

Agricultural transformation, economic growth, and poverty in Indonesia

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ABSTRACT

This paper explores the link between agricultural transformation, economic growth and poverty in Indonesia. Based on descriptive analysis, it shows that the Indonesia's economic growth and poverty reduction performance are more influenced by the service sector than the agriculture sector. The two major challenges to implement agricultural transformation in Indonesia are the limited availability of land and agricultural contract issue. To address these challenges, a gradual change is the best solution. The fixed rent scheme should be introduced properly to the society so as to increase the agricultural production, while support from the government is needed to help the smallholder's farmers to avoid poverty.

Keywords: agricultural transformation, economic growth, poverty, Indonesia

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1. Introduction

It has been suggested that transformation of agriculture that consisted of the principles of highly diversified, market efficiency and specialisation in production has given hope to solve the problems of poverty in developing countries. Then, in its basic form, many developing countries have been actively adopting agriculture to substantially decrease the poverty rate in rural areas.

Although the agricultural transformation has traditionally been treated as an important economic development factor, the agricultural transformation has not brought about any consistent positive result in developing countries. In these countries like Indonesia, agricultural growth tends to decline in recent years, which is indicated by the decrease in agricultural production. In effect, when agricultural production is down, a shortage occurs, and there is a less supply of agricultural products, leading to a higher equilibrium price and a reduction of household consumption. This explains why economic growth was slow overall in previous years.

Land distribution is one of the greatest obstacles to address the declining of agricultural production in Indonesia. Land distribution problems cannot be explained without a lack of land and the existence of sharecropping system which fail to overcome market imperfections. In the case of land availability, most farmers owned less than 0.5 acres of land (World Bank, 2012). If the land is limited, farmers will not be able to increase their production and face difficulty in obtaining credit from commercial banks. Uniquely, land shortage in Indonesia is closely connected to the type of land ownership. People still use

social relief, customary law and Islamic law as a land ownership scheme which completely differs in comparison to the capitalist system. However, these systems are counterproductive in land trade negotiations and agriculture productivity.

When it comes to the sharecropping system, some evidences suggest that the sharecropping system which is used most by smallholders in Indonesia may not be able to raise agricultural production. This situation is further complicated because the sharecropping system in Indonesia makes both landowners and smallholders are increasingly vulnerable to poverty.

Based on the discussion above, the purpose of this paper is to discuss those two major land distribution problems, limited land availability and the sharecropping system, which are essential to explain the poverty trend. This paper argues that in order to reduce poverty rate and to achieve agricultural transformation it is crucial to solve these two issues beforehand.

2. Theory

There has been a relatively large number of empirical studies evaluating the theoretical link between agricultural transformation and economic growth, but there is no consensus among scholars. Some economists maintain that agricultural sector is a crucial part of economic growth (Jatuporn et al, 2011; Xuezheng and Gaofeng, 2010; Rostow, 1986). Meanwhile others believe that agricultural sector does not have significant correlation with economic growth (Tiffin and Irz, 2006; Tsakok and Gardner, 2007). More broadly, some scholars argue that, the agricultural sector and economic growth have a complex relationship and processes with many factors such as

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development of the agricultural sector (Schultz, 1964), the quality of the main production factors (Timmer, 1995) and its contribution to people's income in rural areas (Ravallion, 1998).

On the other hand, when it comes to the relationship between agricultural transformation and poverty alleviation, there have been many scholars who have dealt with the issue positively. The increase in agricultural productivity and output per unit of land contribute to the reduction of poverty (Goswami and Chatterjee, 2010; Datt and Ravallion, 1998). These arguments are reasonable, because most of rural people are heavily reliant on agriculture for their livelihoods and which potentially help in reducing poverty by increasing farm incomes, encouraging labor market, and reducing food price.

The first problem in agricultural transformation is land inequality which has resulted in the lack of land availability that can be operated and cultivated (Ray, 1998). Therefore, it is clear that land redistribution program is inevitable. According to Besley and Burgess (1998), land redistribution scheme can raise agricultural wages which give a powerful impact on poverty alleviation. This argument has proven the findings of Keswel and Carter (2014) which found that the land redistribution program stimulates people's standard of living in South Africa.

The second problem is the issue of sharecropping. The weakness of sharecropping system has long had its critics. Adam Smith (1776) emphasizes that sharecropping create a limited incentives earned by tenants, where they have to bear the most of input costs and only receives a more fraction of the output produced. Additionally, there is uncertainty regarding the land ownership, which is difficult for farmers to improve their production. This view is supported by Ray (1998) who argue that sharecropping is a traditional method of farming system, in which productivity per acre on sharecropped land is lower than the productivity of farms under the fixed rent system.

However, some scholars still maintain that sharecropping has its benefits for both smallholders and landowners. Eswaran and Kotwal (1985) as well as Bhattacharyya and Lafontaine (1995) believe that the sharecropping system plays a key role in allocating resources and is more effective in anticipating a moral hazard, compared to the fixed rent scheme.

3. Agriculture's contribution to economic growth and poverty alleviation in Indonesia

In the context of Indonesia, a recent evidence support the theories that agricultural transformation has given positive consequences on economic growth. As shown in figure 1, economic growth has increased along with the increase in agricultural growth in 2010 and 2011. When the agricultural growth declined to 3.4% in 2013, economic growth also experiences a decreased to 5.7% in the same year. However, when the trend is associated with poverty, both economic growth and agricultural growth fluctuated and the poverty rate decreased gradually. This stimulates a question whether this evidence is in opposition to the positive relationship between agricultural transformation and poverty rate?

To answer this question, it is important to note the service sector has increased dramatically in recent years. According to Suryahadi and Hadiwijaya (2011) the services sector contributes significantly to reduce poverty compared to the agricultural sector. Many farmers in Indonesia have left their farms to work in the service sector since they can earn more than doubled income (McCulloch et al, 2007). This explains why Indonesian poverty rate decreased significantly when the agricultural performance fluctuated.

Nevertheless, if we examined more critically, the economic growth and poverty reduction that is driven by the service sector rather than others, such as agriculture, would have negative consequences on income inequality and the rate of savings. As we can see, figure 2 shows that, when Indonesia was too reliance on the service sector from 2003 to 2013, the rate of savings in their country was relatively stable and the Gini index increased to 0.37 in 2012.

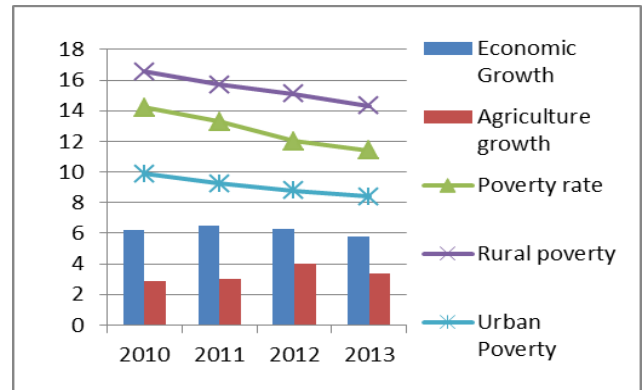


Figure 1. Trend economic growth, agriculture growth, and poverty rate in rural and urban areas (in percentage) (Source World Bank, 2014)

Therefore, it is obvious that, poverty reduction should not depends very much on the service sector rather should encourage the productivity of agricultural sector, which more likely to contribute in addressing income inequality and achieving a higher rate of savings in comparison to the non-agricultural sector. Several factors behind this will be discussed in more detail below.

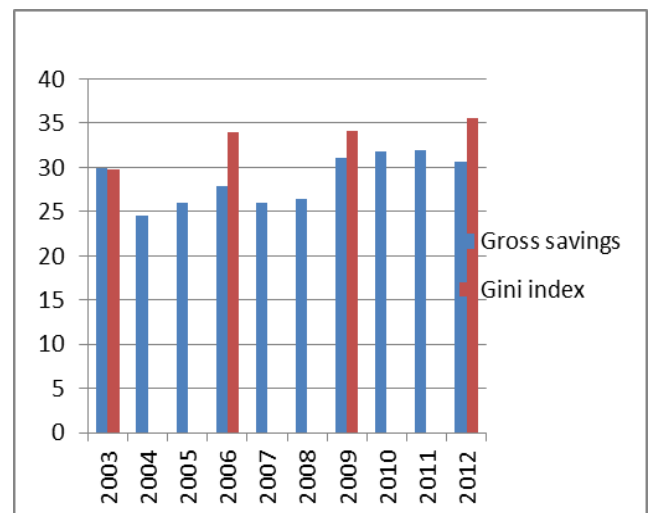


Figure 2. Trend gross savings and Gini index (Source: World Bank, 2014)

Firstly, more than 60 percent of the people who are below and close to the poverty line work in the agriculture sector (Suryana, 2001). Therefore, the increase in agricultural productivity will be the key factor in reducing the income inequality. Secondly, the total of the agricultural household expenditures was 48.1 percent higher than non-agricultural household expenditures in rural and urban area which are 42.53

percent and 30.63 percent respectively (Syafaat, 2000). The elasticity of farm household expenditure on food consumption is higher than the non-agricultural households. This means that an increase in income through the expenditure of agricultural household consumption is more effective than the non-agricultural households.

Thirdly, agricultural transformation is also closely related to redistribution policies which encourage a surge of savings at the national level (Ray, 1998). Once there is an increase saving rate, it will raise the rate of capital accumulation and economic growth (Harrod Domar Model). These three are the reasons why agricultural transformation should not be overlooked. Encouraging a good balance between agriculture and service sector may be an effective way to eradicate poverty more successfully

4. Issues and challenges for agriculture's growth in Indonesia

4.1. Land shortage

Indonesia is one of the world major countries for global agricultural products (World Bank). Nevertheless, ironically, Indonesia is increasingly dependent on the import of agricultural products. It is reported that between 2003 and 2013 Indonesian agricultural imports increased fourfold from 3.34 billion in 2003 to 14.9 billion in 2013 (BPS, 2014). The import surges are caused by an imbalance between total productivity in agriculture and domestic consumption demand for agricultural products.

One of the main reasons behind a lower agricultural productivity is a land sharing system in which people share their lands according to compassion and decency. Research conducted by Ervina (2014) found that much of the agricultural land leased by the owner on the basis of compassion and as a form of social piety or maintaining a good relationship with their families. In addition, many elderly people who are no longer able to cultivate their lands, decide to inherit the land to their children, and usually the land is divided into many fractions for every child. This condition implies that social solidarity among smallholders is remain. However, in economic point of view, it can result in a number of negative impacts.

People are often trapped in the unproductive land ownership system. Assets are divided into smaller fraction without substantially change in the level of production. Surely, in the absence of agricultural productivity, agricultural transformation seems impossible. This case is similar as in Malawi. Research conducted by Restuccia and Santaaulalia (2014) found that in Malawi the majority of the lands is transmitted by inheritance (73%), bride price (1.9%) and only 1.1 percent of the land have a title and 6.9 percent only rent to. All of this, cause 0.33 output loss in the agricultural productivity.

Another potential problem is a fundamental difference between the land ownership system in Indonesia with the capitalist system. Indonesia's land ownership system is influenced by the combination of customary and Islamic system where land cannot completely be owned by one individual, prohibited to lease and social justice as a core value. These elements are completely different with land ownership scheme adopted by the western society. This different system is explained further by Syahyuti (2014)

The main drawback of customary and Islamic law approaches is that it would prevent full ownership of the land and restrict the rights of landowners to manage their own land. Then, landowners are not able to optimize the output from their land and are facing difficulties in expanding land since they are not allowed to sell them. In some case, they might face hardship to

access credit due to the absence of the land title. Nevertheless, customary and Islamic law may help to reduce inequality because the owners of the land are allowed to open their land for the people to access and to cultivate. However, there seems little doubt because there is limited studies have been done about the relationship between land ownership system and inequality in Indonesia.

Table 1: Land ownership law in Indonesia

Customary Law	Islamic Law	Capitalist Law
No one could claim absolute ownership, land is provided for everyone	Land right ownership is not absolute. It must be returned to the state if it's not managed within 3 years	Owners have <i>absolute land rights ownership</i>
Inclusive, allowing the social rights of communities	Inclusive, allowing the rights of communities	Exclusive, wholly owned by the owners
The land market is not allowed	Land land market is limited in certain conditions	Open land market is allowed
The value of humanity is higher than the land	Humans and their performance are higher than the land	Land and labor are equal as a factor of production

Source: Syahyuti, 2014

4.2. Contract farming problems: sharecropping vs fixed rent

In Indonesia, most contract farming still adopt the sharecropping system which is not productive to pursue agricultural transformation goals. According to Syahyuti (2014), in some regions, the sharecropping system uses social solidarity and offer leniency to some extent. This is clearly not an acceptable situation from an economic perspective. At the landowner's point of view, contract farming, which based on a social commitment is likely to reduce the profit because landowners have limited capability in determining the price of products. In addition, it may also cause them to be vulnerable people because the landowners are not able to improve their own income. Meanwhile, in other regions, such as West Java, where sharecropping already involves the contrast between landowners and tenant, the agreement tends to provide more benefit landowners (Anggita and Jamal 2009). Overall, these evidences indicate that the sharecropping system is less beneficial.

On the other hand, the fixed rent system which should be the solution to the sharecropping also faces a number of obstacles. These barriers can be explained as follows. *Firstly*, landowners are not able to implement the fixed contract because their inability to pay their employees before harvesting term. This is caused mainly by the lack of credit market (Anggita and Jamal 2009). *Secondly*, most Indonesian farmers still believe that the fixed rent system is based on the exploitation of farmers (Darini, 2010). This belief is rooted from the colonial era where during of colonial age, the Dutch implemented force cultivation system that triggers the process of involution and shared property (Geertz, 1963). *Thirdly*, the evidence also examines that some of the fixed contract system which has been applied in the country today to bring negative impacts on labors. This system favours more the large farmers. In some uncontrolled situations, it stimulates the conflicts between large farmers and laborers. In 2012, for example, 22 people died due to a tension between large farmers and laborers. It was also reported that there were 232 conflict in the oil sector (UCAN, 2013).

However, there are also some cases which indicate positive results of the implementation of the fixed rent scheme. In 2004, Patrick investigated the contract farming system in two provinces, Bali and West Nusa Tenggara. He found that the fixed

rent system generates a higher productivity, wider market access support, addresses the lack of information issues and guarantees a market for farmers.

4.3. Is it still applicable now to use sharecropping contracts?

As mentioned in the theoretical approach, fixed rent system which employ labors from smallholder is more efficient compared to the sharecropping system (Ray, 1998). Taken into consideration the sharecropping problems which were discussed previously, if we put productivity as the main consideration, it is difficult to object Ray's suggestion that the fixed rent system is the best option. Hence, I argue that, although there are some obstacles in implementing fixed rent system, it is still seen as an important step to generate productivity. I also believe that some problems in implementing fixed rent system are mainly driven by poor government support and an imbalance in the system cooperation agreement.

Therefore, the government can play an important role in providing regulations that guarantee the rights of farmers, expanding credit for farmers, and promoting mutually beneficial partnership between landowners and laborers. Together, socioeconomic approach is needed to increase people's trust towards fixed rent system. It is important to note that it seems impossible to change the contract farming system in short term period because of social and cultural factors which requires the involvement of farmers, government and landowners intensively. Thus, gradually agricultural transformation is best.

5. Conclusion

Indonesia's economic growth and poverty reduction performance are more influenced by the service sector than the agriculture sector. However, economic development should not only rely on the service sector but also it should encourage agriculture sector. The two major obstacles to implement agricultural transformation in Indonesia are the limited availability of land and agricultural contract issue. The lack of availability of land in Indonesia is influenced by social and cultural factors that encourage asymmetric information and decrease productivity. In addition, the most prevalent agricultural contract system in Indonesia still uses sharecropping schemes which has been proved to be unproductive compared to the fixed rent scheme. Lastly, a gradual change is the best solution. The fixed rent scheme should be introduced properly to the society so as to increase the agricultural production. At the same time, support from the government is absolutely necessary which can subsequently help the smallholders to avoid poverty.

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