



Leaf of *Ananas Comosus L. Merr* as an Innovation of Local Wisdom to Increase Income of Rural Communities

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Abstract. Indonesia is included in the ranks of pineapple-producing countries (*Ananas comosus L. Merr*) after Brazil, Thailand, the Philippines and China. Abundant yields produce pineapple leaf waste as animal feed or just thrown away when in fact, it can be of high economic value and useful if processed properly. In line with the economic pillars in the Village Sustainable Development Goals (SDGs) to achieve quality economic growth through job opportunities, innovation, and supported partnerships, the group of farmers must have a strategy for developing their pineapple products. This study uses a descriptive approach and is located in Prabumulih City, South Sumatra Province. Data was collected by studying documentation obtained from electronic and physical documents, field observations and interviews with pineapple farmer groups and small business actors. This study found that pineapple leaf waste can now be processed into pineapple leaf fiber. Pineapple leaf fibers can be used as handicrafts and raw materials for woven fabrics. Pineapple leaf fiber is also produced into yarn to meet domestic and foreign market demands. Pineapple leaf waste that has been produced into pineapple leaf fiber and yarn can increase people's income.

Keywords: Innovation of Local Wisdom · *Ananas comosus L. Merr* · Income of Rural Communities

1 Introduction

Indonesia is one of the potential natural resource-producing countries, including the agricultural sector, which is still believed to be one of the roots of the nation's economy. Natural resources have the potential to be a source of local wisdom development [1]. The contribution of the horticultural sub-sector to agricultural development continues to increase as reflected in several indicators of economic growth, such as Gross Domestic Product (GDP), Export Value, and Employment. The strategic role of the horticulture sub-sector can still be improved given the potential and good prospects for its development. The potential of the horticultural commodity market for both domestic and international markets is still very high [2].

Indonesia is included in the ranks of pineapple-producing countries (*Ananas comosus* L. Merr) after Brazil, Thailand, the Philippines and China. Pineapple is the main industrial product of many countries and international demand for pineapple is increasing [3]. Prabumulih City is one of the cities in South Sumatra Province, which has great potential for fruit development and as one of the pineapple producers in Indonesia. In addition to selling fresh pineapple products, farmer groups and small and medium enterprises are also developing processed pineapple products into jam, syrup, cakes, chips and other foods [4]. With the increasing sales of processed pineapple products, the pineapple waste produced, both the skin and leaves, has only been disposed of.

Pineapple skin has not been seen as something that has added value for pineapple farmers because until now no one has been able to process it. Pineapple leaves that have been used as animal feed or thrown away, in fact it can bring high economic value and are useful when processed properly [5]. In line with the economic pillars in the SDG's village, achieving quality economic growth through sustainable employment opportunities, business, innovation, and partnerships. Pineapple farmer groups must have a strategy in developing their pineapple product business. Through the SDGS, realizing a people's economy will result in equitable economic growth based on innovation and creativity, as well as high competitiveness driven by the community, while reducing the percentage of the poor [6].

Pineapple skin waste can be developed into mouthwash [7], while pineapple leaves that are processed into fiber can be used as composite materials or raw materials for handicraft products. The potential for pineapple leaves to be used as material for paper production [8]. Pineapple leaf fiber is one of the potential alternatives for the basic material of disposable personal protective equipment because the material is environmentally friendly [9]. Processed products from pineapple leaf fiber have several advantages, among others, because of their nature that comes from nature so that they can be produced sustainably, the ease of obtaining the basic ingredients and relatively simple processing but requires high patience [10]. By being processed into pineapple leaf fiber, the economic value of pineapple leaf waste will also increase. Smooth Cayenne pineapple whose fruit is in demand for fiber exports is better if it is used as a raw material for handicrafts [11]. Therefore, this study aims to analyze the business of pineapple leaf fiber as an innovation to increase people's income.

2 Method

This study employs a qualitative approach with a descriptive method and is located in Prabumulih City, South Sumatra Province. The data are collected by means of a study of documentation obtained from electronic and physical documents, field observations and interviews with pineapple farmer groups and small and medium enterprises. Qualitative data analysis techniques are carried out by reducing and sorting the data that supports the research as well as the themes and patterns that are sought. Presentation of data is done by describing the results of observations and interviews as outlined in the form of a description with narrative text to draw conclusions. To ensure the validity of the data, validity tests, check clearing and triangulation of data sources were carried out.

3 Results and Discussion

3.1 Result

The city of Prabumulih is also known to be the city of pineapples because one of its agricultural products is pineapple which is famous for having a sweet taste and its sales reach the island of Java. Pineapple leaf waste can be transformed into a money mine through a touch of artistic creativity and transformed into various beautiful crafts that are worth selling. Through community empowerment, pineapple leaf waste produced in Prabumulih City has been processed into pineapple leaf fiber to increase people's income. Local wisdom Pineapple leaf fiber can be used as raw material for making cloth, clothes, clothes, bags and other handicrafts. There are various kinds of pineapple leaf fiber crafts that are produced, which have now penetrated various parts of Indonesia. Crafts made from pineapple leaf fiber include jewelry boxes, glasses holders, casual bags, laptop bags, tissue holders, shopping bags, and several other products. Besides being processed into various crafts, pineapple fiber is also the raw material for woven fabrics. Pineapple leaf fiber is also produced into yarn to meet domestic and foreign market demands. There are many Small and Medium Industries that make Pineapple Fiber Cloth as their main product. The appearance of pineapple fiber is increasingly attractive because it has become a modern handicraft [12]. The surface is soft when compared to other natural materials the fiber also absorbs and retains color well. Pineapple leaf fiber has high strength and stiffness and is naturally hydrophilic which has a high cellulose content [13].

Small and Medium Industries have a strategic role in national economic development, because apart from playing a role in economic growth and employment, they also play a role in the distribution of development results [14]. In the economic crisis that has occurred in our country since a while ago, where many large-scale businesses have stagnated and even stopped their activities, the Small and Medium Industry sector has proven to be more resilient in dealing with the crisis. The development of Small and Medium Industries needs to get great attention from both the government and the community so that they can develop more competitively with other economic actors [15]. Government policies in the future need to be made more conducive to the growth and development of Small and Medium Industries. Therefore, the government needs to increase its role in empowering Small and Medium Industries in addition to developing mutually beneficial

business partnerships between large entrepreneurs and small entrepreneurs and improving the quality of their Human Resources. It takes a business development strategy of Prabumulih's signature Pineapple Leaf Fiber.

3.2 Discussion

The analysis is carried out to provide direction for Micro, Small and Medium Enterprises in achieving their goals or provide an indication of opportunities, threats, strengths and weaknesses that must be faced or minimized to meet the desired income.

3.3 Opportunity

Currently, information and communication technology is increasing, the industrial era 4.0 is felt to be increasing technology systems that can facilitate various human lives, including in the business world. Information technology is one of the tools used to promote goods and services produced by micro and small businesses from various social media with various digital marketing. With digital marketing, interest in buying goods and services will be higher. Digital marketing for the marketing of micro and small business products aims to promote and market micro and small business products and services in order to attract consumers to make purchases. Digital marketing is also a strategy that must be applied by every business, including micro and small businesses that want to survive in the midst of the dynamic development of digital technology today, one of which is the promotion of micro and small business businesses. In the past the business world relied a lot on television, radio, telephone, and billboards, now the business world can use social media and search engines to introduce products.

One of the advantages of digital marketing or digital marketing, is not only effective in capturing traffic and conversions, but also more efficient in terms of costs. Content marketing costs more affordable than advertising on television. Based on a survey conducted by a number of digital marketing experts, content marketing is three times more cost-effective than traditional marketing methods. For this reason, the business world, including micro and small businesses, must be able to promote and market their products using digital media. Business actors who do not implement digital marketing will tend to find it more difficult to compete, gradually being abandoned by consumers because currently consumers are more often looking for, ordering, and buying goods and services online without the need to come to the place of business [16].

3.4 Threat

In the era of the Covid-19 pandemic and in the future, business competition at the lower middle level is increasingly fierce in competition for the market. Challenges and obstacles do not only come from fellow Micro, Small and Medium Business actors, but also apply to large business actors, both from within and outside the country. Tight business competition, especially for Micro, Small and Medium Enterprises in Indonesia, including Prabumulih City, is a dynamic that cannot be avoided. Business competition among Micro, Small and Medium Enterprises occurs when producing goods that turn out

to have similarities with goods produced by other Micro, Small and Medium Enterprises. This has resulted in the form of competition that will become increasingly competitive in line with the various breakthroughs made by the Micro, Small and Medium Enterprises.

3.5 Strengths

Existence of Micro and Small Business Supporting Institutions

One of the supporting institutions for the development of micro and small businesses in Prabumulih City (Central Rambang Kapak District, East Prabumulih, South Prabumulih, West Prabumulih, North Prabumulih, Cambai), especially those that are managed by the poor are the existence of Bank and Non-Bank Financial Institutions, namely Cooperatives. Which provides various loan and savings/saving schemes or serves the needs of other micro and small businesses. In 2018, the number of Commercial Banks, Savings and Loans Cooperatives and other Cooperatives in Prabumulih City was 19 units each; 8 units; and 2 units.

Availability of Business Facilities and Infrastructure

One of the supporting facilities and infrastructure for the development of micro and small businesses in the Prabumulih Region, especially those cultivated by the poor, is the existence of markets, both traditional markets and modern markets, where these markets can accommodate products and services produced by micro and small businesses. The largest number of traditional markets is in Cambai District, which is 4 units. Meanwhile, the largest number of supermarkets is in Prabumulih Timur District, which is 1 unit. Traditional markets grow into a source of income that encourages the economic development of rural communities [17].

3.6 Weakness

Not yet Optimal Coordination Between Related Agencies/Agencies

In its implementation in the field, coordination between stakeholders in Prabumulih City is still not optimal. Coordination is intended so that various programs have synergies so that they become more effective, including ensuring that programs are executed according to design. This can be seen in the determination of focus and targets for poverty alleviation in the Prabumulih Region. As a result of the focus and targets that have not been optimally coordinated, it is often found that program synergies between related stakeholders are often not optimal. Good communication between stakeholders will facilitate the implementation of policies that are in accordance with the goals and objectives that have been determined at the time the policy was made. If the goals and objectives of a policy are not focused or even known by the target group that is the object of poverty alleviation, it is likely that resistance from the target group will occur. Thus, the coordination of the implementation of various poverty reduction programs is the key to success in achieving the goals [18].

Not yet Strong Institutional Support for the Poor

One of the supporting institutions for the poor who already have micro and small scale businesses in Prabumulih City is the existence of business groups or business

clusters. One of the disadvantages of clustered industrial sectors is that they tend to only enjoy the benefits of the same location (external economies). Business actors have not maximally utilized the network to work together (joint action) to solve the problems they face. In addition, in Prabumulih City there is also no one-stop service center that serves all the needs of the poor, whether they already have a business, work in the informal and formal sectors and are still unemployed. So far, the poor still have difficulty accessing various information related to poverty alleviation efforts carried out by the Government, the business world and the community in general [19].

Powerlessness of Micro and Small Enterprises

In general, micro and small businesses in Prabumulih City, especially those that are managed by the poor, are still powerless, especially in terms of entrepreneurial behavior, capital, human resources and technology adoption. As an illustration, the entrepreneurial characteristics of the micro-scale pineapple fiber cloth and pineapple cake entrepreneurs in Prabumulih City are still low, especially in terms of self-confidence, task and result oriented, leadership, and originality. Meanwhile, future-oriented and willing to take risks in the medium category, but tend to be low. Most of them do not have the confidence or confidence to develop their business, including participating in exhibitions/bazaars, because the most important thing is that their business runs every day and the capital turnover runs smoothly even though it does not generate large profits. Most business actors do not participate in exhibition/bazaar activities because the local government does not invite business actors to participate and for business actors these activities are not very useful. Without having to take part in exhibitions or bazaars, the business continues. Task and result oriented are also included in the low category. Recording financial statements is not considered to have an effect on its business because the most important thing is that every day it can generate profits even though it is small. Promotion in business development only relies on word of mouth promotion because promotion through the media requires large capital, while the capital owned is still limited [20].

Limited Support for Poor Community Empowerment

Mentoring activities for micro and small businesses in Prabumulih City, especially in the sub-districts of Rambang Kapak Tengah, East Prabumulih, South Prabumulih, West Prabumulih, North Prabumulih, Cambai are still limited or not running optimally. This can be seen from the products of micro and small businesses that are still not innovative, product quality is still low, product packaging is not yet attractive, there are still at least micro and small businesses that use digital marketing to increase their sales turnover and limited access to capital. The mentoring activities are not yet optimal, mainly due to the limited number and capacity of the Facilitators, both from the private sector and government agencies/institutions. Accompanying micro and small businesses that will be running or those that are already running is a job that requires physical and mental resilience. Considering that each Facilitator has limited capacity, synergy between facilitators is needed through teamwork to resolve any existing problems. For this reason, the existence of a business development agency or Business Development Service Provider (BDS-P) is important as an umbrella in finding the strength of their position as consultants for the poor.

Misperceptions of the Poor in Interpreting Aid

Related to the implementation of poverty reduction programs, the poor people's misperceptions, especially considering government assistance in poverty reduction programs aimed at reducing the burden on the poor are permanent (continuous), even though the assistance is temporary until the poor can be lifted from their poverty level. Another misperception, especially in the program to increase the income of the poor, is that the provision of loans for business development is considered as a non-refundable grant, even though the loan is a revolving fund to be returned and can be re-rolled back to the poor who have businesses and are in dire need. The limited ability of the poor in terms of finances causes funds to be used for urgent needs, such as seriously ill children and others, so it is necessary to provide a buffer fund that is included with program assistance funds.

4 Conclusion

Pineapple leaf waste can be processed into pineapple leaf fiber to be used as handicrafts with economic value. Pineapple leaf fiber can also be spun into yarn to meet local and international market demands. Through community empowerment, Micro and Small Enterprises and the role of the government, pineapple leaf waste that has been processed and innovated can increase people's income. The existence of supporting institutions for Micro and Small Enterprises can ensure the sustainability of this business. Information technology is one of the solutions that must be used in promoting pineapple leaf fiber crafts to various social media with various digital marketing. However, business competition at the lower middle level is getting fiercer in the competition for the market. In its implementation in the field, coordination between stakeholders in Prabumulih City is still not optimal and needs to be improved.

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