Comment on
"Small Farm Development in Asia: An Overview of Its Problems and Perspectives by Shao-er Ong"

by

Sam C. Hsieh*

I feel happy and honored as a commentator on Dr. Ong's interesting paper on small farm development in Asia. My association with Dr. Ong in dealing with many challenging professional subjects such as small farm development can be traced back to as far as 25 years ago, when we joined and attended several seminars on farm management and small farm development in Malaysia, Philippines, Korea and Thailand. Therefore, I have read with interest and admiration Dr. Ong's excellent paper prepared for this seminar.

Actually, small farm development and management have also been one of the subjects of my own interest since 1950. During the years of 1950 to 1965, I have conducted several studies on small farm system in Taiwan. Particularly, I want to mention two of my papers on this subject. One is "Management–Decision of Small Farms in Taiwan", published in April 1963 and reprinted by Agricultural Development Council in New York. Another is "Taiwan's Model of Agricultural Progress: Potentials of Small Family Farms and Their Implications for Other Developing Asian Countries", as one of the articles in a book published by the University of Washington in Seattle in 1971. In view of my own professional interest and background, I am particularly grateful—

* Vice Chairman, Council for Economic Planning and Development, Executive Yuan, ROC; and former Director, Project Division, Asian Development Bank, Manila, the Philippines.
being assigned to review Dr. Ong's paper.

My comments will cover two parts. First I will present my comments on Dr. Ong's paper, and second, I will present some of my own perspectives on the important subject of small farm development in Asia.

First of all, I would like to offer my compliment to Dr. Ong in presenting his analysis on this important and challenging subject faced by many Asian countries today. Dr. Ong has first offered the explanation on the common feature in Asia regarding the average size of small farm. The disadvantages of operating small farm are being analysed and both micro and macro considerations of the small farm development program are being presented. Dr. Ong has indicated the disadvantages of small farm are in the (1) inefficiency in resource management, (2) low productivity and income per farm worker, and (3) weak bargaining power in buying and selling. It seems to me that the small farm system itself does not necessarily involve inefficiency in resource management; if other factors and situations could be improved and integrated into small farm operations. For example, small family farm system in Taiwan during the decade of 1950 to 1965 or even 1970 has been rather efficient under the contributions of biological and institutional innovations and market situation. Therefore, my own view is that the small farm operation itself, while suffering many constraints, is not always necessary to be an inefficient farming system. You have to develop and improve other factors and situations in order to make small farm system efficient.

Small farm system is usually associated with higher productivity per unit of land on the one hand, and lower productivity per farm worker on the other hand as the surplus labor are crowded in the rural areas, particularly in the early stage of economic development. Through irrigation and water management development, biological innovations and intensive use of land and expanding multiple cropping index, productivity and income per farm worker could also be improved. The weak bargaining
power in buying and selling of small farms could be corrected by assisting farmers in cooperative marketing and purchasing and dissemination of market information in the rural area. For example, the farmers' association system and fruit marketing co-operatives in Taiwan have performed this function rather satisfactorily during the decades of 1950 to 1970. Therefore, my own view is that these disadvantages of small farm system could be corrected and improved, even though there are many difficulties in implementation of such improvement programs.

In my article presented at the University of Washington, I have specifically analysed the potentials of small farms in Taiwan by analysing certain disadvantages and the ways and means to improve such disadvantages to enable small farms to function efficiently and productively.

Taiwan's agricultural productivity growth is characterized by the economic viability and organizational strength of the small farm system, even under heavy population pressure and very limited land resources. Taiwan's small farms are fortunately supported and assisted by (1) well-organized, multiple-purpose farmers' associations and marketing cooperatives; (2) effective extension education programs carried out jointly by the government and farmers' associations; (3) technological improvement developed and carried out by agricultural and research institutes and district improvement stations; (4) adequate procurement, supplies, and distribution of farm equipment and services through the farmers' associations and cooperatives at the local levels; (5) extensive development of controlled irrigation and water distribution and management through the district irrigation associations with government support and technical supervision, and (6) government participation in agricultural planning, project development, price negotiation and manipulation, marketing and trade arrangement and development, credit provision, and capital investment in agricultural infrastructure and other projects in cooperation with farmers' organizations. These advantages have enabled Taiwan's small farms to be equally adaptable to modern
technology and to the use of physical inputs and services. For example, the organization of irrigation associations by farmers and with the participation of the government in planning and investment assistance in irrigation, it is possible to transform indivisible irrigation input into divisible input in terms of the use of water at the farm level. This institutional arrangement in irrigation development and water use in Taiwan is quite unique. The flow services of irrigation investment become divisible, and can be adapted to small farms with advantage.

With a very limited land resource and small farms, intensive land use for achieving high productivity has been enforced. This has required (1) the adoption and application of divisible technologies and factor inputs, (2) farm-enterprise adjustment and multicrop combinations, (3) the substitution of capital and labor for land as a land-saving technique in farm operation, and (4) the joint operation for some farming activities under individual farm-management units. All these supporting services and operational technologies have contributed to making Taiwan's small farm economically and structurally viable and able to attain a development and productivity sufficient to meet international competition.

There are certain disadvantages in the operations of small farms. The volume may be too small for either the marketing of farm products or the purchasing of farm supplies. There is difficulty in the adoption of indivisible technology and capital inputs like farm machinery and irrigation facilities, and there is less access to modern technical knowledge and information. In addition, some social and political backwardness, coupled with an uneconomic scale of operation, may serve as deterrents in the operation of a small farm. The need for group action and improved organization and extension services is, therefore, quite important.

I appreciated very much Dr. Ong's discussions and analysis of micro and macro considerations of small farm development. On macro considerations, Dr. Ong has discussed the importance
of land reform, infrastructure changes, non-farm sector development and regional and international trades as related to the problems and improvement of small farm sector. I fully agree that we can not view small farm development in isolation nor only within the agricultural sector. In my view, favorable biological innovations, supported by institutional innovations (such as land reform, farmers' organizations, etc.) and minimum necessary infrastructure (such as farm level water management, irrigation development, feeder roads, etc.) will provide a condition under which small farm operation could be economically, technologically, and financially viable to meet the domestic and international competition.

As regard to micro considerations, Dr. Ong has suggested a concept of a family farm to which I agree. Over the last two to three decades, the major difficulty facing the small farms is how to make constant adjustment in their product-mix and operations with the rapid changing economic situations, both domestic and international. I would like to cite the Taiwan's experience for illustration. During the period of 1950 to 1965, the Taiwan small farm system could be considered as a viable and efficient farming system to meet both domestic and international competition without very much government's support and subsidy. Actually, the highly productive agricultural sector has contributed to a great extent to the non-farm sector development in terms of capital, raw materials, food supply and foreign exchange. At that time, the per capita income in Taiwan was at the range of US$100 to US$220. However, during the period of 1965 to 1980, Taiwan's economic structure has changed drastically from an agriculture-oriented economy to an industrialized economy, the per capita income has been increased to US$2,600 in 1981. During this period, the product-mix in the farm sector has not changed too much to produce high-value crops. In addition, the two energy crises in 1973 and 1979 have added very much to the cost of production in agriculture. The real wage rate has also increased rapidly during this period. On the other hand, the
terms of trade in the international market have not been in favor of the agricultural commodities. Under this situation, the whole agricultural sector suffered very much in terms of value-added to the whole economy. Small farm sector and farmers' income have also suffered very much. The question to ask ourselves is that while a small farm could be viable under a national per capita income of US$100–200, how it could be also viable under a national per capita income of US$2,500–3,000 without significant change of product mix on the farms. It seems to me that the only solution is to shift the product-mix in small farm sector to a much higher-level of value in production, even though I understand fully this is a rather difficult challenge.

Dr. Ong has also presented excellent discussions on small farm under dual economy. The most serious problem in the majority of Asian countries is very weak inter-sectoral linkage in their small farm operations. It is important to improve this aspect to make small farm viable and to make contributions to overall economic development. Dr. Ong has mentioned three projects initiated by United Nation Agency with an objective to start small farm development from below. However, based on my own knowledge, these projects and many other projects of similar nature are not genuinely resulted very much success at the farm level in the vast area of Asian region.

I would like to offer my observations on “Perspectives” as presented in Dr. Ong’s paper. Dr. Ong has classified Asian countries into three categories of progress in small farm development. Generally, I agree with his classification. However, it is quite possible that the three categories could co-exist simultaneously in different regions of a given country. In order to facilitate the smooth development of small farm sector, it is quite important to consider the integration of various key factors and investment and to follow a right sequencing of different inputs and infrastructure. You can not reverse the sequence, otherwise the farm level development will not occur.

Dr. Ong has offered three possible perspectives which make
small farm system viable and competitive. The first perspective is to convert all small farms into part-time farms. My own observation is that the small farms and part-time farms will coexist under a given situation. It may be very possible that with the limitation of land resources, the majority will be part-time farms, but a certain percentage of the farms will be efficient and viable small farms. It seems to me that it is not necessary to convert all small farms into part-time farms. I had some reservations on the second perspective of Dr. Ong to place small farms under corporate management. In view of the special characteristics of agriculture in production, it will be difficult and even not viable to place small farms under corporate management, except for some plantation crops, such as banana, sugarcane, etc. Both from economic and organizational points of view, I do not believe that all small farms should be placed under corporate management. I believe it is possible for us to device a certain kind of system, technology, and organization to make certain groups of small farms to be viable. I endorse the third perspective of Dr. Ong in organizing small farms into group farming. We are trying this perspective in Taiwan during the last several years with some success.

In concluding my comment, I would like to offer my own perspectives on small farm development in Asia. My perspective will include the following elements:

(1) Small farm system will continue to exist in many of the Asian countries with the size from one hectare to three hectares. The crop area per farm may be from one and half hectares to four to five hectares.

(2) Irrigation development and farm-level water management and feeder roads and other necessary but small infrastructures will be needed as pre-requisite to support the small farm development.

(3) It is very important to develop a viable cooperative system and farmers' organizations for cooperative purchasing of inputs and cooperative marketing of products.
(4) It is rather crucial to accelerate the science and technological development in agriculture, particularly in research for new crops and enterprises in order to facilitate the changes of product-mix for higher value production on small farms, and to conduct such technological research, such as genetic engineering and nitrogen fixation, etc., in order to lower the cost of production or higher productivity on small farms. Other biological innovations should also be initiated for either productivity growth or cost-reduction.

(5) Government should assist market development, both domestic and international, and research in packaging, storage and warehousing, processing, and other technologies. Agricultural extension should be reorganized on specialized line of production to meet the special problems of small farms in addition to general agricultural extension. Adequate and rational government support program for small farms is also needed.

(6) While the small farms will maintain their individual land ownership and independent operation, it is essential to develop cooperative operations in certain selected items of operational activities, such as common nursery, pumping irrigation, plant protection, use of machinery, harvesting, processing, etc., I strongly believe that small farm development in Asia still has its future, provided government, farmers' organizations and farmers themselves can make adequate and timely adjustment in their policy and operations.