Participation, Investment Institutions, and Local Economic Development: The Study of Food Security in East Java - Indonesia

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Abstract

The growing concern of food security has been an important issue in Indonesia. The increasing population of Indonesia requires the big amount of food supply. However, nowadays several important food commodities, like corn, soy, milk, and meat are likely to experience the decreasing production. The heavy reliance on food imports to meet domestic demand is not certain due to the unstable price in international market. Therefore, an increase in food production becomes one of the most rational solutions. In this way, it is obviously not easy considering the problems faced by the government, such as restricted land, declining agricultural sector incentive, and limitation of budget. In this case, the active participation among the farmers, traders, investors, cooperation, and local government become strategic to escalate the production. The research shows that the investment plan formulation process on the basis of participation and local development is a significant step that can be initiated by the local government so that the objective of increasing food security can benefit all subjects.

Keywords: food security, local economic development, participation, investment planning

Introduction

Indonesia is widely known as a country that has a very large number of people in the world with 240 million people. The world population continues to grow so that the demand for food continues to increase, with implications for the agricultural sector to produce more (Agyemang and Freedman, 2009:1619). Food matter has been one of the most important issues in the long run, in terms of availability, accessibility, and food utilization (Ziervogel and Ericksen, 2010:525). Thus, food security has been the government's primary concern in line with the population growth. One of the problems which lately becomes a major interest in Indonesia is a decline in food production (especially soy, corn, meat, and milk), whereas the demand continues to rise as a result of increasing population and incomes.

Increasing food production is not always easy to take place due to several reasons, such as declining agricultural sector incentives, land use competition with other activities (residence, industry, infrastructure, etc.), and government budget constraints. Beyond that, the increase of food production should also consider the subjects who involve in it.

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The government no longer uses top-down approach without considering the voices of economic actors. In other words, participation in food production plan becomes a very important part. Case in the UK, for example, according to Curry (2013:711) who mentions that a community will be more responsible and has the opportunity to be actively involved in decision-making which is consultative and in participation for local development planning. Increasing food production should also be an integral part of local economic development. With the increase in food production, local economic activities will also grow. In this way, all subjects involved in investment plan to increase food production can obtain great benefits.

Literatures

Local economic development (LED) strategies –or using other terms, local and regional developments programmes- have now for more than two decades been increasingly recommended by scholars, practitioners, NGOs and some international organisations as a complement, if not as an outright alternative, to traditional top-down development strategies (Rodrigues-Pose and Palavicini-Corona, 2013:303).

Building on this tradition, more recently, a research stream, largely advanced by urban planners, business economists, geographers and urban sociologist, has focused on examining the development and impact of LED initiatives in developed countries and developing countries. Initiatives in developing countries have been documented, but the analysis of the wealth of cases that are found in Asia, Africa and Latin America has been limited (Barberia and Biderman, 2010:951).

The process of globalization has also contributed to the growing relevance of local approaches to development (Vcooke, 1989; Stohr, 1990). While central governments are increasingly viewed as too remote and too inefficient to effectively tackle the challenges and opportunities generated by globalisation, localities, cities and regions are perceived by some as the most adequate spaces to address global challenges (Scott, 2001; Scott and Storper, 2003), including those emerging from the Global Financial Crisis which started in 2008 (Barquero, 2009; Tomaney *et al*., 2010; in Rodrigues-Pose and Palavicini-Corona, 2013:304).

Local economic development program cover an enormous range of activities. For example, financial budgeting is enacted to improve local conditions, to reduce costs, and minimise the risks when taking certain actions (e.g. program evaluation). Local governments must also be able to provide incentives packages offered in the implementation of local economic development programs include land, tax, infrastructure, and regulatory powers that attack or retain business, and allow the economy to prosper (Barrios and Barrios, 2004; in Hsieh, 2011:5). Local governments also expect that business incentives will promote local economic development by increasing local jobs and the local tax base (Bartic, 1995; in Ha and Feiock, 2011:11).

The crucial issue in local economic development is integrating knowledge and values. This integrating across a range of stakeholders and expert is increasingly becoming a common goal of, and challenge in, forecasting, planning and evaluation processes across numerous decision-making domains (Klenk and Hickey, 2011:152). In this context, concept mapping is very important. Concept mapping itself is *"a structured methodology for organizing the ideas of a group or organization, to bring together diverse groups of stakeholders and help them rapidly form a common framework that can be used for planning and evaluation, or both"* (Kane and Trochim, 2007; in Klenk and Hickey, 2011:155).

In this phase, participation is increasingly becoming crucial. When community groups are actively engaged in planning and implementation processes, plans are likely to be more closely matched with stakeholders's needs, interests and expectations, motivating them to help achieve socially and ecologically beneficial outcome (Healy, 1998; Shrestha and McManus, 2005; Sarker et al, 2008: in Mahjabeen *et al*, 2009:46). Ribot (1996; in Mahjabeen *et al*, 2009:47) defines participations as: *community or popular participation is about communities having decision-making powers or control over resources that affect the community as a whole, such as forests and grazing commons or community development. But, for such decisions to internalize social and ecological costs or to assure equitable decision-making and use, they must be devolved to a body representing and accountable to the community.*

Methodology

This study employed three approaches, namely food mapping, focus group discussions (FGD), and participatory research appraisal (PRA). Food mapping stands on three pillars, which include land availability, potential demand, and projected sustainability.

Those pillars exist as a unity so that the increase in production does not put farmers in a position that is always left behind as happened during this time. In this case, a descriptive analysis was used to identify potential food production in East Java.

This study was conducted with the synchronization of academic side and the appropriateness seen from economic actors or local government. Therefore, FGD approach is continued to be used throughout the study to ensure that the output of this activity is proper in both academic and economic side. FGD mainly focus on the attempts to see the aspirations and opinions from the economic actors toward the commodity development that has been determined. Some constraints that might take place and actions to solve the problem can be discussed intensively to discover a new idea. This strategy is expected to get a point that is more credible to formulate policies and implement programs.

FGD approach alone is not sufficient because it only gathered aspirations at the surface level and has not reached the in-depth information about the economic dynamics occurred in the field. Therefore, the PRA approach is also included to ensure that the latest information can also be obtained. In the field, the PRA approach will be combined with Stakeholder Analysis Procedure (SAP). SAP approach is usually applied through group workshops in a half-day or full day involving key informants in this study (World Bank, 2007:72).

The setting of this study is in the area of East Java Province which is well-known for a national barn. Therefore, this study was carried out in collaboration with local government, such as agricultural office, industry and trade office, provincial development planning agency (*Bappeda*), and research & development agency (*Litbang*) as a representation of East Java local government involved in agricultural sector plan and development process. Meanwhile, the study will also synergize with enterprise world, particularly East Java Chambers of Commerce & Industry (*Kadin Jatim*) and Cooperation (SMEs) as economic actors who have capacity and experiences to run investment activities. The cooperation will also expand with other institutions, such as banking sector.

Results and Discussion

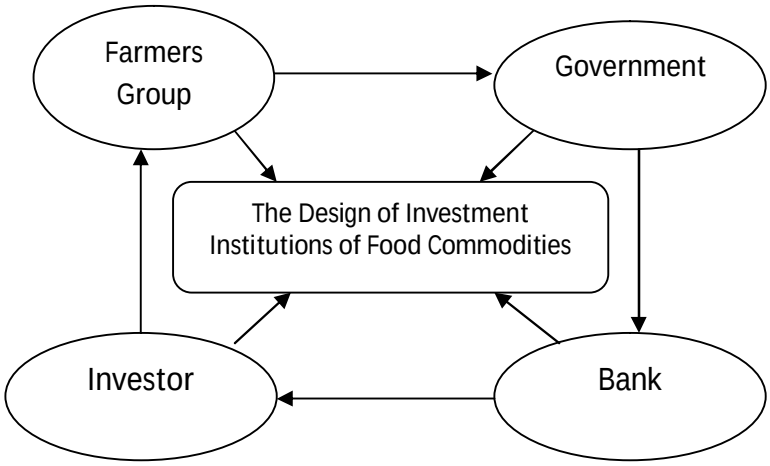
Local Economic Development (LED) becomes the common issue discussed lately, along with the implementation of economic decentralization in Indonesia since 2001. LED is the development with bottom-up system or the encouragement of economic development from several local places to the economy in a broader context, in this case national economy. According to Pose and Corona (2013:304), LED is the most recommended strategy and alternative strategy in economic development nowadays that is comprehensive by identifying and figuring out local economic strengths, weaknesses, opportunities, and world liberalization threats in order to set short-term and long-term development goals.

The key to success for local economic development is through the development of local potentials which have high competitiveness. In addition, local economic development also involves the direct participation of local communities in developing economies. At this point, economic development is done by empowering local communities. In the words of Ramukumba *et al* (2012:8), local economic development is a strategy for fostering national economy on sector basis which is different from what is owned in other places. Local economic development in South Africa is described as an innovative development strategy to cope with delayed development and reduce unemployment by involving local communities.

In this study, local economic development is conducted through investment route in food sector which becomes East Java potential sector. One strategy to achieve local economic development is with upstream – downstream way, especially in agricultural sector by involving all subjects. As Robert *et al* (2013:156) mentions that the development of upstream - downstream agricultural sector conducted in Scotland is known to have a strong influence on local economic development as it provides a high value of economic transactions.

The formulation of investment plans for food commodities must necessarily include all actors involved in the development of food commodities. The groups of farmer, local governments, banks, and investors are actors who should be involved to design an institutional food commodity investment which is ideal and applicative (Chart 1). The need for developing institutional design of investment is made together to optimize the role of each subject according to its portion.

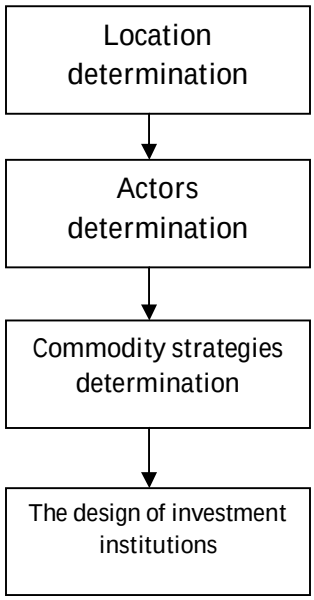
Chart 1. Stakeholders Participation in the Design of Investment Institutions on Food Commodities



Source: primary data (processed), 2013

The development of institutional food commodity investments has several stages to follow. These stages are carried out to optimize the local quality potential as well as the involvement of all subjects in the development of food commodities investments. With the presence of these stages, the development of institutional investment is expected to be convenient for the conditions of each food commodity. The first stage is the determination of leading commodity area, the second stage is the determination of economic actors, and the third stage is the determination of leading commodity strategies as a form of sustainable local development (Chart 2).

Chart 2. The Stages of the Design of Investment Institutions on Food Commodities



Source: primary data (processed), 2013

In the area determination stage, leading commodities can be identified by the amount of production, productivity support facilities, as well as local government policy. Regarding these three aspects, the researcher chose four regencies representing four commodities, namely milk commodity in Malang regency, beef commodity in Pasuruan regency, soybean commodity in Banyuwangi regency, and maize commodity in Kediri regency.

The largest cow milk production in East Java is Malang regency. One sub district in which the largest milk production is obtained from is Ngantang sub district. The availability of support facilities in Ngantang sub district is a vast area of forest to meet the need of dairy cattle feed, especially in the dry season.

The selection of Pasuruan regency as beef cattle development area is due to the high forest ratio, population density, and plenty of abattoirs. Furthermore, Pasuruan regency also has a large abattoir hall, as one of the government institutions for animal slaughter field in East Java.

The selection of Kediri regency as maize production area is due to the mass production, especially in Papar sub district. In addition, there are many maize germ manufacturers nationwide. Banyuwangi regency is well-known for soybean production area as it is the largest in East Java. There are also many SMEs subjects in tofu or fermented soybean cake that use soybean as the main ingredient production.

The government policy in those four regencies tends to support the production development of each commodity. Every year, the livestock office in Malang regency has cooperation with banks in terms of capital credits for cattle rancher groups. In addition, the livestock office also has a partnership with the farmers through dairy support for increasing milk production. The livestock office in Pasuruan regency also has a policy to increase beef cattle production.

The second stage of this study is to determine the subjects of food commodity economic activities. The subject identification is the first step in planning leading commodity development strategy through investment institutional design. The results of subject identification also became the basis to conduct Focus Group Discussion (FGD). The main subjects in this leading commodity development are farmers and ranchers. The support subjects are cooperation, businessmen (SMEs, small industry), middlemen, and government.

Subject identification in economic development requires a long process. In the early stages, subject identification is made through government institutions, for instance offices associated with agriculture (agriculture office in Kediri regency and Banyuwangi regency), livestock (livestock office in Malang regency and Pasuruan regency), and small businesses (cooperation and SMEs in each regency). At this stage, the data synchronization from farmer groups, livestock groups and SMEs subjects is the most important goal.

The next stage is the identification of ranchers and farmers involved in the production development activities. At this stage, it does not directly specify the subjects, but the approach to each group of farmers and ranchers in each region is made. The attempt is made to seek information from the head of the farmer groups or livestock farmers about the farmers and potential ranchers who can collaborate in the development of commodity production. Information from farmer group leader is the key determination of the main subjects in the production development activities for each commodity.

The following is finding out the information on the distribution chain of farmers and ranchers' production as well as the capital system of production support facilities. For dairy commodities, the subject which supports the production is village unit cooperatives (KUD). Cooperation plays an important role in increasing milk production in Malang regency. For maize commodities, the subject which supports the production is middleman. Beef commodities have butchers, middleman in livestock and village unit cooperatives (KUD) as key subjects to support production increase. Meanwhile, soybean commodities have tofu or fermented soybean cake entrepreneurs (SMEs) which support the farmers' soybean production. In addition, there are banks that also play an important role in increasing the production of each commodity.

After passing through the process, the identification of roles and problems faced by every subject in the production activities of each commodity must be done. In this case, it is divided into four commodities on four areas of research. In dairy cattle commodities, a major role for increasing the production is dairy farmer. Dairy farmer acts as a main producer who served as cattle keeper ranging from feeding, caring and milking cows. Most of the dairy farmers in Malang regency turned out to have problems with cow milk price determined by the buyer company at low price. The important role of cattle production support is village unit cooperatives (*Koperasi Unit Desa*/KUD), which acts as milk container and seller, feed distributor (concentrate), and cow health facility provider. Other subjects involved in the milk production in Malang regency are local government and bank. Government acts as a facilitator and bank acts as a financial institution offering credit programs to help cattle rancher capital.

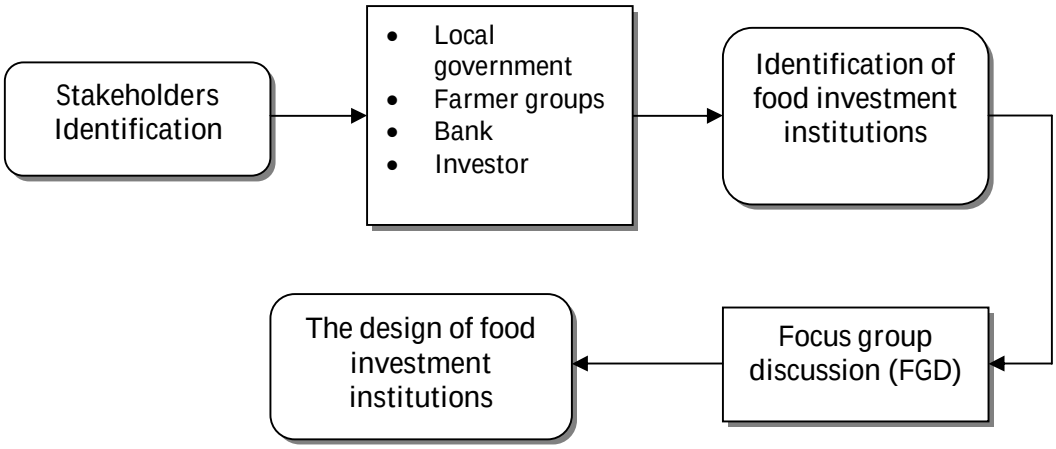
In maize commodity, the subject that has a vital role is maize farmer who performs as a maize producer. An obstacle found by the farmers is the unstable maize prices which often cause a loss to the farmer. The next subject is the middleman who purchases maize from farmers and as a subject that provides capital loans to support farmers in maize production. The next subjects are government and banks.

The government acts as a facilitator through policy which supports the maize production in Kediri regency, and also as a field facilitator during the maize production process. Meanwhile, the bank acts as a credit provider giving capital in the maize production process.

For beef cattle commodity, the subject that acts as a meat producer is beef cattle ranchers. Local beef cattle ranchers constrained both local beef quality that is inferior to the cattle imports and capital. The butchers act as beef cattle buyers. The livestock middleman acts as a quality beef cattle provider. The government, in this case livestock office acts as a facilitator and policy maker. The banks also have an important role to help cattle rancher capital.

The soybean commodity depends on the important role of soybean farmers as producer. Constraints faced by soybean farmers are the unstable soybean price and the low interest among the buyers to purchase local soybean compared with soybean imports. The lower price of soybean imports made soybean buyers switch from local to imported soybean. In this case, the tofu and fermented soybean cake producer (SMEs) acts as a buyer. The government acts as a facilitator and policy makers who support the increase of soybean production in Banyuwangi regency.

Chart 3. The Process of Stakeholders Participation in the Design of Investment Institutions



Source: primary data (processed), 2013

Thus, all stakeholders involved in institutional food commodities in each regency are then invited to a forum to have discussion. The attempt to gather all stakeholders in a forum is certainly not easy. The fact remains that there is no more trustworthiness among those stakeholders. For instance, bank does not believe the farmers any longer due to the credit arrears. Similarly, the farmers no longer believe the banks because of the difficulties to get credit access to the bank. The role of local government is certainly very important in mediating the disputes between the both sides. Therefore, the effort to bring all subjects together in local government forum through related agencies has a significant role. The flow of formulation process of institutional food investment can be seen in Chart 3.

Institutional design to increase food production requires the participation of all related subjects which their deep voices are obtained from and heard through the stakeholder analysis. The involvement of all stakeholders in local development planning process has to go through many processes with different approaches. The importance of all subjects to get involved in the planning of regional programs is to minimize the information asymmetry in order to reach an agreement about the sustainable regional development strategy.

The third stage is the pre-eminent commodity development strategy that is to make institutional investment planning in accordance with the agreement of economic actors and the local conditions of leading commodity development. The results of subject identification can be used to formulate institutional investment strategies which match the characteristics of the problems faced in order to increase the commodity production. There are at least two investment schemes that have been widely used in institutional food commodities, those are share–cropping investment scheme and labor investment scheme.

This share-cropping pattern is seen quite simple and fair in representing the interests of the subjects to make a consortium (investors and farmers).

Investor acts as a seed and land provider while the operational and technical activities are undertaken by farmers. For example, in dairy and meat commodities, the cattle from investors are given to the cattle rancher group and then a group of cattle ranchers will fatten the stock animals. Livestock farmer has sole responsibility for regular care and feed supply. The common feed provided by the livestock farmers is forage crops. Meanwhile, additional concentrate feeding highly depends on the agreement between investors and livestock farmers because it involves the calculation of the additional costs and the amount of share-cropping. The crop yield is the sale of cattle breeding to fattening which will be divided between the investors and farmers.

This investment pattern is a model that describes the relationship between investors and farmers as industrial relationship pattern. The point is that the investors are the capital owners and farmers or ranchers are laborers who fully work to get wages from labor production factors. The labor investment pattern is seen to offer less welfare and bargain price balance between livestock farmers and capital owner investor, so this investment pattern is not popular among the livestock farmers. However, there is a possibility that this kind of investment pattern can be applied, particularly in the production scale and greater investment.

Table 1. Summary of Research Results

Regions	Findings
Malang Regency (Milk)	- Supports for dairy cattle development, the vast area of forest to meet the basic needs of animal feed, especially in the dry season - Subjects involved in the increase of milk productivity in Malang regency include: livestock groups, village unit cooperatives (KUD), government (agency), and financial institution (bank) - There are two patterns of institutional milk investment in the community, namely labor pattern and share-cropping pattern
Kediri Regency (Maize)	- A large number of maize germ manufacturers in national scale - Subjects involved in the maize production: farmer group, middlemen, government (agency), and financial institutions (banks and cooperation) - There are two patterns of institutional corn investment in the community, namely labor pattern and share-cropping pattern
Banyuwangi Regency (Soybean)	- The highest soybean yield in East Java - A large number of SMEs that use soy ingredients - Subjects involved in the increase of soybean productivity include: farmer group, government, SMEs actors, financial institution (bank) - There are two patterns of institutional investment in the community, namely labor pattern and share-cropping pattern
Pasuruan Regency (Beef)	- Infrastructure supports such as abattoirs in Pasuruan regency - A larger forest area compared with population density - Subjects involved in beef cattle production include: livestock groups, village unit cooperatives (KUD), abattoir, livestock middlemen, butcher, financial institution (bank) - There are two patterns of institutional beef cattle investment in the community, namely labor pattern and share-cropping pattern

Source: primary data (processed), 2013

For the betterment of these research results, dissemination is carried out by involving all stakeholders in the workshop. Dissemination process is aiming to combine the information obtained from several regencies and provincial government. The result of this phase is the synchronization of local government policy and central government in regard to the food production development. Those three stages come up with a strategy that measures and identify the local economy strengths in order to arrange long-term development in each region. This effort is then expected to boost the competitiveness of local leading commodity through the increase of food production. To sum up, the findings of each area can be seen in Table 1.

Conclusion

This research suggests that participatory method that brings many actors in the program of an increase in food production has positive influences. *Firstly*, each of the actors knows the real problems occurred, so the solution can be found altogether easily. *Secondly*, there is no suspicion among the actors involved in it for the agreement is made upon a bottom - up process in which all voices are heard. *Thirdly*, each actor can contribute its resources to achieve the desired goal, in this case an increase in production. *Fourthly*, local government does not merely make policy based on its perspective alone, but the regulation is issued in accordance with what is needed. *Fifthly*, collective action is easily taken so that this entire process is integrated with the aim of improving the quality of local economic development.

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