Waqf Village can apply business management, online marketing (e-commerce) and the application of innovative technology in their production processes.

3. RESULT AND DISCUSSION

Result

Community service activities in the national program for the 2023 fiscal year were carried out in Opak Village (Wakaf), Sukaratu Village, Majasari District, Pandeglang Regency, Banten. Training and mentoring activities were carried out for one day, starting at 09.00 to 17.00, at the house of Mrs. Askah and Mr Depi Rosadi, the head of the opak artisan’s group and the head of the Waqf farmers. The theme of this service activity is Improving Packaging and Marketing of Local Products Through the Application of
Improving Packaging and Marketing of Local Products Through the Application of Technology and Packaging Innovation to Increase Community Income in Opak Pandglang Village, Banten. Community service activities in the national program for the 2023 fiscal year were carried out in Opak Village (Wakaf), Sukaratu Village, Majasari District, Pandeglang Regency, Banten. Training and mentoring activities were carried out for one day, starting at 09.00 to 17.00, at the house of Mrs. Askah and Mr. Depi Rosadi, the head of the opak artisans group and the head of the Waqf farmers. The theme of this service activity is Improving Packaging and Marketing of Local Products through the Application of Packaging Technology and Innovation to Increase Community Income in Opak Pandglang Village, Banten. The team implementing this activity can be seen in Figure 1.

Figure 1. Implementation Team Carrying out Socialization Activities for the National Cooperation Program

The first activity began with remarks from the opak artisan's group (Mrs. Askah) and the head of the farmer group (Mr. Depi Rosadi). The two group leaders welcomed this activity very positively. They hope this activity will help opaque food businesses and business farmer groups in the Waqf Village of Sukaratu Village further improve in terms of production, packaging, and marketing so that it can increase sales and indirectly increase the income and economy of the community. The Waqf village community itself.

This activity invited resource persons from Bina Bangsa University as the Kosabanga Program Implementation Team and from the Bogor Agricultural Institute (IPB) Kosabangsa Program Accompanying Team. Documentation of this activity can be seen in Figure 2.

Figure 2. Group Photo with a Group of Craftsmen and a Group of Farmers

Second activity: Business management training and mentoring with resource person Hadi Kurniawanto. In delivering his material, he said management is very important in managing businesses, including opak food craft businesses and farmer groups in Waqf villages. The two groups that run their businesses so far have yet to implement management because it is a business passed down from their parents, and they need to understand business management. The members of this group of opaque craftsmen are almost all mothers, aged between thirty and sixty years, with an educational background, mainly elementary school and junior high school. So, by looking at these conditions, it is necessary to provide training and assistance in business management to increase the business's existence. The training and mentoring that has been implemented can be seen in Figure 3.
Third activity: Training and assistance in implementing information technology-based product marketing (e-commerce). So far, product marketing carried out by Opak artisans groups and waqf farmer groups is still conventional, so they have yet to be able to increase sales and affect the sustainability of their business. Given the conditions above, it is necessary to provide training and assistance in information technology-based product marketing (e-commerce) with Sigit Auliana. With the application of information technology, product marketing can be further improved.

Fourth activity: Training and assistance in the application of innovative technology with lecturers Sigit Auliana, Jaka Wijaya Kusuma (Bina Bangsa University), and Tjahja Muhandri Nugraha Edhi Suyatma (Bogor Agricultural Institute), which can be seen in Figure 4. In their material, several speakers above conveyed the need to apply technological innovation to produce a product with the hope of producing quality. The technology applied in this activity is the application of product packaging using a packaging machine with nitrogen injection and the application of production using a solar dome dryer to dry the opaque slices. This is beneficial when facing the rainy season. Opak artisans need help because they cannot produce opak. Apart from that, the application of machines or tools for making banana and cassava chips is more practical so that it can produce more attractive chip slices.
Discussion
The research results show that training and mentoring activities through packaging technology and innovation to increase community income in Opak Pandlang village, Banten, have been carried out well. This can be seen based on the community’s enthusiasm for participating in activities. So that they can absorb and implement the knowledge they gain to increase the productivity of their business (Parwita, Astawa, & Sadguna, 2022; Wasan & Sariningsih, 2021). This training and assistance can help opaque food business actors and business farmer groups in the Waqf Village of Sukaratu Village to further improve in terms of production, packaging, and marketing so that it can help increase sales and indirectly increase the income and economy of the waqf village community. Alone. Besides that, with training and assistance, business actors can increase their creativity to create superior product innovations to compete in the market (Muna, K. N., S & Perdana, 2022; Rifai & Meiliana, 2020).

The application of packaging technology and innovation to improve the packaging and marketing of local products aims to increase the attractiveness, safety, sustainability, and functionality of local product packaging by utilizing advances in technology and innovation (Agustina, Dwanoko, & Suprianto, 2021; Sufaidah, Munawarah, Aminah, Prasastii, & Oktavianti, 2022). With the right marketing strategy, manufacturers can also introduce the advantages of this packaging to consumers and increase sales of their local products. Applying technology and innovation in using solar dome dryers to dry opaque slices will positively impact production (Nurendah et al., 2021; Sari, 2018). Applying technology and innovation in a product’s packaging will attract consumers’ attention because it provides a unique and interactive experience. This will help local products compete in a market with international brands.

With innovation in implementing production using a solar dome dryer, it will have a big impact on the production process. This will be very useful when facing the rainy season. During this time, opak artisans need help because they cannot produce opak. This will certainly increase product inventory and supply chains. The product will still be able to be processed without needing to worry about weather changes. So consumers can easily find the products they want.

Additionally, applying machines or tools to make banana and cassava chips is more practical for producing attractive chip slices (Arisetyawan et al., 2023; Wasan & Sariningsih, 2021). Delicious products will increase consumer purchasing power. Applying technology and innovation in processing and packaging a product will provide a better experience and products that are safer, environmentally friendly, and informative; improving packaging and marketing of local products through technology and innovation can increase overall consumer satisfaction (Muslih et al., 2020; Niati et al., 2023).

Previous research findings state that applying technology and innovation influences micro-business development (Jariyah et al., 2021; Wahyuningsih & Rahmawati, 2021). This can be seen from the increase in technology and packaging innovation, which impacts production productivity (Adawyah et al., 2021; Lestari et al., 2023). Other research says that training on packaging technology and innovation can improve the quality and creativity of business owners (Nurendah et al., 2021; Wahyuningsih & Rahmawati, 2021). Previous research states that the application of agricultural innovation technology plays a role in increasing the productivity of agricultural businesses so that it can improve welfare (Ekasari et al., 2019; Noviyanti & Surisro, 2021). Based on these findings, mentoring business actors has a positive impact on the progress of their business. So, seeing the benefits of applying technology and innovation in packaging is a strategic step for local producers to increase the competitiveness of their products, expand market share, and build stronger relationships with consumers.

4. CONCLUSION
Community service activities in the national service program with the theme: Improving Packaging and Marketing of Local Products through the Application of Packaging Technology and Innovation to Increase Community Income in Opak Pandlang Village, Banten, can be carried out well. The partners, in this case, the opaque artisans group and the waqf farmer group, can work together well and are very enthusiastic during training and mentoring. As a result, they can understand and apply product marketing based on business management information technology (e-commerce), and fostered partners can apply innovative technology in the production process, such as using press machines with nitrogen injection and applying production with nitrogen injection. Solar dome dryer for drying opak slices is very helpful when facing the rainy season; so far, opak artisans have had difficulties because they cannot produce opak.

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6. REFERENCES


