Socio-Economic Impact of Agropolitan Area Development Among Chrysanthemum Farmer

Reza Siskana Lia, Srio So Satmoko and Kadhung Prayoga
Agribusiness Study Program, Faculty of Animal Husbandry and Agriculture, Diponegoro University, Semarang, Central Java
Correspondence Email: rezasiskanalia98@gmail.com

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Abstract

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Chrysanthemum farmers had encountered significant issues during the agropolitan program implementation. Their small-scale business, seasonal fluctuation, poor knowledge and innovation contribute as hindrances in running the program. This study aimed to explore the socio-economic impact of the agropolitan program among the farmer. We conducted a study in December 2019 on the Gemah Ripah Farmer Group. Purposive sampling technique was applied to recruit thirty-four farmers from the farmer group as study participants. This was a descriptive study with a qualitative approach. Literature review, interview sessions, and observation were conducted to collect the study data. Data analysis consisted of three steps: 1) data reduction, 2) data display, and 3) conclusion and verification. The data validity was tested by credibility, transferability, dependability, and confirmability test. Results revealed that the social impact perceived by the farmer was the ease in accessing daily needs and health care, intimate relationship between farmer and local people, development and refinement of cropping tools, and stronger institutional structure of the farmer group. The economic impact observed were improvement of the narrow field utility value, income enhancement, and improvement of employment opportunities. Further studies are required to explore more perspectives to obtain varied information from a different layer of parties involved in the programs.
INTRODUCTION

Indonesia is a country that adopted and implemented agropolitan program. This program concentrates in rural or underdeveloped areas with high potential agricultural commodities. Malaysia is also known as another country in Southeast Asia that executed agropolitan program. Ahmad et al. (2018) signified that agropolitan is a development program in an integrated area that empowering destitute people by exploring the potential of the agricultural sector, agribusiness-based industry, and rural industries. In Malaysia, the aquaculture industry zone and sustainable staple food plant were integrated with the agropolitan program. This program had produced an advantageous effect for the participant. Destitute people who participated in the program were selected from a digital database, E-Kasih, and E-Tagar. The program was implemented through two methods: in Shitu and area relocation.

Agropolitan program in Malaysia managed by an institution appointed by the national government. The program received a lot of support and participation from government agencies, private agencies, universities, and non-governmental organizations (Latip et al., 2020). These programs were directed by ECER and designed to decrease the poverty rate in the area of Pantai Timur Semenanjung Malaysia, which consisted of Batu 8 Lepar and Runchang in Pekan, Pahang, and Gu Musang in Kelantan. A program developed in the year 2009-2015 under The Federal Land Development Agency (FELDA) had successfully transformed the area of Pahang Selatan into the largest dorper sheep livestock business in Southeast Asia. Furthermore, the agropolitan program also successfully resettling farmers with no cropping land. Kelantan Selatan Authoritative Development Agency also had moved homeless people to new houses and planted palm oil trees on 9,900 ha of land since 2009 (Ahmad et al., 2014).

Agropolitan programs in Indonesia were directed by the Local Board of Agricultures. This program utilized the local commodities as the main attraction of the site. They considered that each region in Indonesia had prominent commodity, resembling unique characteristics of their agricultural activity. Bandungan District in Semarang Regency has been directed as a role model of the agropolitan program. Chrysanthemum flower is a famous agricultural commodity cultivated in Bandungan District. The cultivation was relatively easy. It could be cultivated in narrow spaces, such as house yards. Agricultural facilities such as agribusiness terminals in Jetis Village, the central market in Jimbaran, vegetable and fruit laboratory, and modernization of cropping tools had supported the flower cultivation. The implementation of the agropolitan program stimulated the growth of the agribusiness that integrated into agrotourism management. Agrotourism management as the sub-program of agropolitan area on Bandungan District was pioneered in 2016. Farmer in Dusun Clapar as the center of chrysanthemum flowers was also introduced as the
role model of chrysanthemum flower farmers. However, this program did not produce optimal results due to its poor management. Today, they shifted the focus of the agropolitan development to farmer empowerment to improve the quality and quantity of the chrysanthemum flower commodity produced.

Agropolitan programs intended to build and empower local communities through the development of local resources. Kurniawan (2015) had stated that the impact of national development programs attributed to several socio-economic indicators: a) local workforce employment, b) economic structure development (small shops, services, or transportation), c) income enhancement, d) community perception, e) migration/urbanization, and f) local community social life. Agropolitan programs offered plans to manage the gaps through adequate management of local resources. These programs proposed more independence in managing the community’s socio-economic life. Agropolitan programs are also expected to shift the conventional into economic ecology paradigm that matches the unique characteristics of an area.

Notwithstanding its status as an agropolitan development area, Bandungan had limited sources of market lines and promotion targets. The majority of the farmers also seemed uninterested in learning new skills and programs, especially studying the agropolitan programs. Despite their low enthusiasm, the chrysanthemum cultivation was relatively showed steady production. Departing from these issues, we want to explore the farmers’ perspective about the agropolitan development area through this study, entitled “Socio-Economic Impact of Agropolitan Area Development among Chrysanthemum Farmer”. Previous studies had investigated the perspective of the local community on the chrysanthemum agropolitan area. Hence this study would be explored the farmers’ perspective. Farmers were subject and object of the agropolitan programs. Their perspectives would be an essential input to the development of the agropolitan area. This study aimed to: 1) explore the social impact of agropolitan area development in Bandungan District, Semarang Regency, and 2) explore the economic impact of agropolitan area development in Bandungan District, Semarang Regency.

RESEARCH METHOD

National development programs should have oriented on the local resources and designed to meet the need of all regions according to the availability of the local resources. Unfortunately, the national development has not been equally distributed, producing economic inequalities between urban and rural areas. Rural area was attached to stigma as lagging and underdeveloped regions. Moreover, national development only highlights the importance of economic growth in the industrial field that tends to encourage a large-scale urbanization. Contrary to this trend, local resources are highly utilized in the agropolitan area development. The agropolitan area development in Semarang Regency was concentrated in the rural areas with high potential of agricultural resources, such as vegetables, fruits, and decorative flowers. It has been operating since 2009 and remains appealing and productive today. Hence, this study explored the “Socio-Economic Impact of Agropolitan Area Development among Chrysanthemum Farmer”.

508
This study was conducted in December 2019 on a farmer group, namely Gemah Ripah. Purposive sampling technique was applied to select the study participants from the Gemah Ripah Farmer Group. Thirty-four farmers from the farmer engaged as study participants. Gemah Ripah Farmer Group was a role model of farmer group and pioneer of chrysanthemum agrotourism site development in Bandungan District.

This was a descriptive study with a qualitative approach. The qualitative approach applied by directly involved in the farming group activities through a direct observation. We observed the agricultural and the farmer group activities (group meetings) during the study. The initial step of the observation technique was the selection of the study location. After the observation permission had been granted by the farmer group, the observation was conducted from morning to night. We recorded all things from the direct observation in a field note. The result of the direct observation was described and interpreted by data reduction and data grouping technique. The phenomenon identified was perceived according to the researcher’s perspectives.

Researchers also participated as study instruments in the study. We were directly involved in the interaction between the study subjects. During the observation, we acted as observers without embedding manipulation to the studied object. This method aimed to understand the occurrence of a phenomenon and explain the meaning of a phenomenon according to the community’s perception supported by theories. We documented every event, record every saying, observed every word and gesture from the study object, community behavior, and written document using the empiric-qualitative method.
We tended to apply inductive reasoning in this study. Categorization was possible due to exclusive encounters with the key persons. Field data provided information associated with context bonds that explained the interaction, phenomena, and activities. Data were collected from literature review, interview sessions, and observation techniques. We gathered secondary data from reviewing related works of literature. Primary and secondary data were collected through observation and interview sessions with key persons.

Data analysis for the first and second objectives was conducted through several steps: 1) data reduction, 2) data display, and 3) data conclusion and verification. These systematic steps completed simultaneously at one time during the data collection. Collected data then reduced and organized into data study. The data validity tested by four criteria: credibility, transferability, dependability, and confirmability. Credibility substitutes the internal validity concept from non-qualitative studies. Transferability is parallel with the data generalization concept in non-qualitative studies. It requires comprehension of the topic discussed in the study. Dependability substitutes the reliability concept in quantitative studies. Confirmability is a concept substitution of objectivity on the quantitative model.

RESULT AND DISCUSSION

Profile of Gemah Ripah Farmer Group

*Gemah Ripah* Farmer Group was a farmer group that cultivated chrysanthemum flowers with a greenhouse system. This group was officially established on June 4th, 1996. At the beginning of the group establishment, most of the members were cultivating vegetable and rice paddy commodities. However, as time gone by, they were considering substituting vegetable commodities into chrysanthemum flowers. Agricultural land in Bandungan District was appropriate for chrysanthemum flower cultivation. The flower also could be harvested throughout the year. The utilization of chemical fertilizer was reduced during the program. Organic fertilizer was applied to cultivate chrysanthemum flowers. Farmers were transformed livestock manured and straw into organic fertilizer at affordable prices. All farmers were cultivating chrysanthemum flowers during the study. This situation might happen due to the development of integrated agropolitan areas that prioritized chrysanthemum flower cultivation. A good partnership and guidance from agriculture instructors should have created *Dusun Clapar* in Duren Village as a well-managed chrysanthemum-based agropolitan area.

*Gemah Ripah* Farmer Group was selected as a role model in Bandungan District and pioneered the chrysanthemum flower agrotourism sites in 2016. Together with the *Udi Makmur Sleman* Farmer group, *Gemah Ripah* Farmer Group was striving to meet the chrysanthemum flower demand in the Central Java area. On the other hand, *Tunas Bunga* Farmer Group with the Board of Agriculture in Sukabumi, West Java had directed their focus on chrysanthemum seedling and variety breeding to meet the national and export demand.
### Table 1. Inventory of Gemah Ripah Farmer Group in December 2019

<table>
<thead>
<tr>
<th>No</th>
<th>Inventory</th>
<th>Total</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cultivator</td>
<td>1 unit</td>
<td>IDR 14,000,000,-</td>
</tr>
<tr>
<td>2</td>
<td>Mini Laboratory Tool</td>
<td>1 unit</td>
<td>IDR 10,000,000,-</td>
</tr>
<tr>
<td>3</td>
<td>Sheep</td>
<td>26</td>
<td>IDR 21,500,000,-</td>
</tr>
</tbody>
</table>

Source: processed primary data (2020)

Board of Agriculture had supplied some inventories for the Gemah Ripah Farmer Group: cultivator, mini laboratory tool, and sheep. All inventories are supposed to support the development of the agribusiness. The cultivator was placed on the chairman’s house and could be used by the member. However, the mini-laboratory tool was rarely used. The majority of the farmer explained that they did not know how to operate the tools. Twenty-six sheep were also provided to the farmer group. It was domesticated by a member appointed by the group. The sheep manures would be utilized as organic fertilizer for the agricultural land.

The member of the farmer group was agreed to establish a group that would accommodate their vision to work together and encourage each other. They had worked together in the procurement of fertilizer and pesticide for the flower commodity. Updated information about agricultural works were also regularly conducted to produce better agricultural practices. This farmer group also collected money from each member with a soft interest of 0.9%. The existence of Gemah Ripah Farmer Group had supported the government to assure adequate adoption of an agricultural program in Bandungan District.

### Socio-Economic Impact of Agropolitan Area Development among Chrysanthemum Farmers in Dusun Clapar, Bandungan District

Farmers from Gemah Ripah Farmer Group showed positive and negative attitudes towards the implementation of the agropolitan programs. Some farmers agreed that the agropolitan program was appropriate for Dusun Clapar. It provided a proper environment that promoted floral-based commodities cultivation. However, the majority of farmers expressed their disapproval of the program. They claimed this program burdened the farmer due to the various requirements needed to develop a well-managed agropolitan program. These requirements are taken up a lot of time. In some points, it also interfered the farmer’s daily activity. However, the agropolitan program still has high importance for Dusun Clapar. It potentially helps the area to develop and grow. We also found that the agriculture instructors did not consistently visit and guide the farmers in executing the program. Moreover, some of them suddenly have stopped visiting the farmers. Hence, the majority of farmers independently managed and encouraged each other to execute the programs sustainably.

Agropolitan programs had delivered socio-economic impacts on the local community life, offering new hopes in improving farmer’s household income. Agropolitan development policies had influenced the life of the local community, both in positive and negative ways. A positive impact is always expected from the application of a novel program. However, the negative consequence of the program is also unavoidable. It led to the occurrence of unwanted things in the local community life.
Social Impact

The agropolitan area was an integrated agriculture program. Bandungan District was appointed as the center of agropolitan area development due to its adequate environment for chrysanthemum flower cultivation. Farmers perceived the access to operational needs for their agricultural works after the program implementation was less complicated. They also found that the process to supply their daily need through transactions at the Jimbaran wholesale market, Bandungan, was getting easier. This result was in line with a study by Basuki (2012). He observed positive changes after the agropolitan program implementation. Agropolitan programs brought convenience in shipping the agricultural products and access to daily needs and production factor input. The implementation of the program also helped the farmer to learn about agribusiness marketing strategies and non-agricultural subjects.

Every country introduced different outcomes for a program. Bulgaria desired to improve the quality of life and provided a more inclusive program for the community. Hence, they set a target to actively involve person with disability in their programs. A study by Todorova and Ikova (2014) yielded that better access to health services and empowerment of people with disabilities were the advantageous social-impact from the development of programs in the agriculture sector in Bulgaria. Through the program, they enhanced social interaction, communal solidarity, and participation as a whole community.

Compared with those developed countries, agricultural businesses in Indonesia is progressing toward brighter future. However, easiness in accessing various services triggered several negative impacts among the farmers. Most farmers seemed to use to their “instant life”. They tended to sell their harvested commodity to the panders instead of directly sell it to the market. This behavior could gradually transform into a habit. They seemed reluctant to independently tender their harvested flowers to the several market lines. The convenience offered by the pander by directly picking up the harvested commodity from the farmer’s house produced easier way of product shipping. Farmers were also perceived this distribution strategy had provided the most convenient way to sell their flower commodity. Findings revealed that farmer preferred pander to distribute their product, eventhough they have realized the price difference through the direct market selling and panders.

Agropolitan program had encouraged all farmers in the Bandungan District to cultivate chrysanthemum flowers in their agricultural land. The adequate geographical area condition and local community enthusiasm to plant homogeneous commodities had created a communal environment in the district. A harmonious environment had supported a successful agritourism program of chrysanthemum village that was initiated in 2016. During that time, farmers consistently put hard work into their agricultural practices to transform their land as a tourism site. According to the social structure of the farmer group, the organizational aspect of the group had re-initiated to be moved. However, a more detailed investigation on the cooperation enterprise (a local scale of an economic enterprise) showed inappropriate management of its financial practices. No bookkeeping practice conducted to record the financial transactions on the cooperation. A lack of
comprehensive understanding of sustainable agritourism may contribute to this poor management.

Another social impact of the agropolitan development program was the perception of the importance of education. In 2009, before the program implementation, farmers tended to be skeptical about the importance of education. The perception of high cost spent to study in school and the insignificant effect of education was closely attached to the education image among the farmers at that time. Syaefudin (2018) also revealed that the low level of educational background is associated with stigma about education. This stigma slowly disappeared after the implementation of the agropolitan program. This fact indicated that agropolitan program capable to upgrade their way of thinking in highlighting the importance of education for their children.

Non-formal education such as field school, agriculture training, and agriculture skill workshops delivered advantageous effects for the farmer. Information related to skill in managing agritourism sites, chrysanthemum cultivation, traditional medicine therapies from indigenous plants, and controlling monkey menace had been delivered through some training sessions. The latest training was the certification of chrysanthemum cultivation that conducted in Lembang for three weeks in 2014. This training session contributed a significant amount of knowledge related to agricultural works and practices. Sugiyanto (2019), on a deep interview session, explained that the member of Gemah Ripah Farmer Group had participated in several non-formal training sessions with the Local Board of Agriculture, such as SLPHT in 2013, SLPSOPGAP “Good Agriculture Practice 2014”, and chrysanthemum flower workshop in Lembang in 2014.

Information from the training and workshops was regularly distributed to all members of the farmer group. This finding indicated the value of openness had attached to the group values. The group’s vice-chairman had frequently participated on training or workshop about the program. Sometimes, he found the subjects of the training were very complicated. He considered subjects related to bookkeeping, cooperation practices, and archiving was relatively challenging. Malaysia also conducted training sessions to improve the participant knowledge during the program. Latip et al. (2020) stated that agropolitan programs consisted of intensive training and workshop sessions for their participants. Training sessions successfully improved participant’s knowledge about the program. Extensive training and guidance would also stimulate the development of the local human resources.

According to the stages of economic growth by Rostow, the situation of the chrysanthemum cultivation program in Bandungan District was classified into the preconditions of takeoff. The programs had conveyed improvement on social mobility and stimulated social change in Bandungan District. Convenience access to health care, practicality, and the perception of education importance was an indicator of the preconditions of takeoff stage. In this stage of economic growth, the local community was forced to confront with the risk of cultural change. The culture of gotong royong (community-self help) and sambatan were faded slowly due to the money-oriented social life. Study participants stated that they felt hesitant to ask for free help from their neighborhoods. They preferred to pay for a worker for insignificant tasks, such as repairing the house or installing the roof for the greenhouse.
Economic Impact

Chrysanthemum cultivation was quite unique and simple. Chrysanthemum flowers could be cultivated in relatively narrow land areas. The narrow-land size did not significantly affect the productivity of the chrysanthemum farmer. Contrary to this finding, a study done by Nugroho et al. (2018) found that land size was closely associated with production volume. The majority of the farmer also conducted flower cultivation in their house yards. This situation would produce a more flexible working hour. They could do the cultivation works at night, especially if the temperature in the greenhouse were too high at day. Chrysanthemum flowers require constant light to grow better. Hence, farmers put lamps in the greenhouse to maintain the growth of the flower. A low level of urbanization also observed as another impact of the program. Productive-age population was favored to work in their house and develop their agricultural land as the agropolitan area.

The other economic impacts noted on the local community were new hopes of a broader employment opportunities and a higher level of household income. Basuki (2012) also stated that agropolitan area development provided more employment opportunities that finally will increase the level of income. The economic variable discussed in this study referred to the chrysanthemum farmer income. A significant difference of income found between the level of income before and after the implementation of the agropolitan program. Despite the high demand for chrysanthemum flowers from various market lines, the cultivation of the flower was still limited.

The mean income of the farmers was ranged from IDR 4,300,000 to IDR 25,800,000 in a planting season. This finding yielded that the farmer could produce ± IDR 2,866,666 to IDR 8,600,000 in a month. This number was above the regional minimum wage of Semarang Regency in the year 2020 of IDR 2,229,880. Hence, their income was relatively high and able to adequately meet their household daily needs. Furthermore, chrysanthemum flowers could be harvested every 100 days and also ready to be periodically harvested after the first harvesting period. The unstable price offered by the market did not significantly influence their income. This finding was parallel with a previous study by Maghfira et al. (2017) that found the mean income of the chrysanthemum farmer in Bandungan District, Semarang Regency, was relatively high. A relatively high income originated from the chrysanthemum agricultural activities had become farmer’s major source of income. This situation was one reason behind the farmers’ willingness to actively participate in the agropolitan area program and simultaneously work as the chrysanthemum farmers. The agropolitan program also brought new hopes for the modernization and improvement of infrastructures and cropping tools used on agricultural works. These improvements had supported the flower shipping activities in the district.

A successful agrotourism program in 2017 also revealed a great partnership built between the farmer and the local community in conserving their environment in Bandungan District. This situation created a broader employment opportunities. It showed by the existence of shops, food stalls, accessories shops, and gift shops around the agropolitan area. Parallel with the finding, Fadilil et al. (2020) yielded that environmental conservation required active participation from the local community. Farmer and the other member of the local community could complement and participate in an agrotourism activity by running a home-scale business for the
tourist. Unfortunately, centered agribusiness activity in Bandungan District brought negative impact to other districts in Semarang Regency. Pratiwi (2018) explained that a form of utilization of a local commodity could be delivered through the tourism activity with the ecotourism concept. Ecotourism presents natural resources as the main object of attraction sites. This concept emphasizes the importance of performing sustainable tourism through land conservation. A negative consequence that occurred was the centered economic activities in an area. This situation led to a dense population and an increased number of unemployed population due to a lack of input factor in running chrysanthemum business.

Generally, the implementation of the agropolitan program presented positive influences for the wellness of the farmer. However, lack of product innovation was recognized among the member of the group. Product innovation was vital in improving farmer income and product existence in the market. In line with the finding, Ho et al. (2018) also stated that innovation was significant for an agribusiness in pursuing competitive excellence. Innovation created a broader range of market lines, improved income, and maintained product existence. The majority of chrysanthemum farmers were tended to be easily satisfied with the income produced from their agricultural activity. In fact, they still require to learn about the current agricultural development strategy through strengthening the partnership between the farmer and entrepreneurs, improving financing (capital) capability, strengthening the agricultural institutional structure, and extending chrysanthemum market lines. These were important to catch up with their setbacks in developing the chrysanthemum agribusiness. Parallel with this finding, Farhanah and Prajanti (2015) also stated that an institution contributed an essential role in strengthening economic resilience. It should have been balanced with adequate system management, good human resources and technology implementation, intuition improvement, and appropriate input factors to develop an agropolitan area.

**CONCLUSION**

Based on the study findings and discussion, we acknowledged that agropolitan areas delivered both positive and negative impacts to the life of farmers. Agropolitan programs provided beneficial effects on the social aspect of farmer life such as ease in accessing daily needs and health care, intimate relationship between farmer and local community, development and refinement of cropping tools, and stronger institutional structure of the farmer group. The economic impact observed were improvement of the narrow field utility value, income enhancement, and broader employment opportunities. In spite of these advantageous effects provided, the risk of the change of the local culture and pander’s interference brought negative impact to the farmer socio-economic life.

**RECOMMENDATION**

According to the discussion and conclusion about the socio-economic impact of the agropolitan area development among the farmer, we suggested picking a proper approach to deeply probe information from the informant to present a more comprehensive and deep discussion of the agropolitan area impact. Future studies also need to add more study subjects and perspectives about the agropolitan area.
More perspectives, especially from the stakeholder, would append more information from a different layer of parties involved in the programs.

REFERENCES