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คิดเห็นของผู้เขียนโดยเฉพาะ ไม่จำเป็นต้อง
ยอดต้องการความเห็นของผู้อ่านแต่ละ คน แต่จะใช้ความรู้
ณ ขอบเขตของภาคีข้ามเล็กการเกษตร
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AGRICULTURAL
POLICIES CONCERNING
FARM SIZE IN INDONESIA

Budi Guntoro*

Introduction
Size has economic meaning, in the sense that a certain area of land can most economically be used in a certain way; if it is below or above a certain size, the owner may have to farm in a different way. The point where one type of activity should be replaced by another is called the “margin on transference”, while the “no rent margin” is a situation where the value of land rent, given a certain activity, is zero (Barlowe, 1978).

Indonesia agriculture is characterized by small farms, for production of food crops and some tree crops. In 1983, around 6.5 million farm households, or 40.8% of the total, had a land holding smaller than 0.5 ha, with an average farm size of only 0.26 ha. By 1993, the number of these very small farms had increased to 8.7 million, or 48.5% of the total. Meanwhile, average farm size in Indonesia fell from 1.09 ha in 1983 to 0.74 ha in 1993. This was mainly because of the pressure of a growing population on a limited area of arable land, particularly in Java.

Background
Indonesia consists of five large islands and thousands of small ones. The area is 9,600,000 km² with 80.61% sea and only 19.39% land (BPS, 1995). Of the 1,684,00 km² land, 66.35% is forest, 7.75% plantation, 6.68% dry-farming and 5.01% wet-land farming. The main forest area is found in Irian Jaya; the main plantation, dry land and wet land area are in West Kalimantan, East Java and West Java provinces, respectively (Niits, 2003).

In Indonesia tropical environment, where precipitation ranges from 1500 to more than 3000 mm/year, often falling within a few months of the year, traditional techniques are generally poor in conserving soil and water. As a result, productivity falls in the uplands themselves, while material washing down into the lowlands causes sedimentation and disruption of water regimes. This disruption of the ecosystem threatens investment into infrastructure, especially irrigation systems, water reservoirs and hydroelectric facilities and roads, as well as industrial and domestic water supplies and coastal estuaries important as fishing grounds.

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areas of hilly upland are being brought under cultivation, often using inappropriate farming practices which reduce agricultural productivity.

The outer islands (Islands outside Java) still have relatively sparse populations, and it has been estimated that approximately 47.1% million ha are available as new agricultural land (with slopes of 0-3%, 3-8%, and 8-15%). In addition, 15-20% million ha are potentially suitable for the cultivation of tree crops or estate crops.

**Distribution of Landholdings**

In 1870, when the more liberal policy that followed the cultuurstelsel required the eradication of the system of compulsory cultivation of certain export crops, an Agrarian Law was promulgated requiring individual owners to indicate the land to which they had rightful ownership. All land to which there was no clear or rightful claim was treated as belonging to the state and as a consequence much of the forested land on the hill slopes

government later rented out much of this “publicly owned” land in leases of up to 80 years to private estate companies that were predominantly owned and managed by Europeans.

In the more sparsely populated outer islands, where shifting cultivates prevailed until the middle of the twentieth century, land had been communally owned by clans or extended families for centuries. Individual ownership was practically unknown. To cultivate a piece of land one needed the consent of the clan head, once cultivated, the land could be passed on to one’s children. Never, however, could such land be owned in the absolute sense. Thus, the general conclusion can be drawn that communal ownership continued to prevail for a longer time in areas where shifting cultivation was practiced than in Java and Bali, where the rural population was more familiar with individual ownership or at least individual control over land.

The 1980 Population Indonesia depended agriculture as their source of income and obtained 17.5 million households. of all households, owning 7.2 million or operated agricultural even though they earned livelihood in the agric sector in some way, us as agricultural laborers.

Although 58% of households in the n operated land, 34% of number were cultivating than 0.25 ha, while 29% cultivating between 0.25 ha. As might be expected, larger holdings of 0.5 ha were much common outside Java and Bali. Similarly, landless in Java and Bali on other islands.

For Indonesia as a whole, only 31% of food households have access to at least 1 hectare or more of land in Java is only 10.6% distribution within this is examined, it can be seen...
crop households, some 10% control holdings of less than one tenth of a hectare (Tjondronegoro, 1994).

Policy Concerning Farm Size

Policy Options

Varieties of policy alternatives in dealing with farm size are as follows:
- Land resource base policy options which change the actual size of land holdings through the development of land resources (e.g. irrigation, clearing of new agricultural land).
- Technological base policy options which improve the incomes of small-scale farmers through the application of new technologies on their given land holdings. The development of new high-yielding varieties resistant to pests and diseases, improved livestock breeds, and more productive land management come under this category.
- Institutional base policy options are based on institutional changes such as changes in property rights, land consolidation, contract

Smallholders (NES) etc.

- Off-farm base policy options are concerned with generating off-farm employment by means of e.g. agro-industry.

Land Resources Capacity

The area of utilize land in Indonesia up to 1997 is about 64 million hectares. It has increased 1.15% compared to the previous year. The highest increase is on fishpond which increases about 6.56%. Meanwhile, the total area for rice field has decreased about 0.34%.

Based on the land utilization data in 1997 and the total Indonesian land in 1992, the land resources used for developing the new agriculture reaches about 33.0%. Meanwhile, the potentially useable land resource is still available especially in Kalimantan and Sumatera, which have the biggest stretched land in Indonesia (Depan, 1999).

Only 23% of Java and Bali is forested, less than minimum level of recommended by professional foresters of 30%. This situation implies that any opportunity to convert forest to agricultural land in Java and

the same time, the growth of the industrial sector and urban centers in Java has increased the demand for land. The accelerated conversion of fields from non-agricultural uses has far-reaching implications for the future performance of the agricultural sector in Indonesia (Anwar and Pakpahan, 1990).

Even though Java has only about 6.8% of the total land area of Indonesia, it has 60% of the human population. Java is also the most important island for food production, and provides more than 60% of Indonesia's annual production of such crops as corn, cassava, soybean, peanut and other commodities (Pakpahan et al., 1990a). This high level of production in Java is made possible by the island's fertile volcanic soils, highly skilled farmers and well developed infrastructure.

The Ministry of Agriculture (1990) has classified the land in Indonesia into eight classes of land capability. According to this classification, land resources that are suitable for food crop production are limited to...
classes I to IV. Out of 134 million hectares of land (land capability class I-VI), only about 22.4 million ha are suitable for food crops. Almost a quarter of that land is in Java, and has already been developed for paddy rice and upland farming. In Kalimantan, however, only about 3% of the land is suitable for food crops, while in Sumatera, Sulawesi and Irian Jaya, the figures are 21%, 34.6% and 4.4%, respectively.

The capacity to produce should be distinguished from the actual production, which is greatly influenced by the availability of markets, technological level and market demand. Information about capacity to produce is a very important input in the agricultural planning and development process.

Land Tenure and Reforms

In Indonesia, extremely large agricultural landholdings have never been common, especially in Java where the majority of the population lives. Redistribution of landholding through public law has been relatively limited. A land reform program introduced in September 1960 was intended primarily to eliminate the dualism that long existed between the legal system based on western legal concepts and the traditional adat system of religious and customary law that governed agrarian issues. However, the program also intended, much too optimistically it turned out, to provide every farm household with at least two hectares of land. The pre-1965 government embarked on a land redistribution program after establishing ceilings that varied (from 5 to 20 hectares per family) depending on regional population density and irrigation availability. Among the many problems the program encountered, a major one was the overestimation of excess land likely to become available; the ceilings were, therefore, lowered. Nevertheless, they were evaded by landholders through subdivision among family members. The post-1965 government gave up the whole program regarding it as "communist inspired". It also did not implement the stipulations of the legislation regarding sharecropping in the 1960 agrarian reform law (Quibria and Srinivasan, 1980).

Changes in Economic Structure

Changes in economic structure are very important in considering farm size. The greater the dependence of the national economy on agriculture, the higher the demand for agricultural land will be. On the other hand, the more urbanized the economy, the greater the demand for non-agricultural land. Therefore, discussions of policy regarding farm size cannot be separated from the structure of the overall economy.

The contribution of agriculture to the Gross Domestic product (GDP) of Indonesia declined from 51% in 1969 to 25.5% in 1987. More than 60% of agricultural sector on GDP came from food crops, with rice contributing around 48% in 1984 (Pakpahan et al., 1990b). This implies that more flexibility in land use policy is required, because BAL only considers the agrarian structure, not the overall economic situation.

Land Holding of Farm Households

In 1993 there were
with the biggest number in Central Java (Anonymous, 1996). Between 1983–1993, farm households increased by 11.46%. Based on Indonesia's Land Reform, the maximum land holding of a farm household is 2.5 ha wet-land, and 7.5 ha dry-land. The average is 0.2–0.5 ha wet-land, and 0.5–1.5 ha dry-land in the intensive farming system; while in the extensive farming system the land ownership is 1.5–2.5 ha and 5.5–7.5 ha for the wet-land and dry-land, respectively (Nitis, 2003).

Policy for the Sustainability of Small Farms

Steps to revitalize small-scale farming are being taken by introducing an agribusiness approach to a commodity-based farming system (Center for Agro-Socioeconomic Research, 1996). The main

- There should be a priority commodity or product, even though in year-round farming practices, a diversified cropping system may be developed.
- The choice of commodity should be based on market preferences, either intentional or domestic.
- Economic efficiency should be considered in developing a farming system. For food crops, a land holding of around 500 ha will give economies of scale. It is necessary therefore to coordinate groups of neighboring farms, and make these groups the basis of agricultural development.
- New improved technology should be introduced, adapted to local conditions. This may take the form of new planting materials, farming practices, or processing and post-harvest

the quality of the product.
- To ensure the process of technology transfer, guidance must be given by an integrated team of researchers and extension workers.

Conclusion

Discussion on how to enlarge the scale of farm operation should distinguish between enlarging farm size and increase land productivity on small farms. The former is appropriate for the outer island, and the latter is appropriate for Java and Bali. Future agricultural development in Indonesia will depend on what happens on the outer islands, where the capacity of land to support agricultural production is limited by topography, soil and climate.

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