Social Capital and Implementation of Subsidized Fertilizer Programme for Small Farmers: A Case Study in Rural Java, Indonesia

Rustinsyah

Abstract
A government programme for rural farmers in Indonesia is often implemented poorly in many villages. However, there is always a village that manages to implement the programme better than the others. The objective of the research is to understand the functioning of the subsidized fertilizer programme in a village that is considered to be a good example of the programme. This research also wants to know what role social capital plays towards it and in what ways it can be used for increasing effectiveness of the programme. The research was conducted from May to October 2013, by observing and interviewing all the stakeholders, in order to determine the best strategies to implement the programme. The results of this article are: (a) The implementation of the subsidized fertilizer programme in the village can run smoothly because of the involvement of social capital in the Rencana Definitif Kebutuhan Kelompok ‘the definite plan of the group needs’ preparation and fertilizer distribution; (b) the agricultural system with various time and cropping patterns need to be taken into account, as it causes differences in fertilizer needs.

Keywords
Social capital, subsidized fertilizer, farmer groups, rural Java, Indonesia

1Department of Anthropology, Faculty of Social and Political Sciences, Universitas Airlangga.

Corresponding author:
Rustinsyah, Department of Anthropology, Faculty of Social and Political Sciences, Universitas Airlangga, Jl. Dharmawangsa Dalam Selatan, Post Surabaya, East Java, 60286, Indonesia.
Email: rustinsyah58@yahoo.com
Introduction

Farmers in Indonesia are generally small farmers. They only manage narrow agricultural land and face many problems, such as the high cost of farm production and the influx of imported agricultural products. Consequently, some of these farmers in the village become bankrupt right after the harvest time. This is because the selling prices of their agricultural products decrease, while the costs for starting the planting again increase. To cover the costs, the farmers usually take a loan from the richer people, who are mainly traders of agricultural products and dealers of fertilizers, pesticides and seeds (Rustinsyah 2009).

To help the small farmers, the Indonesian government has initiated some programmes to improve the welfare of these farmers and to maintain the national food security. In 2005, the Agency of Research and Development (Balitbang), Department of Agriculture, started a pilot programme for the Acceleration of Agricultural Technology Innovation (Balitbang Pertanian 2006). One of innovations formulated is the direct subsidized fertilizer programme. This programme began in 2006 and has expanded to 33 regencies in 25 provinces in Indonesia (Hermanto 2007). However, this programme has faced several problems. One of the issues is the inadequate amount of the subsidized fertilizer due to incorrect data. This issue can be related to the lack of involvement of the farmers. Consequently, it is necessary to determine how to involve the whole stakeholders, called the social capital, in deciding the amount of fertilizer’s need and the distribution of the subsidized fertilizer. This study is conducted in one village in rural Java area, that is, Pelem village in Pare subdistrict, where the programme has been implemented quite well. The article tries to explore reasons of its success and ways to improve effectiveness of the programme. The role of social capital in improving the effectiveness and success of the programme in Pelem is also explored.

Overview of the Subsidized Fertilizer Programme

Since Indonesia is an agricultural country, the agricultural sector has become the main priority in the national development since the first five-year development plan (Pelita I) in 1970. The objectives, which have always been stated in the plan, are to achieve national food security and to improve the farmers’ welfare. To achieve those objectives, we need short-term and long-term policies (Dwidjono 2005). The short-term policy is expected to provide protection to the farmers by restricting the imports of agricultural products, whereas the long-term policy is expected to increase the amount of national agricultural products through agricultural intensification and extensification.

One of the ways to increase the amount of national agricultural products through agricultural intensification is to use chemical fertilizers, pesticides and seeds. For that, the government provides subsidized fertilizers to reduce the production costs. The concept of subsidized fertilizer programme has actually begun since 1970s. However, the farmers are unable to avail the programme directly
because of the regulations and implementation methods. The first period of the subsidized fertilizer programme ran from 1970 to 1980, where the subsidy was financed by Perusahaan Listrik Negara (PLN) or the National Electricity Company in the form of imported fertilizers. In the second period, 1981–98, there were several companies in Indonesia that were also supported by the government’s fund to produce fertilizer in the country. In 1998, there was an economic crisis in Indonesia, so the subsidized fertilizer system from the government only provided gas incentives to the fertilizer companies in Indonesia. In 2003, the government could provide again both the gas subsidies and the price subsidies. However, the gas subsidies are only for urea fertilizer, while the price subsidies are only for non-urea fertilizer.

From 2006 until now, the programme is called the subsidized fertilizer programme and it is implemented directly to the farmers. The subsidy includes both urea and non-urea fertilizers. This subsidy is to help the farmers to purchase fertilizers at a price set by the government. The latest regulation related to the procurement and distribution of the subsidized fertilizer is in the Ministry of Agriculture Regulation No:122/Permentan/SR.130/11/2013. This regulation explains the distribution of the subsidized fertilizers, as reflected in Figure 1.

**Figure 1.** The Distribution of Subsidized Fertilizers

**Source:** Adapted from the decree of the Ministry of Trade, Republic of Indonesia, No. 15/M-DAG/PER/4/2013 on the distribution of subsidised fertilizers.
At the top of the line in Figure 1, there are state-owned fertilizer producers called Badan Usaha Milik Negara (BUMN), or state-owned enterprises, as the suppliers of subsidized fertilizers. These producers include PT. Pupuk Sri Wijaya, PT. Petro Kimia Gresik, PT. Pupuk Kalimantan Timur, PT. Pupuk Kujang and PT. Pupuk Iskandar Muda. The types of subsidized fertilizers are urea, NPK, ZA, SP-18 and organic fertilizer. According to Regulation of the Ministry of Agriculture No 122/Permentan/SR.130/11/2013, the highest retail price for the subsidized fertilizer is Rp1,800/kg (approximately 0.15 cent) for urea fertilizer; Rp1,400/kg for ZA, Rp2,000/kg for SP-36, Rp2,300/kg for NPK and Rp500/kg for organic fertilizer. The target groups of the subsidies are farmers and people working in agricultural business that includes food crops, horticultural products, plantations and livestock.

From Line 1, the subsidized fertilizer then moves to warehouses at the Provincial Level as Line II. After that, it moves to the warehouses in the District Level (Gudang Pupuk di Kecamatan) as Line III. The subsidized fertilizer is kept in Line 3 and can be collected by the fertilizer distributor agents in the villages or subdistricts as Line IV. In this case, there are two arrows shown in Figure 1 between Lines III and IV, because the fertilizer distributor agents do not collect the fertilizer at once, due to the limited capacity of their storage. Therefore, they usually go back and forth to the district-level warehouse to collect the fertilizer. Finally, the subsidized fertilizer goes to the farmer groups. The farmer groups are the ones who make the Definitive Plan of Group Needs (Rencana Definitif Kebutuhan Kelompok [RDKK]) that determine the amount of subsidized fertilizer to be provided for the farmers from time to time.

At the bottom of the line in Figure 1, there are farmer groups that are the main target in the implementation of the subsidized fertilizer programme. A farmer group is farmer association in a village, but it can also be at a subdistrict level. The head of a farmer group is usually selected because he has extensive knowledge in farming. A farmer group can be formed based on the types of commodities, agricultural areas and gender (Syahyuti 2006).

The procurement and distribution of fertilizer must fulfill the six principles: the right type, right quantity, right price, right time, right place and right quality (Adnyana and Kariyasa 2000). These principles have been used as a benchmark by manufacturers, distributors and retailers. The procurement and distribution can lead to problems if these principles are not followed. According to Arifin (2004), the problems faced by farmers are the scarcity and loss of fertilizer in some areas, because there is a gap between the need and the amount of fertilizer supplied. According to Pangi (2000), one of the causes of the scarcity of subsidized fertilizer is the leaking of fertilizer from the subsidized market to the non-subsidized market. In other words, the subsidized fertilizer is sometimes bought by large plantations or the people who are not rural farmers, but those who want to sell the fertilizer again at higher prices.

According to the evaluation made by the Directorate General for Infrastructure, the Ministry of Agriculture in 2013, the main problems associated with the subsidized fertilizer programme are as follows: (a) the RDKK is inconsistent with the needs, (b) there are people who can buy the subsidized fertilizer without...
being listed in the RDKK, (c) the lack of harmonious work relation between the Ministry of Agriculture and the counselling institutions, (d) the documentation in the distributors is sometimes inaccurate, (e) the prices of fertilizer in some areas are above the highest retail price (Harga Eceran Tertinggi or HET) and (f) there are still subsidized fertilizers given to the wrong target group.

Similar issues on the subsidized fertilizer programme were reported by the Regional Study and Information Centre (Pusat Telaah dan Informasi Regional or PATTIRO), a non-governmental organization. PATTIRO identified the following problems: (a) RDKK data were not valid because there was a mark-up in the number of land areas and the number of farmers who received the subsidy, (b) there were some volumes of delivery order that had not been distributed, (c) the fertilizer distribution aspect found out that there were some farmers who had not been registered in RDKK and (d) The supervision of subsidized fertilizer distribution by Komisi Pengawas Pupuk dan Pesticida (KPPP of the Commission for Fertiliser and Pesticide Surveillance) was not conducted optimally in the district and provincial levels (www.pangisyarwi.com).

Considering the aforementioned problems related to the implementation of the subsidized fertilizer programmes, it is necessary to explore ways to solve those problems. The problems have been faced by many villages, but there is a village that is considered more successful in implementing the programme than the other villages. The research can be started from this particular village to explore reasons of its success. It is also necessary to explore ways to improve effectiveness of the programme. One of the ways that could be worth to explore is the role of social capital, as it involves all the stakeholders in the decision-making.

Research Method

This research was conducted in Pelem village, one of the villages located in Pare subdistrict, Kediri regency, East Java province, Indonesia. Palem village is chosen as the location of the study, as it has reached good development and has been quite successful in implementing the subsidized fertilizer programme. Therefore, in this village, we can study the best practices as well as formulating solutions for some problems that they still face in implementing the programme. Although it is only a village, it actually has infrastructures similar to a city: It has a general hospital, banking offices, schools from elementary level to senior high schools, shopping centres, paved roads, restaurants, and so on. According to Husken (1998), it is known as Mengkotanya Desa (a crowned village, i.e., a village that becomes like a city). Pelem village is an agricultural village with good irrigation, hence farming can be done throughout the year. Agricultural products produced by farmers in this village are food crops (rice and corn), horticulture (peppers, tomatoes, red onions and vegetables) and sugar cane. The farmers in this village are mostly commercial farmers who farm to sell their products to various markets. The food crops and horticulture farmers get subsidized fertilizers from the government. Actually, the subsidized fertilizer programme for farmers in this village was only for the farmers who plant rice and corn, but in the realization of this programme, farmers who plant other crops also receive the subsidy.
The research was conducted from May to October 2013. The data were collected by using participant observation and interviews. The interviews were conducted by the Petugas Penyuluh Lapangan (PPL; field counselling agent) officers, the heads and board members of the farmer groups, the farmers who receive the subsidy, the head of the village and the village officers and the fertilizer distributor agents. This is supported by data related to subsidized fertilizer programme such as RDKK which is prepared by chairman, board members, and PPL as consultant. The questions are open-ended, but focus on two main themes, that is, their past experiences with the subsidized fertilizer programme and their future expectations for the implementation of the programme. The collected data are then classified according to the themes and then interpreted in order to answer the research problems.

The Implementation of Subsidized Fertilizer Programme in Pelem

Pelem village is located 3 km from Pare subdistrict, 21 km from Kediri district and 120 km from Surabaya, the capital of east Java province, Indonesia. According to the monographic data from the village office in 2012, the total area of Pelem village is 426,250 hectares. It is rich in agricultural activities. More than half of the area (that is, 278,120 hectares) is agricultural field. In addition, about a third of the area (that is, 148,130 hectares) is used as family gardens. The population, in 2012, is 9,954, consisting of 5,032 males and 4,922 females. Most of them are farmers. In Pelem village, the implementation of the subsidized fertilizer programme has involved several stakeholders, including the farmer groups. There are five farmer groups (Kelompok Tani) in Pelem village that receive the subsidized fertilizer programme, they are: Kelompok Tani Makmur I, Kelompok Tani Makmur II, Kelompok Tani Maju I, Kelompok Tani Maju II and Kelompok Tani Mulyo.

To apply for the subsidized fertilizer programme, the heads and the board members of the groups have to make RDKK, which states the needs of fertilizer based on the agriculture land areas that will be planted. In making the RDKK, they can refer to the volume of fertilizer needs for rice and corn per hectare, according to the recommendations of the Department of Agriculture (Table 1).

Table 1. Average of Subsidized Fertilizer Needs (kg/per Hectare)

<table>
<thead>
<tr>
<th>No.</th>
<th>Fertilizer Type</th>
<th>Paddy Crop (kg)</th>
<th>Corn Crop (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Urea fertilizer</td>
<td>350</td>
<td>400</td>
</tr>
<tr>
<td>2</td>
<td>Sp 36</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>ZA</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>Phonska</td>
<td>200</td>
<td>200</td>
</tr>
</tbody>
</table>

budget and are not allocated with any budget by the government. Therefore, the heads and the board members have to be willing to work voluntarily without being given any payment. Consequently, it is not easy to elect the heads and the board members, as only few people are willing to work voluntarily.

Based on the interviews with the heads, the board members and the farmers of the farmer groups in Pelem village, we can know that the heads and the board members are trusted by the members. This is because the heads of the farmer groups (a) are flexible in establishing and maintaining relationships horizontally and vertically; (b) have quite good economic power so they can work by using their own expenses and (c) have wide knowledge of agriculture, so sometimes they can become consultants in farming issues. Those characteristics owned by heads of the farmer groups have made them to be respected and trusted also by the Department of Agriculture to implement and deliver government’s programmes.

The responsibility of preparing the RDKK is within the head of the farmer groups. However, when preparing the RDKK, the heads of the farmer groups always discuss it with the board members of groups, the members and PPL officers. The board members and the members of the group provide data about the land areas, whereas the PPL officers provide recommendations about the rules and the volume of fertilizer needs for paddy and corn. An example of the RDKK of Pelem village is shown in Table 2.

The data in Table 2 show the accumulation of RDKK from five farmer groups in Pelem village in period I (January–June 2013). Kelompok Tani Makmur II received the biggest amount of subsidized fertilizer because they have the largest hectare of land area, that is, about 76.7 hectares, and the least is Kelompok Tani Maju II, as they only have about 34.29 hectares of land. The RDKK is prepared by the heads of the farmer groups. As mentioned earlier, the heads of the farmer groups have gained the trust from the group members, so the decision in

### Table 2. RDKK for Subsidized Fertilizer in Pelem Village

<table>
<thead>
<tr>
<th>Name of Farmer Group</th>
<th>Number of Block</th>
<th>Number of Farmers</th>
<th>Crops Area (in Hectare)</th>
<th>Amount of Fertilizer Needs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kelompok Tani Makmur II</td>
<td>4</td>
<td>275</td>
<td>76.6</td>
<td>Urea: 29,844, ZA: 7,461, SP-36: 7,461, NPK: 14,922, Organik: 37,305</td>
</tr>
<tr>
<td>Kelompok Tani Maju I</td>
<td>4</td>
<td>94</td>
<td>72.73</td>
<td>Urea: 25,455.5, ZA: 7,273, SP-36: 7,273, NPK: 14,546, Organik: 36,365</td>
</tr>
<tr>
<td>Kelompok Tani Maju II</td>
<td>3</td>
<td>82</td>
<td>34.29</td>
<td>Urea: 12,001.5, ZA: 3,429, SP-36: 3,429, NPK: 6,858, Organik: 17,145</td>
</tr>
</tbody>
</table>

**Source:** RDKK of Kelompok Tani Makmur I and II, Kelompok Tani Maju I and II, Kelompok Tani Mulyo (Period I, January–June 2013).
the RDKK will not cause any serious problems. If there is any mistake in the list, it can be communicated and negotiated with the heads of the groups and the fertilizer distributor agents in the village. The subsidized fertilizer programme is implemented twice a year: The first period is from January to June, to grow rice; and the second period is from July to December, to grow corn.

There are various types of cropping patterns depending on the planting time. These create different needs of fertilizer. The diversity of the cropping patterns is influenced by the condition of irrigation, farmers’ needs, farmers’ methods of farming and farmers’ predictions about the prices of the commodities. There is also a difference that is due to the different characteristics of one farmer group to another.

The regions of Kelompok Tani Makmur I and II are the areas which get the best agriculture irrigation compared with the other farmer groups in Pelem village. Therefore, they can potentially grow rice three times a year. However, the farmers in this area choose to grow rice only once a year and then they plant corn and other horticultural products (for example, chillies, vegetables, tomatoes, sugarcane, and so on). In 2011/2012, the combined farmer groups, also called Gabungan Kelompok Tani (GAPOKTAN), in Pelem village succeeded in planting excellent cabbages and received an award from the East Java provincial government because their cabbages could be exported to Taiwan through the merchants in Lumajang. The coordinator of the programme in planting cabbages was elected from one of the heads of the farmer groups.

The regions of Kelompok Tani Maju I and II are not as well irrigated as the previous groups. Therefore, the farmers of Kelompok Tani Maju I and II generally plant rice in the rainy season and plant corn in the dry season, because in the dry season, there is not enough water to plant rice. Farmers in Kelompok Tani Maju I and II are quite reliable in planting corn. In 1993, these farmer groups received an award for the best corn crops at the national level.

The other group, the farmers in the area of Kelompok Tani Mulyo are generally good at planting horticultural products, such as red onions, peppers and so on. The head of Kelompok Tani Mulyo actually has a horticultural plant company that provides seeds, such as peppers, tomatoes, cucumbers, cabbages and so on. The company’s name is Pana Merah, and it supplies the seeds for the farmers not only in Kediri district, but also Kediri’s surrounding districts, such as Tuban and Bojonegoro. The sales turnover of plant seeds can achieve approximately 100 million rupiah per month. Therefore, the farmers in this area usually prefer to plant horticultural products. They only grow rice to fulfil their family food needs. The following is the quotation from the interview with one of the rich farmers who owns three hectares of farmland: ‘I only plant a half-hectare area with rice to fulfil my family’s food needs for one year. I plant the rest of the areas with horticulture such as onions and peppers for bigger profits.’

The RDKK, which had been created by the farmer groups and approved by the PPL, is then submitted to the fertilizer distributor agents in the village that has been chosen by local Department of Agriculture. The RDKK is used as the basis of order or pick-ups of subsidized fertilizer in distributors in Kediri district level. The fertilizer distributor agents need to gain trust from the stakeholders, especially
the farmers, to avoid suspicion in providing the services. In Pelem village, there are two agents who are recommended by Department of Agriculture to distribute the subsidized fertilizer, they are: (a) Kiosk Lina Jaya that serves the farmers in Kelompok Tani Mulyo, Kelompok Tani Maju I and Kelompok Tani Maju II; and (b) Kiosk Tani Makmur that serves the farmers in Kelompok Tani Makmur I and Kelompok Tani Makmur II. These agents who are recommended by Department of Agriculture have been entrusted to serve farmers with the subsidized fertilizer programme for more than 10 years.

After the distributor agents in the village obtain the supply of fertilizer from the distributor in the district level, they will immediately contact the farmer groups. The farmers, as the members of farmer groups, can purchase the subsidized fertilizer from the distributor agents. For that, the farmers can see transparently the appropriate amount of subsidized fertilizer listed in the RDKK. The farmers in this village support and believe in the RDKK that was made by the heads of the farmer groups.

As mentioned earlier, the subsidized fertilizer programme was actually intended for planting rice and corn. However, farmers in this village are free to plant anything. The government cannot force the farmers to plant a particular crop. Therefore, there is a possibility that the farmers also use the subsidized fertilizer to plant other crops, for example, red onions. This does not seem to be a problem, as the farmers still plant rice and corn in a particular period of time and in a part of their land.

Another inconsistency that may happen in the RDKK is the list of recipients, as there are changes in farmers’ names in sharecropping. However, this does not cause a big problem, because the subsidized fertilizer distributor agents transparently show the RDKK to farmer groups and members, so they can see directly who have taken the fertilizer.

The amount of total fertilizer needs in RDKK is sometimes in contrast to the practice of farm activities in the field, such that, it sometimes influences the types of fertilizer needed. For example, farmers who plant red onions do not need urea fertilizer, but they need bokashi fertilizer, so the urea fertilizer in the particular agent will not be purchased by the farmers listed. However, this condition does not cause a big problem, as there are still other farmers who may need it.

Another problem that sometimes arises is the unavailability of subsidized fertilizer, because the supply from distributor has not arrived. This is due to difference in the time of cropping pattern of farmers in this village. Although the delay rarely causes a big problem, it is still an issue that needs to be considered when making the RDKK.

### The Concept of Social Capital

The involvement of a number of stakeholders shows an inter-related social networking. Therefore, the social capital, that involves various stakeholders, has an important role in implementing the programme. The concept of social capital is particularly popular within contemporary scientific circles and used in various...
disciplines (for example, economics, sociology, political science and regional development), as it has proven to ameliorate economic, social and public policy (Paraskevopoulos 2010). According to Putnam (2000), the existence of social capital of trust and norms governs the existence of a network to improve the efficiency and collective initiative of social organization. A social capital comprises several dimensions of civic participation, social network and social support, social participation, reciprocity and trust, and views of the local area (Foxton and Jones 2011).

Granovetter (1973) identified that the form of social capital consists of social relations, where the relations can be either strong or weak, depending on the nature of the relationship. Woolcock (2001: 13) says that there are three forms of social capital: bonding, bridging and linking social capital. The first form is described as the relationship of individuals within a homogenous group, characterized by strong bonds so that they are motivated, have the confidence to collaborate, support and help each other to fulfil the needs. Bridging social capital is further social relationship between individual to cooperate with other individuals or heterogeneous groups in order to bring benefits. Usually, the social relation of this form is weaker than the first form. Linking social capital describes the relationship between individuals in the power structure that is intended to gain support from formal institutions (Woolcock and Narayan 2000). The role of the formal institutions has also been noted by Fukuyama (1995) who argues that social capital is necessary for successful development, but a strong rule of law and basic political institutions are necessary to build social capital.

The concept of social capital is frequently associated with a social relation network that has the function of a coordinated social organization to improve collective initiative. All the elements or the stakeholders in a particular network work together participating, supporting and reciprocal exchanging cooperation following the norms, trust in each other to achieve certain goals. According to Cohen and Uphoff (1980), participating in rural development projects involves various dimensions, such as decision-making, implementation and evaluating the project, and distributing the benefits, and results depend on who participates and the nature of that participation.

The distribution of subsidized fertilizer in Indonesia has to go through many stages and involve multiple stakeholders, such as the fertilizer manufacturers, the warehouse managers at the provincial Level, the warehouse managers at the district Level as distributors, the owners of warehouses in the subdistrict and village levels as the final fertilizer distributors to the farmers. The main group that determines the procurement and distribution of the subsidized fertilizer is the PPL. PPL officers are commissioned by the local department of agriculture to supervise and give approval of the RDKK that was made by the farmer groups. To compile RDKK and distribute subsidized fertilizer, there is no budget for the officers working in the village and district levels. Therefore, the social capital, in terms of voluntary work, from the stakeholders is needed to carry out those tasks.

The implementation of subsidized fertilizer programme is one of the rural development programmes, especially in agriculture sector, in order to maintain national food security and alleviate the burden on farmers. The social capital has
an important role to achieve development goals. Moulaert and Nussbaumer (2005) explain how to integrate the role of power relations and the articulation between various spatial scales and institutional settings into the community-development approach in the European society. Michelini (2013) shows that social capital, involving joint participation of state and civil society, plays a crucial role in the implementation of a social colonization project in the Upper Colorado River Basin (Argentina). Similarly, according to Koutsu et al. (2014), a low social capital provides an effective explanation to the fact that Greek young farmers, in particular, and others farmers, in general, fall behind with adapting to modern circumstance in the farming sector, so the collective actions are needed to better adapt to the new conditions.

As we have seen in the previous paragraphs, the concept of social capital has been implemented in several areas and the role of social capital has been largely beneficial. Therefore, it is interesting to see how such a concept is implemented in a rural area in a developing country, such as Indonesia, in connection with a subsidized fertilizer programme. Some modifications on the existing concept may be found during the process and some formulation for better implementation of the social capital can be learned by conducting the research on how the social capital can be used to ensure the success of the subsidized fertilizer programme in a rural area in a developing country.

Role of Social Capital in Fertilizer Programme Implementation

As mentioned in the previous section, there are three forms of social capital, that is, bonding, bridging and linking social capital. If we refer these forms with the implementation of the subsidized fertilizer programme in Pelem village, we can see there are several similarities and modifications to be made. Consequently, a kind of hybrid social capital needs to be applied. The hybrid social capital is a combination of the bonding, bridging and linking social capital. The following is the explanation of each of the three forms of the social capital in Pelem village and a proposal for the hybrid form of social capital.

The bonding social capital is described as the relationship of individuals in a homogenous group, characterized by strong bonds so that they are motivated, have the confidence to collaborate, support and help each other to fulfill the needs. In the implementation of the subsidized fertilizer programme, we can see the strong bonds among the farmers and between the members of the farmer groups and the heads of the farmer groups, who are all in a homogenous group. Farmers are motivated to cooperate, support and participate in the programme implementation, because it gives them economic benefits, particularly in decreasing their production costs. This is the case in Pelem village, where the farmers need to work together to make RDKK that is used to apply for the subsidized fertilizer programme. If they do not work together to make RDKK, they will not be able to buy the subsidized fertilizer and will have to buy a non-subsidized fertilizer that is more costly. Therefore, the farmers are willing to spend some time to discuss
and make RDKK, although they are not paid to do it. They realize that they will eventually obtain the economic benefit by having cheaper fertilizer, thus decreasing their production costs and increasing their profit.

The bridging social capital is further social relationship between individual to cooperate with other individuals or heterogeneous groups inorder to bring benefits. Farmers in Pelem village are mostly commercial farmers who are free to plant any crop. However, to achieve mutual benefits, it is necessary to establish relationship with heterogeneous groups, not only with other farmers, but also the distributors and agents. The relation can also be established even with wider groups, for example, the buyers of agricultural products, traders of non-subsidized products and seed plant merchants. This wider relationship with other individuals and groups has enabled the farmers to run their farming business smoothly and earn more profit.

The bridging social capital is particularly useful in Pelem village, as there are various types of crops planted, but the subsidized fertilizers from government are only for paddy and corn. The good relation between the farmer groups and the other groups, that is, distributors, agents and PPL officers, has made them able to reach a consensus on the provided subsidized fertilizer. The good relation with another wider group is established in connection with the needs of pesticides. The horticultural crops, such as peppers, tomatoes, onions and other vegetables, need pesticides that are not subsidized by the government. Because of that the farmers need to establish good relationship with dealers of pesticides and agricultural drug companies who have representatives in this village. The role of the bridging social capital enables the farmers to obtain pesticides that are needed for their production process.

The farmers in Pelem village also need to establish relationship with buyers of agriculture products to sell their products. Each farmer can establish relationship with several agricultural merchants in accordance with his/her cropping patterns. For example, a farmer who plants rice, corn and other horticultures needs to establish good relationship with merchants dealing with each of those products. The social relationship between farmers and buyers or merchants of agricultural products is usually informal but it still runs well because of the mutual benefits that they gain in terms of profit. The merchants get the supply of agricultural products and facilitate farmers to sell their harvest. In turn, the farmers get the benefits from the quick sales of their products.

The linking social capital is the relationship established by individuals in the hierarchy of power. For example, with a good relationship with the government officials, a rich farmer or a head of a farmer group can be appointed by the head of the village to manage irrigation. That position is very strategic for infrastructure development in agriculture, in order to repair the irrigation canals, to build new roads in farming areas to facilitate transportation of agricultural products, and so on. The farmers need to establish good relations with the head of the village and the village officials, so that they can get the support from the government or the head of their group can be appointed to an important position. Availability of good infrastructure in agriculture will facilitate farming activities in the village.
The heads and the board members of the farmer groups also establish good relation with the local department of agriculture officials and the PPL officers. The good relation between them will facilitate the delivery of programmes desired by the farmers. Usually, they express their expectations informally to the head of the Executive Agency for Agriculture and Food Security (Badan Pelaksana Penyuluhan Pertanian dan Ketahanan Pangan or BP3KP) at the Department of Agriculture. For example, Kelompok Tani Makmur that needs to get help for hand tractors to cultivate the wider farm land because at the present time, it is not easy to get workers to work in agricultural sector. The presence of the hand tractors will save the labour cost for land preparation. The social relation between the head and board members of the farmer group and the local department of agriculture has managed the farmer groups to get the facilitation from government in the form of technical assistance that is required by some of the farmers.

The achievement shown by the farmers in Pelem village is one of the indications of the success of the agricultural development in this area. In 2007, farmer groups that are also members of the Farmer Group Association (GAPOKTAN) submitted a proposal for Farmer Empowerment Programme through Technology and Farming Information (Programme Pemberdayaan Petani melalui Teknologi dan Informasi Pertanian or P3TIP), for the development of Cabbage Agribusiness. The proposal was accepted and it received 70 per cent of the grant from the World Bank and the rest from the National Budget (APBN) and the District Budget. The implementation was done in 2008–12, and the programme was successful. The cabbages produced have been exported to Taiwan and received an award from the East Java Governor.

As we have seen in the explanation above, the success of the farmers in implementing the programme is achieved by implementing the combination of the three forms of social capital with special conditions for each of them, thus a hybrid social capital is needed. Within the hybrid social capital, the farmers need to build social relations with their own members and farmer groups to solve the needs of the fertilizer, and then they need to build a relation with wider groups (for example, merchants, traders, etc.) in order to manage and distribute their products more widely. Finally, they need to build a relation within the hierarchy of power (for example, the government officials), as the political institutions may influence their success in providing the needs that they cannot fulfil by themselves.

**Conclusion**

Based on this research that was conducted in Pelem village, East Java Province, it has emerged from the study that the subsidized fertilizer programme from the government has been implemented successfully by including the social capital. All the three forms of social capital, that is, bonding, bridging and linking social capital have all been implemented in Pelem village and been integrated into the so-called hybrid social capital. Within this concept, we observed that the farmers built relations with their own groups, with other groups and with the bureaucracy. The farmers have built social relations with other farmers in order to manage the
use of various types of the fertilizer, as there were different cropping patterns within the same village. The farmers have also built a good relation with those who are not farmers, for example, merchants, traders, etc. in order to gain the most benefit from their crops. Finally, the farmers have built a good relation with the government officials, as the political institutions could create policies for the benefit of the farmers.

To further improve the welfare of farmers and to increase the national development, the government needs to implement a more integrated policy. As we have seen in the case of Pelem village, the success of the subsidized fertilizer programme has been achieved, but this success can become a failure, as there are several problems that are emerging and require attention from the government. The main problems are the pest and disease that attack the agricultural products and the fluctuating selling prices of the crops. Consequently, the government should take care of disease and pest attack and price variability, so that farmers will remain interested in associating with multiple stakeholders. In this case, the government needs to make a policy that includes all the process, from the pre-production phase until the distribution phase.

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References


