Economic glocalization: A sustainable local food production system in Wonosobo Indonesia

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Abstract. Economic glocalization has been developed in the local food production system in Wonosobo. Glocalization is indicated by the existence of sustainability in the food production system and local empowerment. The aim of this study was to describe economic glocalization in the local food production system (carica and purwaceng) in Wonosobo. The qualitative method used in this study was based on the paradigm of constructivism with a phenomenological approach including knowledge, attitude and behavior. The result of this study showed that local products of carica (Carica candamrcensis) and purwaceng (Pimpinella pruatjan) were able to compete with global product capitalism. The impact of the glocalization of carica and purwaceng was to develop local economic institutions such as productive economic enterprises and cooperatives. In addition, economic glocalization in the local food production system in Wonosobo had also the effect of the increase production capacity, product development, market expansion, local economy and eco-tourism.

1. Introduction

Dieng, Indonesia is known as a producer of vegetables and fruits because it has fertile soil with a very high organic carbon content, a high cation exchange capacity, Ca and K content, and an adequate N, P, and Na content [1]. The main commodities produced there such as potatoes, cabbages, chilies, and tomatoes have been exported to other towns and even to other islands, and they were main source of livelihood for the local residents. Fortunately, Dieng also has a special and unique local product, carica (Carica candamrcensis) and purwaceng (Pimpinella pruatjan), which can only grow well in that area. This fact is also supported by evidences showing the products are unable to grow well or produce fruit in other regions with almost the same topography. Attempts have been made to cultivate carica...
plants in other areas such as on the slopes of Lawu Mountain in Karanganyar District, but it failed to thrive and its fruit had a different taste and aroma. For this reason, the plants can be included in the category of Geographical Indications. Along with eco-tourism development in the region of Dieng have led to increased demand of carica and purwaceng both local and foreign tourists. At the present time, the production of two processed products is developing rapidly, and their market distribution is continuing wider. The increase these products led to the formation of a local food production system in Dieng, Wonosobo. Thus, this system was used as a tool for the development of economic glocalization.

Glocalization has been described as the process of “creating a product or service that is directed at a global market but adapted to a local culture” [2] [3]. Glocalization, which involves the interaction of local and global cultures, creates heterogeneity in life. Based on the idea of postmodernists, glocalization has two sides of a reciprocal influence between global and local culture. On one side, the strength of identity of the local (traditional) culture means that the global culture is unable to eliminate the local culture, but on the other side, the global culture absorbs elements of the local culture. The phenomenon of glocalization in society has started a contestation between local cultures and global (capitalist) cultures [4]. Connecting global with local has subsequently posed a huge challenge for community development. Glocalization forces a community to evaluate the consequences of developing its region and repositioning the community in a global context [3] [5]. Hence, glocalization is a good illustration of the combination and connection of local and global contexts while continuing to maintain a significant contribution of different cultural communities and contexts [5]. Glocalization has been successfully used in various fields such as marketing, education, theology, and so on, as an effective and prudent way of utilizing global ability to fulfill local demand. This is one method for meeting these needs pragmatically. Glocalization is implemented to internationalize the crisis of communication which profits practitioners and researchers by evading the application of Western frameworks and interpretations in non-Western crisis situations [6] [7] This has been done by demonstrating the approach of a case that involves the multinational McDonald's Corporation and its foreign subsidiary, McDonald's Japan [8].

Community empowerment is an endeavor to improve the dignity and pride of communities that are unable to break free from the poverty trap and the shackles of underdevelopment. The success of community development is determined by the participation of the community and the role of the relevant government. One great innovation of the concept of glocalization is that local communities are not portrayed as passive “actors” in the process. This can be interpreted as meaning that local communities have the power to create their own vision about the interfusion of hybrid cultures, creole, and cosmopolitan cultures. This research describes a local community that has local potential and local traditions capable of developing glocalization to deal with the rapid infiltration of capitalism.

2. Research Methods

This research focused on the community living in and around the highland of Dieng, Wonosobo which is an area producing geographical indication plants namely carica and purwaceng. In this area, there is a great deal of local wisdom, which is densely packed with local cultural values and has managed to synergize with the potential of the beautiful natural surroundings to attract large numbers of tourists to this area. This research used a qualitative method which centered on an investigation of the ways people interpret a social life that continues to be guided by the synergy of culture and local wisdom in developing the existing local potential. The study follows the method that connect the subjective characteristics of a social reality, a method which is highly capable of generating an understanding of the perspective of stakeholders, and also enables the researcher to view various things as they are viewed by their subjects [9]. This research was a case study. According [10], the way of distinguishing the type of a research study is by identifying the type of research question that is posed from the start with respect to operational connections that require separate time tracking and do not simply depend on frequency or appearance. This research also refers to the opinion of [11] in which the researcher explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed...
in-depth data collection involving several sources of information, and reports the description of a case or case-based theme.

The data collection in this research refered to [12] in that the researcher collected and then organized and also analyzed the data about certain cases related to the problems addressed by the researcher so that the data can subsequently be compared or connected with other data (in multiple cases) while adhering to holistic and contextual principles. In this study, the researcher understands the potential of social behaviour occurring in an inter-relationship activity between individuals in a community, specifically concerning the extent to which the macroscopic structural factor and institutional factor influence the relationship between the individuals. The social behaviour that was studied to be understood in depth includes the aspect of local cultural values that have developed and local wisdom of farmers in line with the economic glocalization that was taking place to develop the potential of local food.

The primary data source for qualitative data is words and actions, while supplementary data includes documents and other sources [13]. The techniques for data collection used in this research were in-depth interviews with important community figures, participant observation of the daily lives of the farmers, focus group discussions involving stakeholders in order to seek an understanding of the data and information developing in the community, and a documentary study. In each case, the analysis is processed using an interactive model of analysis [14]. In this model of analysis, the three components of the analysis are data reduction, data presentation, and verification.

3. Result and Discussion

Efforts to prevent the emergence of local food products dominated by global food products are by building a sustainable local food production system. The development of a local food production system had been carried out in Wonosobo by integrating various potentials in the region including local institution, local wisdom, local government and society so as to create economic glocalization of local food products (Figure 1.).

![Figure 1. Model of the economic glocalization as a sustainable local food production system](image-url)
3.1. Carica and purwaceng plants as a product of Geographical Indication.

Local products in Wonosobo Regency that are able to compete with global products are Carica and Purwaceng. Both of these commodities are able to compete because they are products of geographical indications and are legendary plants. Carica is a small tree or shrub which is non-woody and similar to a normal papaya (*Carica papaya L.*), but it has more branches and the dimension of all the parts of the plant are smaller. Its average height is 1-2 meters, its stamen has a long stem, growing to a length of 15 cm, and its pistil is larger, with a short, hard stem. The Dieng papaya is oval shaped and measures 6-10 cm in length and 3-4 cm in width. A fruit that is ripe is shaped like an upside-down egg measuring 6–15 cm x 3–8 cm, with hard, yellowish-orange flesh and a slightly sour but fragrant taste, and a lot of seeds that are wrapped in a white, watery sarcotesta. The unripe fruit has a dark green skin which turns yellow as the fruit ripens. The seeds are black, copious, and densely packed. The fruit contains sap which gradually becomes less as the fruit ripens. This sap contains proteolytic papain [15].

The purwaceng plant, meanwhile, also grows only at an altitude of over 1,400 meters above sea level, and more specifically only in certain parts of the Kejajar Regency in Dieng, such as the village of Sikunang, Kejajar. The physical appearance of the purwaceng plant is like a small bush which exhibits a vine-like growth over the surface of the soil, similar to the gotu kola plant and mountain clover. It has small reddish green leaves with a diameter of 3.5 cm. This plant is usually processed into the form of a health drink for increasing stamina, mainly in the form of purwaceng tea, purwaceng coffee, and purwaceng milk. According to local farmers, purwaceng is believed to have aphrodisiac properties that increase male stamina. As a result of the development of various tourist objects in the Dieng region and the increasing number of visitors in this area, purwaceng has become more popular and in greater demand in other towns and cities and even abroad.

3.2. Purwaceng as a legendary plant that has been mythicized and supports glocalization

It is described as a legendary plant used as a tonic by kings and other members of the Javanese courts. In Indonesia, the use of medicinal plants or other plants with aphrodisiac properties is generally based on myth, belief, or experience. The purwaceng plant has been mythicized as a plant that has the ability to give men a stronger erection. Originally, this myth was only known in the mountain region where the purwaceng plant grew, but nowadays the myth has become more widespread as a result of the increasing number of tourists visiting the Dieng area.

In terms of people’s beliefs, many people believe that a wild plant that can only grow in a particular place must have medicinal properties. This belief is still upheld by rural communities in Indonesia. In terms of experience, people who have visited the various tourist objects in Dieng return home with stories to share with their friends and families about the purwaceng drinks. These stories are passed on by word of mouth by the purwaceng drink sellers in Dieng, and this has evidently had an impact on the demand for the purwaceng plant packaged in the form of a drink of tea or coffee.

3.3. The role of Local institutions, local wisdom, local government and local community

Local institutions and local wisdom that have existed in the community contribute to the survival of local products in line with many global products in the face of modernization and globalization. Local wisdom originating from local communities and combined with local potential can be used as an example in facing today's global life. In terms of environmentally sound development, the Dieng community is well aware of the importance of nature for the sustainability of future generations. This awareness creates a great respect for the people of Dieng for the existence of nature by not exploiting nature excessively for economic benefits. Meanwhile in terms of glocalization, the Dieng community can utilize globalization through the tradition of dreadlocks as a tool to make local wisdom and local traditions owned as a global center and development model. Although it is undeniable that local wisdom possessed by the Dieng community is no longer pure and tends to be seen as a result of a combination of foreign influences.
The survival of local products is inseparable from the synergy of the role of local governments, non-governmental organizations and companies. The role of the three entities is seen in empowering both at the individual, group and organizational and institutional levels. On the basis of the role of the three entities, local communities have a collective awareness and critical awareness that moves massively and sustainably and has independence which leads to economic indigenus based vocalization. This economic globalization will create sustainability if the three entities each have a balanced role. The basic thing as a condition of economic glocalization will be, if a region has local products.

3.4. Carica and purwaceng plants as tools for developing productive economic enterprises.

The carica fruit is a plant that is unique to the Dieng area and can be processed to become a variety of products, such as candied fruit in syrup and carica porridge. The purwaceng plant, on the other hand, is processed in the form of purwaceng tea, purwaceng coffee, and purwaceng milk. All these products are now well known due to the developments in the tourist sector in Dieng. The current situation is that farmers are continuing to cultivate carica and purwaceng plants because of the good prospects and the ability to advance local productive economic enterprises.

There are a number of indicators which prove that the carica and purwaceng plants have supported the development of productive economic enterprises. First, carica and purwaceng plants can be processed in various ways to produce a variety of products. Second, carica and purwaceng have encouraged the development of new enterprises, both in the Dieng region itself and in other nearby areas. Carica and purwaceng have become a trade mark of the region and designated as the traditional food of Dieng Plateau in Wonosobo, Central Java. Third, numerous business groups and cooperatives have developed which are able to accommodate carica and purwaceng producers both in Dieng itself and in other regions, thus acting as a motor to stimulate the local economy. Fourth, the existence of carica and purwacengenterprises has helped the government to reduce unemployment. The existence of these two plants which are location specific and have unique characteristics is making them increasingly popular as gifts for tourists and visitors to take home, and this has indirectly led to a rise in levels of community welfare, specifically for communities in and around the Dieng region.

4. Conclusion

The impact of economic glocalization of carica and purwaceng plants is the development of local economic institutions such as productive economic enterprises and cooperatives. In addition, economic glocalization in the system of local food production in Wonosobo also has the effect of increasing production capacity, product development, market expansion, local economy, and ecotourism.

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