

Local Wisdom and Green Economy: The Integration of Farming and Village MSMEs

Moeljadi^{*1}, Wahdiyati Moko¹, Risna Wijayanti¹, Mochamad Ali Imron²

¹Department of Management, Faculty of Economics and Business, Universitas Brawjaya, Malang, 65300 Jawa Timur, Indonesia

²Department of Management and Humanities, Universiti Teknologi PETRONAS, 32610 Bandar Seri Iskandar, Malaysia

Corresponding Author: moeljadi@ub.ac.id

Abstract — Without planning that is integrated with the environment, increasing production and consumption utilizing natural resources in the village will give negative excesses to nature. Agriculture and village MSMEs will not be able to last long if the previously beautiful nature is not preserved, because beautiful nature is a strategic advantage for rural communities to support the community. Through the involvement of the Forest Management Village Partnership Institute and Perhutani orderlies, there is hope for the Jabung village community to not only emerge as a short-term economically superior village but can become a role model as a village with a business that is integrated with the environment so as to produce a sustainable livelihood. Of course, the social potential of rural areas in the form of collaboration of local wisdom also needs to be utilized to show the advantages of Jabung village which is integrated in maintaining the sustainability of its business and nature. The previous research and community service that has been carried out by the FEB-UB Team has opened the understanding of the people of Pandansari Lor Village, Jabung District, Malang Regency to increase the value of village business. Through assistance and assistance in increasing village businesses, advancing village tourism, establishing collaboration of village elements, integrating village businesses to providing Appropriate Technology has helped the Jabung village community in general as a mentoring partner to increase community income. The business development of Jabung village from relying on natural cultivation needs to be developed into a more integrated and more modern village business framework that provides hope for the people in the village to improve their living standards and be sustainable, so it needs to be integrated with the green economy. The purpose of this study is to formulate a framework for the implementation of village business development that is integrated with environmental conservation armed with meta-research on agricultural development and village MSMEs to reach a green economy perspective utilizing the collaboration of compounds and local wisdom. The location of the village that was used as the object of research was pandansari Lor village, Jabung.

Keywords — Green Economy; Sustainable Business; Creative Industry; Village MSMEs; Village Agricultural Business.

1. Introduction

There are concerns that the situation of village business progress will cause negative excesses in the preservation of the nature around the village, which appears to be realized by the Wonoasri Forest Management Village Partnership Institute (LKDPH) and perhutani orderlies who serve in Jabung village. LKDPH realizes that the process of cultivating tree boilers threatens forest sustainability because of the necessary logging (deflating) process, in addition to having water absorption and nutrients that are not good for the sustainability of the land planted in the long term. LKDPH together with Prof. Moeljadi departed from these concerns and then together found a way out in the form of coffee cultivation and intercropping as a better method to maintain the soil's ability to absorb rainwater and nutrient sustainability. Mantri Perhutani also added that in addition to focusing on increasing the benefits of tree boilers, it is also necessary to integrate existing agriculture with more diversified crops, including by planting fruit trees and wood-producing trees because they have better water absorption and nutrient maintenance compared to tree boilers which

are plants tubers can not be as dense as tree plants (Mehraban & Ickowitz, 2021). Land clearing for new businesses in the village tourism area carried out by Jabung village to create village businesses that are integrated with the development of other new business land also has the potential to cause environmental damage to bring disasters if not balanced with natural sustainability planning which Established. (Moeljadi, 2021) New land cleared will be prone to bringing landslides because it does not have good water infiltration if it is not considered the area used as an absorption bag and the preservation of the strength of the surrounding soil (Dash et al., 2022; Martinho, 2018)

The rural area in Jabung, which is supported by the abundance of natural products and natural resources, has not made guarantees for the community to live a prosperous and prosperous life (Rus et al., 2019), Poverty in a village environment that is rich in natural products is closely related to the ability to utilize natural resources that are not optimal and unwise related to handling potential disasters. Based on these considerations, a framework formulation is needed to compile a plan for the integration of village businesses with nature conservation

efforts, which is in accordance with the needs and contextual situation of the Jabung village community.

Based on the results of previous research (Moeljadi, 2021), to increase selling prices, farmers must process their agricultural products with SMEs in villages and create appropriate technology (TTG). And the TTG created has been operationalized and can reach an optimal scale which is expected to increase the production capacity of SMEs to 10 times the previous production, so that the absorption of agricultural production (cassava) can increase in utilizing the absorption of agricultural products (demand) from businesses driven by SMEs. If the absorption of agricultural products is greater due to the demand from village SMEs created, the price of cassava commodities will increase. Farmers' incomes will increase, especially with an increase in production, because they no longer depend on the middleman market as the sole buyer who makes prices fall.

The urgency of increasing the selling price of farmers departing from the conditions of the Covid-19 pandemic has resulted in the village economy being paralyzed because the urban economy that has been supporting it in terms of absorption of village commodity supplies has fallen apart due to the pandemic. The income of rural people fell as the urban economy fell, as it no longer had the purchasing power for the supply of products from the countryside. Reducing social interaction as a step to stop the spread of the virus has an impact on reducing community consumption activities which are closely related to gathering activities (Mehraban & Ickowitz, 2021). This is evident in many rural communities who have lost their jobs due to their business activities that are no longer earning during the pandemic. The unemployment rate in Malang increased significantly from 3.7% jumping drastically to 5.49%, in contrast to the increase in 2018 to 2019 which was at odds of 0.55% (BPS, 2021). This unemployment rate is largely contributed by unemployment in rural areas that are unable to adapt to remote business using digital technology (Chand et al., 2022), including what happened in the rural environment of Jabung District, Malang Regency.

The pandemic crisis exacerbated the poverty that occurred as a result of a business system in which the distribution channels of sales of agricultural products and price information were controlled by traders. This condition occurs because farmers as the most disadvantaged party where the selling price of agricultural products cannot cover the costs incurred as capital. The price of fertilizers and seedlings rises steadily and the selling price of the crop is always cheap so that the yield cannot cover the cost of production. The price of cassava continues to be low, and when it is only Rp. 900,-/kg

(retail price in the city market is Rp. 5,000,-/kg), while farmers cannot do much because so far they do not have a bargaining position in pricing, (bargaining) and are unable to face middlemen who control factory price information (Moeljadi, et al., 2021). Thus, the urgency to increase the bargaining power of farmers is not rooted in the pandemic crisis alone but is also based on problems that have long been deeply rooted in Jabung village. This also implies that, in addition to the need for efforts to ensure environmental conservation that is integrated into agriculture and MSMEs in Jabung village, it is also necessary to consider how this process does not hinder and must instead support village communities to increase their bargaining power.

The development of Jabung village business through the production of local agricultural commodities with me absorbing the increasing supply should improve the quality and welfare of the community while reducing the negative impact on the environment. More efficient production will reduce production waste because there will be less and less residual raw materials / production results that are forced to be disposed of due to rot. Similarly, MSMEs developed in village tourism areas should provide motivation for rural communities to continue to maintain natural beauty, because beautiful and sustainable nature is one of the important sources of their livelihood (Poddar et al., 2022).

Building a village business basically forms an alternative business network system and develops potential. These alternative business networks should be those formed driven by local communities independently (Kautonen et al., 2020; Yoruk et al., 2021). Because the alternative network that is formed is a lively interaction between several alternative actors quickly (leaps), and the creation of community initiatives to build collaboration equally brings new ways of running a joint business is very necessary (Ali Imron, 2021; Alkirom Wildan et al., 2021.) Citing the investment climate direction conveyed by Moeljadi (2021) in the development of SMEs, that the investment system should ideally be carried out in a mental and compound manner. Sejiwa means the similarity of vision and a sense of peace of mind to achieve common goals, while compound is the awareness that to achieve these goals, stakeholders are faced with various potentials and interests that need to be highlighted and collaborated (Chee et al., 2019). Thus, efforts to integrate village businesses with the green economy need to be approached by utilizing the collaboration of compounds and local wisdom of village communities (Hidayati et al., 2016).

Based on the problems previously stated, a framework is needed to develop a formulation of the integration of village agriculture and MSMEs managing

village agricultural products with environmental conservation efforts that utilize the collaboration of compounds and local wisdom of Jabung village. Based on these considerations, the title of this study is “Integration of Green Economy in Farmer Businesses and MSMEs Managing Village Farm Products Utilizing The Collaboration of Compounds and Local Wisdom (A Meta Research Approach and Contextual Case Study of Jabung Village)” The location of the village used as the object of research is Pandansari Lor village, Jabung, as is a village area that is highlighted to face the risks of natural sustainability from development actions the village business to be carried out as previously stated.

2. Literature Review

2.1 Village Environmental Ecology

Environmental science is a field of study that refers to many disciplines for the study of how the earth and living things work. The science of environmentalism should not be viewed as a mere discipline but rather a real social movement needed to improve the environment as well as all planetary biota, or living things. Ecosystem health is a major part of ecology because ecosystems include all living and non-living things in a particular environment and their relationships. Ecosystems are communities of species that interact with each other and with their physical environment. In an ecosystem, the transfer of energy from species to species in the form of food or prey, and this energy transfer works best when all members of the ecosystem are present and healthy. The earth has always provided a way to support the health of ecosystems so that the balance of nature is essential in the so-called fragile ecosystems, where the system has few species or occupies an easily destroyable habitat (Jia et al., 2022).

The term biosphere refers to the part of the earth that contains life. The biosphere includes the lower atmosphere, which is called the troposphere, plus the planet's surface, deep soil, and deep sea. Today, humans in almost every part of the world, no longer interact with nature as they used to. Communities have separated themselves from most ecosystems and are increasingly focused on meeting economic needs, including rural communities. Villages with a modern outlook also tend to negatively affect ecosystems in ways that the earliest civilizations did not do. This negative effect is mainly due to population and industrial growth. Overall, the environment is constantly changing alarmingly. Carbon dioxide (CO₂) emissions are being highlighted as an environmental disease as levels of this greenhouse gas in the atmosphere show a huge increase in population, vehicle use, industry, and deforestation. The most dramatic effect of rising CO₂ levels is related to climate change, in

particular global warming. Global warming is an increase in the average temperature of the earth's atmosphere due to increasing greenhouse gases caused by human activities (Huang & Chen, 2022).

2.2 Green Economy

The mindset of the village community who feel sufficient in the midst of the abundance of potential natural products needs to be changed, because in fact the abundance of natural products does not guarantee the prosperity of the community because nature is extracted and not cultivated wisely will bring natural damage to natural disasters (Liu-Lastres et al., 2020; Wijaya & Furqan, 2018). The Green Economy, or sustainable economy, comes from the realization that the earth cannot continue to support humans if they reproduce and use resources at their current levels. Individuals can make green lifestyle choices to reduce waste, recycle waste, and conserve natural resources. Certain individuals will make a stronger commitment to preserving the Earth by following the principles of deep ecology. Meanwhile, the causes of environmental damage have become the focus of government and industry after decades and become the mainstream of politics, lifestyles, and even industrial decisions (Fabra, 2021).

The enforcement of the green economy concept in village businesses depends on the commitment of people and businesses to reuse, reduce, and recycle. These things may seem easy on the surface, but they will require a lot of scientific, technical and well-managed debriefing to find energy-saving ways to turn waste materials into new products (Castro-Santos et al., 2021; Jeevadason et al., 2022).

Due to increased awareness of environmental issues and the pressure of targets to reduce carbon emissions, the demand for environmentally friendly business practices has grown into the need for a small business response to climate change. These eco-friendly innovation activities are expected to provide "lower consumption of natural resources, sustainable new energy generation methods, and new practices and products that environmentally friendly" (Ghoddusi et al., 2019; Martinho, 2018; Utomo et al., 2021). MSMEs are predicted not only to deliver this agenda but also to create jobs and wealth in the process of safeguarding "valuable and traditional rural locations" (Fakhrunnas et al., 2019; Mehraban & Ickowitz, 2021).

2.3 The Concept of Green Economy in the Village Agriculture Sector

Sustainable agriculture has become synonymous with organic farming or organic farming because they both seek to protect the environment while producing healthy food.

Today organic farming, which is the growth of food crops or animals without the use of pesticides or artificial growth additives, usually consists of small-scale farms serving the local market. Sustainable agriculture uses the same principle but on a much larger scale. Sustainable agriculture seeks to produce the same healthy food produced by small farms but also to change the way agriculture affects the global environment. Sustainable agriculture seeks to reduce the use of fossil fuels, conserve water and energy, and reduce or eliminate the use of pesticides and chemical fertilizers—all on a national or global scale (Dash et al., 2022; Mandal et al., 2019).

Sustainable agriculture seeks to reverse the agricultural trend of large enterprises by using only the methods that cause the least environmental damage or possibly improve the environment. Sustainable agriculture has two additional objectives (1) to make a profit and (2) to improve the lives of people who choose the method of integrating their efforts with the preservation of nature. Sustainable agriculture is better for soil health and saves water. This allows the village to grow crops without spending much land and allows people to grow more food for a longer period of time than is done with more wasteful types of agriculture (Mandal et al., 2019; Martinho, 2018)

Sustainable agriculture is also referred to as low-input agriculture because it consumes less energy, water, and non-renewable resources than conventional agriculture. The three main focus areas for achieving low-input goals are water conservation, soil conservation, and pest control. Water conservation involves the use of more water-efficient crops and irrigation systems while reducing dependence on groundwater and surface water and reducing wastewater. Sustainable agriculture is also driving a decline in meat production, which uses water inefficiently, and dietary changes to more energy- and water-efficient foods. Soil conservation involves increased use of perennial crops, crop rotation, and organic and landscaping fertilizers, ground cover, and limited use of processing. To conserve the land, sustainable agriculture also tries to reduce overgrazing, road construction, and irrigation that drains natural water. Polyculture, the growth of mixed plants, also serves to save water and soil (Mehraban & Ickowitz, 2021).

2.4 Application of Green Economy to Small Businesses (MSMEs)

(Poddar et al., (2022) explores rural entrepreneurship, although the initial drivers were not in principle economic in nature, every business adopted pro-environmental behavior, by identifying entrepreneurial opportunities, then enjoyed economic benefits as a result. These include cost reduction, morale improvement and internal relations, better external relations and the development of new

markets, new products, or new opportunities. Marketing strategies and activities are critical, with business owners feeling that a clear advantage has been gained from promoting environmental action – and from working with customers, suppliers, and other companies to do so.

Village businesses that benefit from environmentally friendly efforts are seen in the movers (community aspects) but also in the impact of environmentally friendly innovations to save on material, distribution, and transportation costs, given the transportation problems in rural locations costs money. The process of environmental innovation in rural small businesses shows a relationship between motivational factors, pro-environmental behavior, innovation, and business growth (Dash et al., 2022).

2.5 Green Economy Concept in the Utilization of Alternative Materials

Alternative materials come from three main processes: (1) recycling, (2) substitution, or (3) synthesis. Recycling common materials such as paper, plastic, wood, textiles, and glass reduces the amount of new supply the industry must produce to meet consumer needs. Recycling then directly reduces the number of natural resources harvested from nature and indirectly lowers the ecological footprint by reducing fossil fuel use, greenhouse gas emissions, and energy wastage. Replacing materials involves replacing scarce or almost depleted natural resources with abundant materials. The third technology, synthesis, usually utilizes biological processes—the reason is called biosynthesis—that require less energy and produce less hazardous waste than conventional chemical synthesis (Maczulak, 2010).

Reclamation is a type of reuse in which a person searches for discarded material and recovers it for a specific new purpose. For example, very old houses at the turn of the century under renovation received a visit from a reclamation company that saved rare wood, marble, granite, and metal fittings. This type of reclamation is sometimes called salvage or, in building design, architectural reclamation. Usually reuse involves any activity to use an item that would otherwise require some effort to discard. Reclamation, on the contrary, usually involves the active search of a particular ingredient for one purpose (Maczulak, 2010).

Alternative resources consist of any material that minimizes the depletion of natural resources. Alternative materials can be synthetic substances or biological substances. There are two types of biologically created materials: (1) substances from newly discovered sources or (2) substitute materials for natural resources. Because of the difficulty of finding alternatives to plastic substitutes, environmental scientists suggest that the best way to

reduce the plastic footprint on Earth is to use less plastic. This can be done by reusing plastic bottles and containers, which has raised new concerns due to the chemicals that are detached from the plastic with its reuse sustainable (Maczulak, 2010).

2.6 Building Independent Villages in Implementing a Green Economy

Village communities that care about sustainable efforts adopt several activities that extend the future of their village business. These activities can be described generally as reducing, recycling, reusing, simplifying, sharing, and choosing not to use or support acts of destruction of nature. All these forms of conservation help people stretch their resources to last longer. Sustainability only occurs if people are aware that environmental issues are as important as village industry problems in ensuring the continuity of their hidup (Maczulak, 2010). The character that characterizes an independent village in implementing a green economy is described in the following table:

Table 1. Indicators for the Implementation the Green Economy

Indicators	Form of Implementation
Pollution prevention with	Reduction in the use of packaging, especially disposable; biodegradable packaging and products; low emission low discharge process.
Waste prevention	Reduced use of packaging; reuse; the use of waste as a raw material for the business.
Habitat protection.	Protected wilderness; the establishment of a zone free from planting; environmental maintenance of wildlife; pollution prevention and minimization of the use of chemical pesticides
Restoration of damaged habitats.	Bioremediation; reclassification of natural existence; pollution cleaning.
The most efficient methods of using resources	Agriculture lacks land; sustainable forestry; alternative materials for fossil fuels; waste-to-energy process
Population stabilization	Implementation of family planning; birth control population education policy; reducing poverty; elevating female degrees
Utilization of renewable natural resources	Utilization of solar, wind, geothermal, or tidal energy; waste recycling; resource reuse and reclamation
Integration of nature conservation with business	Locally produced products; exchange of energy waste between industries; reduction of the use of packaging; emphasis on quality over quantity; efficiency of meetings in management; emphasizing long-term profitability to offset expectations of short-term profitability.

Source: (Dash et al., 2022; Mandal et al., 2019; Martinho, 2018)

The development of green economy independence should not only be based on the guidance of physical activities, but also make it a cultural movement. Cultural indicators that need to be upheld in forming an independent society in the green economy include Embracing businesses rather than fighting them to solve environmental problems. Shifting the burden from recovery efforts to the prevention and minimization of things that are harmful to the environment, and using scientific facts to make decisions rather than exaggerated emotions or information.

2.7 Building Synergy of Village Business Elements Based on the Concept of Compounds

Building a modernization of village businesses needs to start from forming an alternative business network system and developing potential. If the previous venture network was controlled by people who had the status quo, the alternative venture network formed was driven by "Local Actors" (Sonnino and Marsden, 2006). Because the alternative network formed is a lively interaction between several alternative actors quickly (leaps), and the creation of community independence to build collaboration equally brings the "new business pool" to life is very necessary. Usually, this kind of transformation is initiated and supported by the establishment gained from the previous system (familial ties, enlightened influencers and others) (Schneider and Niederle, 2010).

3. Method

This research uses a qualitative method approach of critical analysis of drawing conclusions using meta-analysis as the parent method. Qualitative approach to case study analysis along with empirical research approach descriptive analysis as a procedure carried out as material to complete meta-analysis. Meta-analysis combines a variety of primary studies to explore the findings of previous studies in order to produce synthesis with a deeper depth of analysis (Fisher & Stuhlmacher, 2011; Yin, 2009). Meta research seeks and describes connectedness based on differences between the results of existing studies. Researchers get a research result from the results of existing research by providing new explanations based on a more in-depth synthesis of previous studies.

This study method uses meta-research with secondary data references from other quantitative research results coupled with the conduct of FGDs on village officials, LKDPH and forestry parties to contextualize the application of Green Economy in rural areas of Jabung village, accompanied by special interviews with key persons who are spread representative representing various groups for the adequacy of data triangulation (Heesen et

al., 2019). The data collected are in the form of interview data, quantitative study data for benchmarking and secondary data (including literature / literature studies and taking data from existing research results (stock taking), then the data is processed descriptively and analytically. Analysis uses secondary data and primary data (data that has been collected and analyzed using qualitative methods, en fifo or others). Meta-analysis is to analyze an analysis that has been done. Any data collected and the results of other studies that were carried out were analyzed. The above analysis is formulated to understand the "intact" conclusions to obtain reliable results (Wilson, 2010).

The rural location that is used as a research object that will be developed for the integration of village businesses with the environment through the Green Economy approach is Jabung village, as a follow-up to previous research and service oriented towards increasing the bargaining power of local farmers towards the market by increasing the supply of farm production absorbed by the local SME industry supported by appropriate technology (TTG) (Moeljadi, 2021).

4. Discussion

4.1. Overview of Pandansari Village

Pandansari Lor Village is a village is one of the villages located at the foot of Mount Bromo. The village was formed in 1930 with an area of 470,485 hectares. The typology of the village is farming. This topographical condition makes most villagers choose to grow crops in the fields. Very common and abundant crops of yield over the years are cassava and corn. This plant is the main crop that becomes the life hanger of more than 80% of the people of Pandansari Village. Pandansari Lor Village has a village administrative boundary to the north of Gadingsekar Village, south of Sukopuro Village, east of Taji Village and west of Sukopuro Village. Pandansari Lor Village has several potential natural tourist destinations including Coba Jahe, Coban Tangkil and Telaga Sari Garden which are café tourist destinations in the river. Visitors are presented with the sensation of eating and drinking in the middle of a clear river flowing below.

The village has a land area of 470,485 hectares. The village land is mostly moorland/fields covering an area of 247,065 hectares which is very productive to plant corn and cassava as the most dominant crops. Then followed by food crop fields covering an area of 127.67 hectares, namely for rice crops. Next followed is the land utilized for Village Cash Land (TKD) covering an area of 24.86 hectares, an area for settlements covering an area of 61.30 hectares, a plantation area of 6 hectares and the rest is for public facilities covering an area of 3.60 hectares. Geographically, this village is still quite close to urban

areas, where the distance with the district capital is 8 km and the distance with the center of the capital of Malang Regency is 40 km and the distance with the provincial capital is 100 km which can be reached approximately 1.5 hours because there is already toll road access and daera entrance facilities there is Abdurrachman Saleh Airport which is about 15 km away. This very strategic geographical position makes Pandansari Lor Village as one of the tourist destinations for visitors to Bromo.

The demographics of Pandansari Lor Village have a sex ratio of 1.2 where the male population is 2,242 people and women are 2,752 people. The total population in 2022 is 4,994 people. With an area of 470,485 hectares, the population density of the village is 1,061/km². The number of heads of households is 1,558 families. Economically, as many as 40.10% of the population of Pandanrejo Village is below the poverty line (entering pre-prosperous families) or as many as 625 households. This number is very large and is an important problem for the village government and the Malang Regency Government. The demographic structure of the population is very large in the middle (productive age), this is a demographic bonus for the village. Judging from the type of work of the population, it is dominated by farmers and farm workers as many as 2,342 people or 54% and students as many as 1,441 people or 33.20%. This shows that the focus of people's economic income is in the agricultural sector. So, when the industrial sector that absorbs people's agricultural products falls, the impact will also decrease immediately. The community is very dependent on the selling price of produce to the industrial sector around the village.

Pandansari Lor Village has several natural resource destinations that can be developed into sources of economic growth, including coban ginger, coban tangkil and coban keceh. In the economic development of this village, in 2021 one of the village entrepreneurs developed a tourist destination in the form of Taman Sari Garden which contains culinary tours in a unique place, namely the river. This destination began to be supported by several local village products that were entrusted to the TSG café. This TSG has a very strategic role for the economic growth of the village because: 1) a very unique type of tourist spot, namely eating on the river, thus providing a unique experience for visitors to then become viral for the community, 2) forcing village resources to develop from agrarian ability/ competence to achieve industrial competence and that even tertiary service competencies, so that many local village products appear, and 3) open up the interaction of the village community with the community outside the village, thereby improving the image and prestige of the village to the local and regional arenas.

There are many potential natural resources that can be developed as tourist destinations, supported by the

geographical position of the access road to Mount Bromo. Regionally, Pandansari Lor Village is passed by tourists who leave and return from Mount Bromo tourism, thus giving them access to be able to stop by at Pandansari Lor Village. In terms of tourist flow, visitors to Mount Bromo who return from tourism in Bromo on the way back can stop by the village. The right visit time to some coban is 10.00 to 14.00 WIB. So, it will be very suitable for the villagers to welcome the arrival of tourists. Judging from the historical aspect, Pandansari Lor Village also has a long history, where this village is the most strategic place for Indonesian people to fight. In fact, the naming of Coban Jahe comes from the Pejahe (death) of Indonesian guerrillas who died in this village in the battle at Pandansari Lor.

This change in the profile of the village community that is moving shows that there is a change in the village community in several aspects. First, the economic aspect is the emergence of several productive economic activities based on local agricultural products. The falling price of cassava has forced the residents to process themselves into several types of local specialties, thereby increasing the added value and income of the family, which at the same time reduces the supply to industries/factories in the surrounding villages, thereby driving the increase in the selling price of cassava by the community. In 2022, there were 5 cassava-based processed industry business actors. So, people began to learn to make local products that would be sold either at tourist destination locations, road access to tourist villages or online. Second, the community has begun to realize that Pandansari Lor Village has the potential for natural resources that can be developed into a massive and serious tourist destination so that it becomes a tourist attraction to the village and at the same time creates access to promotion of local village products to tourists. This encourages the enthusiasm of the village community to continue to innovate better local products. Third, people began to realize the importance of diversifying food crops from cassava and corn, there began to be a desire to develop coffee plants. This diversification has 2 objectives, namely, to reduce the abundance of corn and cassava crops which have an impact on excess supply so that prices fall and increase people's income from coffee crop products while providing beverage raw materials for tourists.

4.2 Economy and Local Wisdom

The geographical and demographic conditions of Pandansari Lor Village, which is under the foot of Mount Bromo, encourage the village community to carry out various local wisdom activities to survive and develop. Some of the local wisdom activities that have been carried out include 1) carrying out agricultural cultivation intercropping between forest production plants as staple crops and seasonal crops for they survive, such as corn and

cassava, so it is not surprising that Pandansari Lor Village is the center of cassava and corn. food, cassava skins and corn janggal to be processed into cattle feeding, so that the village has cattle as part of community investment, and 3) manages the potential of natural resources for tourist destinations while maintaining the function of preserving the surrounding nature, so it is not surprising that there are so many tourist spots in the dsea between Other Coban Jahe, Coban Tangkil, Coban Kecah and the artificial tours are taman sari garden (TSG). This local wisdom is nurtured because they believe that they should have the sustainability of life with the gift of natural resources that God has given them.

Pandasari Lor Village has a fairly large natural wealth of plants and is believed to be herbal medicines since ancient times. However, this potential has not been cultivated and used as an economic activity, because so far it has focused more on cassava and corn food crops. This can be seen from the number of business actors, both the agricultural, production and service sectors, who were chosen to be professions for the people of Pandansari Lor Village are still very small. The economic activity of the community is more prominent in agricultural economic activities in rice fields and fields for cassava and corn. The fulcrum of the community's economic activities is cassava farming and other field crops. In addition to farming, many of them are community members who have to become farm laborers because they do not have land to farm. This tradition continues for generations so that during the Covid-19 pandemic where the industrial economy experiences a condition of falling production, the price of crops, cassava, etc., also falls. This condition will obviously threaten the survival of the farmers. Their focus on the agrarian sector is extractively very high, so it does not have the ability to change. This condition must slowly be carried out a paradigma change, namely from the agrarian paradigm to the business economic paradigm, both industries that remain based on the agricultural sector.

The village has a land area of 470,485 hectares. The village land is mostly moorland/fields covering an area of 247,065 hectares which is very productive to plant corn and cassava as the most dominant crops. Then followed by food crop fields covering an area of 127.67 hectares, namely for rice crops. Next followed is the land utilized for Village Cash Land (TKD) covering an area of 24.86 hectares, an area for settlements covering an area of 61.30 hectares, a plantation area of 6 hectares and the rest is for public facilities covering an area of 3.60 hectares. Geographically, this village is still quite close to urban areas, where the distance with the district capital is 8 km and the distance with the center of the capital of Malang Regency is 40 km and the distance with the provincial capital is 100 km which can be reached approximately 1.5 hours because there is already toll road access and daera

entrance facilities there is Abdurrachman Saleh Airport which is about 15 km away. This very strategic geographical position makes Pandansari Lor Village as one of the tourist destinations for visitors to Bromo. The results of surveys and mapping in the field show that many local

plants are trusted and have been used as herbal medicines for sick residents. The mapping survey was carried out directly to the garden and interviews with village leaders and elders, namely Mr. Nur Salam, Mrs. Rahayu and Mrs. Sukarlik. Some of these herbs are:

Table 2. Identification of Types of Herbal Plants

No.	Plant Name	Benefit	Existence	How to use
1.	Red ginger	- Vertigo - Nauseous - Fever - Cough - Menstrual disorders - Cancer - Heart - Rheumatism - Colds	Small-scale self-cultivation	Pressed, boiled
2.	Citronella	- Body warmers - Palpable digestion - Colds	Small-scale self-cultivation	Pressed, boiled, taken the juice, mixed with palm sugar + cinnamon + cloves
3.	Temulawak	- Increase appetite - Body resistance	Small-scale self-cultivation	Grated or blended, drink the juice
4.	Meetreng	- Increase appetite - Removing cremation	Small-scale self-cultivation	Grated or blended, drink the juice
5.	Soursop leaves	- Lowers blood pressure - Diabetes	Small-scale self-cultivation	Boiled
6.	Leaves of luntas (can be mixed with temulawak and young pineapple leaves)	- Reduce odors - Body resistance	Small-scale self-cultivation	Boiled, drunk the juice
7.	Guava leaves	Diarrhea (young leaves)	Small-scale self-cultivation	Boiled, drunk the juice - Ground or chewed directly
8.	Bidara leaves	- Itch - Stomach	Small-scale self-cultivation	Boiled, drunk
9.	Black betel leaves	- Tumor - Cancer - Itch	Small-scale self-cultivation	Boiled, drunk (daily)
10.	Shallot	- Cough - Colds	Small-scale self-cultivation (erratic, more often buy at sellers)	Chopped, given eucalyptus oil, then placed on the forehead
11.	Garlic	Gout	Small-scale self-cultivation (erratic, more often buy at sellers)	Cut transversely laid on the soles of the feet two hours before bedtime
12.	Castor sap	Toothache	Small-scale self-cultivation	Peeled, put on the wound

Source: Site Survey, 2022.

5. Conclusion

The development of green economy independence should not only be based on the guidance of physical activities, but also make it a cultural movement. Cultural indicators that need to be upheld in forming an independent society in the green economy include Embracing businesses rather than fighting them to solve

environmental problems. Shifting the burden from recovery efforts to the prevention and minimization of things that are harmful to the environment and using scientific facts to make decisions rather than exaggerated emotions or information Building a modernization of village businesses needs to start from forming an alternative business network system and developing potential. If the previous venture network was controlled by people who had the status quo, the alternative venture

network formed was driven by "Local Actors". Because the alternative network formed is a lively interaction between several alternative actors quickly, and the creation of community independence to build collaboration equally brings the "new business pool" to life is very necessary. Usually, this kind of transformation is initiated and supported by the establishment gained from the previous leadership system.

References

- [1] Ali Imron, M. (2021). Economy in Times of Crisis: An Economic Analysis of the Energy Policy during COVID-19 Pandemic. *International Journal of Management Research and Social Science*, 8(2). <https://doi.org/10.30726/IJMRSS/V8.I2.2021.82011>
- [2] Alkirom Wildan, M., Ali Imron, M., Syarif, M., & Jakfar, A. A. (n.d.). *PALM OIL EXPORT MANAGEMENT AND DYNAMIC MACROECONOMIC*. <https://doi.org/10.17605/OSF.IO/S3GBF>
- [3] Castro-Santos, L., Filgueira-Vizoso, A., Baita-Saavedra, E., & Cordal-Iglesias, D. (2021). Economics of offshore renewable energy. *Energy-Growth Nexus in an Era of Globalization*, 233–242. <https://doi.org/10.1016/B978-0-12-824440-1.00005-9>
- [4] Chand, A. A., Lal, P. P., Prasad, K. A., & Kumar, N. M. (2022). Economics and environmental impacts of solar energy technologies. *Solar Energy Advancements in Agriculture and Food Production Systems*, 391–423. <https://doi.org/10.1016/B978-0-323-89866-9.00006-7>
- [5] Chee, H. L., Whittaker, A., & Por, H. H. (2019). Sociality and transnational social space in the making of medical tourism: local actors and Indonesian patients in Malaysia. *Mobilities*, 14(1), 87–102. <https://doi.org/10.1080/17450101.2018.1521124>
- [6] Dash, P. B., Naik, B., Nayak, J., & Vimal, S. (2022). Socio-economic factor analysis for sustainable and smart precision agriculture: An ensemble learning approach. *Computer Communications*, 182, 72–87. <https://doi.org/10.1016/j.comcom.2021.11.002>
- [7] Fabra, N. (2021). The energy transition: An industrial economics perspective. *International Journal of Industrial Organization*, 79. <https://doi.org/10.1016/J.IJINDORG.2021.102734>
- [8] Fakhrunnas, F., Imron, M. A., & Ekonomi, F. (2019). Assessing Financial Risk and Regional Macroeconomic Influence to Islamic Rural Bank Performance. *Global Review of Islamic Economics and Business*, 7(1), 049–055. <https://doi.org/10.14421/GRIEB.2019.071-05>
- [9] Ghoddusi, H., Creamer, G. G., & Rafizadeh, N. (2019). Machine learning in energy economics and finance: A review. *Energy Economics*, 81, 709–727. <https://doi.org/10.1016/J.ENECON.2019.05.006>
- [10] Hidayati, R., Sudaryono, Wijono, D., & Prayitno, B. (2016). Tourism Development of Historical Riverbanks in Jatinom Village. *Procedia - Social and Behavioral Sciences*, 227, 650–655. <https://doi.org/10.1016/j.sbspro.2016.06.128>
- [11] Huang, X., & Chen, X. (2022). A regional eco-compensation assessment framework for blue water scarcity based on the spatial effects of socio-economic factors. *Journal of Cleaner Production*, 368. <https://doi.org/10.1016/j.jclepro.2022.133171>
- [12] Jeevadason, A. W., Padmini, S., Bharatiraja, C., & Kabeel, A. E. (2022). A review on diverse combinations and Energy-Energy-Economics (3E) of hybrid solar still desalination. *Desalination*, 527. <https://doi.org/10.1016/J.DESAL.2022.115587>
- [13] Jia, L., Deng, Y., Hou, M., Li, Y., Ding, Z., & Yao, S. (2022). Pathways from the payment for ecosystem services program to ecological and socio-economic outcomes. *Ecological Indicators*, 144, 109534. <https://doi.org/10.1016/J.ECOLIND.2022.109534>
- [14] Kautonen, T., Fredriksson, A., Minniti, M., & Moro, A. (2020). Trust-based banking and SMEs' access to credit. *Journal of Business Venturing Insights*, 14. <https://doi.org/10.1016/j.jbvi.2020.e00191>
- [15] Liu-Lastres, B., Mariska, D., Tan, X., & Ying, T. (2020). Can post-disaster tourism development improve destination livelihoods? A case study of Aceh, Indonesia. *Journal of Destination Marketing and Management*, 18. <https://doi.org/10.1016/j.jdmm.2020.100510>
- [16] Mandal, S., Misra, G. V., Abbas Naqvi, S. M., & Kumar, N. (2019). Situational analysis of agricultural land leasing in Uttar Pradesh. *Land Use Policy*, 88. <https://doi.org/10.1016/j.landusepol.2019.104106>
- [17] Martinho, V. J. P. D. (2018). Interrelationships between renewable energy and agricultural economics: An overview. *Energy Strategy Reviews*, 22, 396–409. <https://doi.org/10.1016/J.ESR.2018.11.002>
- [18] Mehraban, N., & Ickowitz, A. (2021). Dietary diversity of rural Indonesian households declines over time with agricultural production diversity even as incomes rise. *Global Food Security*, 28, 100502. <https://doi.org/https://doi.org/10.1016/j.gfs.2021.100502>
- [19] Poddar, R., Acharjee, P. U., Bhattacharyya, K., & Patra, S. K. (2022). Effect of irrigation regime and varietal selection on the yield, water productivity, energy indices and economics of rice production in the lower Gangetic Plains of Eastern India. *Agricultural Water Management*, 262. <https://doi.org/10.1016/J.AGWAT.2021.107327>
- [20] Rus, R. C., Mamat, A. B., Hanapi, Z., Hasnan, K. A., & Nashir, I. M. (2019). Development of K-workers employability skills measurements indicators in agricultural sector in Malaysia. *Journal of Technical Education and Training*, 11(4), 56–66. <https://doi.org/10.30880/jtet.2019.11.04.007>
- [21] Utomo, S. J., Mayvani, T. C., & Imron, M. A. (2021). COAL ENERGY AND MACROECONOMIC CONDITIONS. *International Journal of Energy Economics and Policy*, 11(4), 426–432. <https://doi.org/10.32479/IJEEP.11214>
- [22] Wijaya, N., & Furqan, A. (2018). Coastal Tourism and Climate-Related Disasters in an Archipelago Country of Indonesia: Tourists' Perspective. *Procedia Engineering*, 212, 535–542. <https://doi.org/10.1016/j.proeng.2018.01.069>
- [23] Yoruk, D. E., Bunduchi, R., Yoruk, E., Crişan-Mitra, C., Salanță, I. I., & Crişan, E. L. (2021). Pathways to innovation in Romanian software SMEs: Exploring the impact of interdependencies between internationalisation and knowledge sources. *Journal of International Management*, 27(4). <https://doi.org/10.1016/j.intman.2021.100874>