

## RURAL TRANSFORMATION IN INDONESIA \*

Sri Widodo

Janabadra University. Yogyakarta. Indonesia

## DEMOGRAPHIC TREND

Indonesia in general is a densely populated country, although it is not in all Islands. With the population of more than 200 million most of the population live in rural area and agriculture households is still dominant in the composition of households in Indonesia. According to the 1993 Agricultural Census there are 42117 thousand household totally and 29323 thousand household of them are in rural area. It means that 69.9 % live in rural area.

Compared to the data of the 1983 Agricultural Census there is an increased in the number of rural household from 29110 thousand to 29323 thousand with the growth rate of 1.56 % annually. However, proportionally there is a decrease from 77.9 % to 69.9 % due to the higher growth rate of the urban household, that had been growing at about 6 % annually (table 1).

Table 1. Number and Proportion of households in 1983 and 1993  
Agricultural Census in Indonesia

	Indonesia		Java		Bali	
	n	%	n	%	n	%
Total households (thousand)						
1983	32,214	100	20,741	100	499	100
1993	42,117	100	26,270	100	634	100
rate of growth (% per year)	2.72		2.39		2.42	
Rural households (thousand)						
1983	25,110	77.95	11,793	76.14	429	85.97
1993	29,323	69.62	17,252	65.67	459	72.40
rate of growth (% per year)	1.56		0.89		0.68	
Urban households (thousand)						
1983	7,104	22.05				
1993	12,794	30.38				
rate of growth (% per year)	6.06					
Rural Agricultural households (thousand)						
1983	18,425	73.38	10,880	68.89	331	77.16
1993	20,095	68.53	10,668	61.91	326	71.02
rate of growth (% per year)	0.87		-0.18		-0.15	

Source : CBS, 1994

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## AGRO EKONOMI

An economic structural transformation in rural area seems begin to happen with the proportional change in agricultural household in rural area from 73.4 % in 1983 decreasing to 68.5 % in 1993, but there had still been an increasing number of agricultural households from 18425 thousand to 20095 thousand.

Although in Indonesia as a whole there is still an increasing population pressure on rural sector and agricultural sector, there are differences among provinces and islands, such as Java and Bali there had been decreasing population in agricultural sector in rural area in 1983-1993, with the rate of growth of minus .18 and minus .15, respectively

Most of the family farms are small farms hence they produce low level of income, although it does not always mean the productivity is low, especially land productivity. These very small farms can be indicated by the number of the farm with the size of less than a half hectare those are 10,906 thousand or about 50 % of the agricultural household.

Most of these farms raise food crops and horticulture. Some others plantation crops ( e.g. rubber, coffee, tea, oil palm, coconut etc), animal husbandry, and fish, or mixed of them.

### THE DYNAMIZATION PROCESS OF THE SMALL FAMILY FARM

The static sociological dualism theory of Boeke argued that Western economic thought was not applicable to tropical-colonial conditions and proposed the need for a separate theoretical approach to the problem of such economies, where there is a sharp, deep, broad cleavage dividing the society into two segments, that many social and economic issues take on a quite different appearance and western economic theory lose their relation to reality. The fundamental distinction is in the objective of the economic activity. The economic activity in the West and Western enclaves in the East is based on the stimulus of economic needs, while the Indonesian is guided primarily by social needs.

The other static dualism theory of enclave dualism of Higgins traces the origin of dualism to the differences in technology and product market between the modern and the subsistence sector. The modern sector concentrates heavily on the production in mining and plantations, import technology from abroad that basically labor saving, with relatively high capital coefficient. In contrast the technology in the traditional sector is characterized by the use of labor intensive production methods, and produced for the household need and local market. Expansion of the modern sector is primarily in the response to foreign market demand, and its growth has relatively little impact on the local economy.

The agricultural involution theory of Geertz (1963) said that, due to the Dutch Colonial Policy, the traditional farmers in Indonesia at the beginning of the independence were still in agricultural involution, that could only increase production as much as the growth of population by increasing the labor input without any improvement in the level of living.

At the first stage of the intensification program (*Bimas*) on rice the meaningful result was to break this condition especially by large farmers (more than .5 hectare) (Suwardi, 1972; 1973; Sinaga & Collier, 1975; Sayogyo, 1973). There were different impacts of the intensification program with the most benefit were going to larger farmers. However, afterward smaller farmers also gained benefit from the program

too. Even recently there has been a tendency to increasing yields as farm size become smaller (Keuning, 1984). Especially this happened with the higher developed land saving technology on rice through *Bimas* package, that was most suitable in irrigated lowland rice field (*Sawah*) with high population density, such as Java and Bali. Therefore the irrigated lowland rice crop had applied the highest level of modern input such as fertilizer and pesticide and produced highest rice yields, especially the smaller farms. This coincide with the other less developed countries that the small farms made better use of available resource of land (Berry & Cline, 1975 ; Reynolds, 1975), and produce higher yield than the larger one.

However, it dealt with yield which is usually a measure of land factor productivity due to the most scarce land resource in agricultural production in density populated of less developed countries. It is true that from the view point of land factor productivity (yield), in general, smaller farmers made better use of their available most scarce land resource or smaller farmers had higher yield. From the view point of total factor productivity, where all factor of production were aggregated in certain manner, there was a phenomenon of higher productivity of large farmers, (Widodo, 1989).

This phenomenon may be because Java is in the process that similar with the case of Japan that was no longer characterized by inverse relationship between size and productivity, suggesting that when enough lucrative off-farm employment become available, the pressure to use labor on small farm diminish (Berry & Cline, 1975: p.131). In fact the off-farm employment opportunity in many villages in Java had increase since 1979 and become important source of household income. (Widodo, 1989; Collier *et al*, 1982; Kasryno, 1983). However this total factor productivity phenomenon does not mean to be rejecting the size-yield inverse relationship paradigm, because the total factor productivity does not always coincide with the single factor productivity of land resource (yield).

### THE MECHANIZATION PROCESS

In Java and Bali, where the man-land ratio is so high, it is necessary to develop selective mechanical technology, because the need of labor in certain months is greater than the available labor force (Birowo, 1977). Although there is a surplus of labor over one year, for several months of the peak season in rice farming, there are shortages, and the larger the size of the farm is the greater the shortage. This fact can be a sufficient basis for developing selective mechanical technology in areas with high population density.

In fact in spite the labor surplus economy as a whole of Java in recent two decades selective mechanization of rice farming has been taking place. Hand tractor and some four-wheeled mini tractor has been adopted in lowland rice area. It is considered that the following factors are responsible for this phenomenon, seasonal labor shortage, increase trouble in supervising hired labor, decrease in draught animal, shortened period of rice operation due to better water condition and new rice varieties, increasing available hiring-tractor market, cost saving and intensification of land use (Widodo, 1989; Inamoto, 1985; Lingard & Bagyo, 1983).

Simple tool for weeding in the form of rotary or spike-toothed push weeder has been adopted throughout the rice farm areas in combination with manual labor for weeding. Changes have also happened in harvesting from the traditional method by

using *ani-ani* with share labor was changing to sickle harvesting with daily wage labor. One of the reasons was that the modern varieties (IR) mostly shatter easily (Sinaga & Collier, 1975). This transition does not only mean the improvement of production tool but also means the process of transition from a social custom based on share labor with *ani-ani* to the daily wage with sickle (Kanazawa, 1982; Sturgess & Wijaya, 1983). It involved a change in labor relationship and employment opportunity especially when it is associated with *tebasan* system. In *tebasan* system the farmers sell rice crop before the harvest to middleman. The original traditional harvesting institution was *bawon* system where a large number of villagers (generally woman) join the harvest and get a share (*bawon*) of what they cut with *ani-ani*. The share varies from region to region and depends on the relationship with the farmers. The *tebasan* system limits the number who join the harvest and reduces the total harvest wage (Collier *et al.*, 1973; Utami & Ilahauw, 1973; Collier *et al.*, 1974). It is one example that a rural institution has changed its function in response to demographic and economic pressure and that has eliminated one of the income sources of landless villagers.

Theoretically there are a number of potential impacts of the mechanization of the land preparation as noted by several writers (Farrington *et al.*, 1984; Bersten *et al.*, 1984), i.e. increase crop intensity, increase yield by higher quality of soil preparation, increase profit, facilitate farm expansion, and reduce the drudgery of the works.

However, empirical evidence from several countries in Asia has not been quite clear on some of these potential impacts, including in Indonesia, especially on yield and efficiency except for the substitution of traditional methods of using labor and draught animal. (Bernsten *et al.*, 1984; Widodo, 1989).

The introduction of non-traditional input of tractor seems to affect the institution of the village community in the mutual exchange and sharing in the use of traditional inputs of labor and draught animal toward more commercially oriented (Widodo, 1989).

From this process of mechanization, it can be noted that the selected mechanization is not only an example of the transition process from the development based on land saving technology to the selected labor saving technology in densely populated area, but also a changing process of a community with strong institution of mutual exchange and sharing in using traditional input toward the commercial profit oriented farming in using non-traditional input.

## THE STRUCTURAL TRANSFORMATION OF THE INDONESIAN ECONOMY

Empirically the economic structure is measured by the sectoral share in the gross domestic product and employment. There has been significant change in the share of agricultural sector in this gross domestic product from 51.8 % in 1961 decreasing sharply to only 14.79 % in 1997 (before the economic crisis). The decrease of the agricultural employment is not as fast as in income, from 79.9 % in 1961 to 41.18 % in 1997. This means that a large number of agricultural population get smaller per capita income compared to non agriculture sector.

Table 2. The Share of Agricultural Sector in Gross Domestic Product and Employment (%)

Year	GDP	Employment
1961	51.8	79.9
1971	34.4	64.2
1980	26.8	55.9
1990	21.2	49.9
1997	14.8	41.2

Source :CBS various publications

The growth of non agricultural sector has been faster than the agricultural sector, to be supported by agricultural sector in two ways, by decreasing term of trade of agricultural product to provide cheap food for non-agriculture labor and cheap material for industry and by greater investment on non agricultural sector. This kind of policy is needed to support industrialization process. But to promote industrialization based on import material and foreign loan cause economic crisis in the international monetary crisis in 1998 (and also political crisis)

### SUSTAINABLE RURAL DEVELOPMENT

The sustainability of development is a development that is be able to conserve natural resources and ecology for the use of future generation, includes the need for enhancing productivity in the use of resources in meeting the increasing demands resulting from growing population and rising incomes (Nurdin, 1994). Institutionally there are two kinds of rural local organization in Indonesia. The first is consisted of the traditional organization such as self-Held Group Organization (*usaha bersama, gotong royong*), *arisan*, pesantren, subak ect. The second is semi-governmental organization, such as PKK, LKMD, *Kelompok Tani* (farmer group), water user association etc. Beside that, there are NGOs (LSM), as facilitator to plan and implement sustainable rural development programs in cooperation with the first group of rural local organization. While the government execute the program through the second group assisted by the local administration of the central and local government.

Rural development in Indonesia on the first long term development (PJP I) has been carried out as planned and guided changes in rural economy and basic social delivery services, through government agencies and government sponsored organization. Economic growth and poverty alleviation were achieved through the developing agriculture on food and tree crop production. The role of the farmer groups was essential in adopting the technology package through BIMAS, INMAS and INSUS programs assisted by the filed extension agents.

The formation of cooperative in the rural area was designed to be a component of the BIMAS program, to implement the channeling of agricultural input. Village Unit Bank (*BRI Unit Desa*) is a credit institution located in rural area was also originally designed to support food production program.

There were still a number of programs in rural development such as cottage industry, education, family planning, poverty alleviation (IDT), health services etc.

A new paradigm of sustainable rural development is not only considering economic growth, redistribution, subsidy and protection, centrally planned development, but covers considering the quality of growth include conserving environment for sustainable development, the acceptance and participation of the community, freedom, autonomy, indigenous wisdom, institution and technology appreciation, protection of the poverty household etc (Shepherd, 1998). There are going to be an adjustment in the method and approach in future of rural development to be more democratic in the new situation of the reformation movement.

### CONCLUDING REMARK

There has been demographic and economic structural transformation in Indonesia, but in general the population pressure on rural and agricultural sector is still going on, although in Java and Bali are different with more advance transformation toward non agriculture. In gross domestic production the share of agriculture has been decreasing significantly, but the share in employment decreasing moderately.

The dinamization of small farmers are not only technologically but also socially and institutionally, a changing process of a community with strong institution in original character of mutual exchange and sharing in the use of traditional inputs to commercial - profit oriented farming using modern inputs.

The traditional and government sponsored rural organization has had the role in the rural development process in working together with NGOs and government program. The new paradigm of sustainable rural development need more participation of rural community and more appreciation on indigenous wisdom, technology and institution.

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