

BOOK REVIEWS

THEODORE W. SCHULTZ, *Transforming Traditional Agriculture*, New Haven, Yale University Press, 1964, xiv+212 p.

Even if this modest volume may be too small to cover all the possible ways in which traditional agriculture can be modernized, one thing is certain. Professor Schultz has been quite successful in outlining *the most important strategy of change*. The theoretical scaffold he uses is extremely simple: the concept of demand and supply in the source of income stream. In this sense, there is little new thought in this book. Its merit lies in the skilful application of concepts of demand and supply to the all-important question: what part will agriculture play in economic development? For contrary to widely held opinions, it can be demonstrated that even agriculture can provide attractive opportunities for economic growth. Another merit of this book is the devastating criticism of "the widely held belief that the agricultural sector in poor countries is generally quite inefficient in using the factors at hand" (p. 16). The consummate skill with which Professor Schultz has proved his points is fully appreciated by this reviewer, who has had the additional pleasure of translating this work into Japanese.

And, as an agricultural economist who is at home with Japanese farming both in the pre- and post-Meiji Restoration periods, the reviewer agrees with Professor Schultz in asserting that there are comparatively few significant inefficiencies in the allocation of the factors of production in traditional agriculture. He also agrees in asserting the fact that, while a state exists in which the marginal product of labour in agriculture is less than that of comparable labour in other sectors of the economy even after the costs of transfer are taken into account when the economy is growing, there is no serious disguised unemployment, or underemployment, in traditional agriculture except during the slack season. Even the traditional terraced rice farming in Japan, which had been unchanged for more than a hundred years until recently, was the result of *Kapitalzeugende Arbeit* in Thünen's sense, during the slack season in the old days. Farmers in those days worked on capital formation such as land reclamation, construction of irrigation and drainage facilities, etc., during the slack season for two reasons: (1) returns from cropping work were extremely low in winter; and (2) the amount of income stream from capital invested in land was always the same no matter when it was done, summer or winter. Therefore, it should be understood that even more than hundred years ago the Japanese farmer was thinking of cropping and capital formation in terms of efficiency.

Considering this and other facts, Professor Schultz is right in defining the traditional agricultural economies purposefully as follows:

"... an equilibrium at which agriculture gradually arrives over a long

period provided particular conditions prevail . . . The critical conditions underlying this type of equilibrium . . . are as follows: (1) the state of the arts remains constant, (2) the state of preference and motives for holding and acquiring sources of income remains constant, and (3) both of these states remain constant long enough for marginal preferences and motives for acquiring agricultural factors as sources of income to arrive at an equilibrium with the marginal productivity of these sources viewed as an investment in permanent income streams and with net savings approaching zero" (pp. 29-30).

An agricultural sector other than traditional now will, under the same conditions, eventually arrive at an equilibrium that characterizes traditional agriculture. History provides many examples of this. When F. H. King visited Japan, Korea and China, he was surprised to find that farmers in these countries had been farming in the same (traditional) manner for countless generations, and called these farmers as "farmers of forty centuries." It was true, for example, that the manner in which rice was farmed in the Yangtze River basin remained constant for more than a thousand years up to World War II. But it was also true that the acreage under rice in the basin expanded very rapidly during the Sung Dynasty (960-1279), and the yield per hectare increased very much at the same time, both as a result of the introduction of new tools and of construction work. Similar examples can be found in every part of the underdeveloped world, including parts of Western Europe. (See, for example, P. L. Yates, *Food, Land and Manpower in Western Europe*, London and New York, Macmillan, 1960, p. 167)

The staple theory of economic development by H. A. Innis, D. C. North and, in more refined form, S. B. Linder, emphasizes the role that foreign trade plays in breaking down traditional agriculture. But, according to Professor Schultz, "it would be a mistake to believe that the prospects are in general bright for the opening up of many new foreign markets for the agricultural products of poor countries" (pp. 188-189). A similar theory developed by more than a dozen economists, including Professor Schultz, emphasizes the importance of developing the non-agricultural sectors in attempts to transform traditional agriculture. But the theory is not the subject of interest here (pp. 56-58). While the problems of the traditional agricultural sector, which is closely integrated into a larger market economy, are not excluded (p. 35), the problem discussed here is the transformation of the traditional agricultural sector not exposed to the direct impact of foreign markets or to an expanding demand for farm products from non-agricultural sectors. Some of the indispensable factors for transforming traditional agriculture, such as the stabilization of farm prices, dissemination of economic information about products and factors, improvements in capital markets, formation of social capital, etc., are mentioned only in passing (for example, pp. 129, 189). The land tenure problem is mentioned only with a view to calling the reader's attention to the "possible demerits" of land reform (p. 111).

Professor Schultz's main concern is with ways to reduce the supply price of the sources of income streams from agriculture, or with ways to shift the supply curve of the income stream from agriculture downward. According to him the reason why traditional agriculture is *niggardly* is because farmers in the traditional agriculture do not buy a sufficient amount of the sources of income streams from agriculture, and the reason why they do not is because the price of the sources of income streams from agriculture is relatively high in traditional agriculture. He denies widely held beliefs: that poverty in a traditional agricultural society is a function of a unique set of preferences related to work and thrift; that the fertility of agricultural land is a main factor in determining income from agriculture; and that the size of farm units is important in efficient farming. His proposition is that "differences in land are least important, differences in the quality of material capital are of substantial importance, and differences in the capabilities of farm people are most important in explaining the differences in the amount and rate of increase of agricultural production" (p. 16). Then it is clear that the most important strategy of transforming traditional agriculture is to educate farm people and to invest in new factors of production such as hybrid seed. The reviewer is not sure whether Professor Schultz means a change in production function or a change in the prices of the productive contents of material inputs in this connection.

So far as the discussion under review is in the field of agricultural *economics*, Professor Schultz is right. The only possible way for the reader to reject his assertions is to produce a sufficient number of examples which contradict the Professor's proposition. However, traditional agriculture embraces many types, ranging from high to low productivity. It should be noted too that so far as income per head of farm population in various parts of the world is concerned, natural endowment, size of farm, and social structure, such as caste and similar factors are very important in explaining the difference in income levels among countries even if the problems of demand for farm products from outside are neglected. Since the kinds of production function available for farmers are specified, differences in natural endowment, or in size of farm, may be crucial in some cases, especially in underdeveloped areas where the kinds of production function available are more limited than that in developed areas. This is what Professor H. B. Chenery found, and what Professor Schultz asserts when he says that investment in research establishments is very rewarding (p. 152). Education and research will save money needed in economic development, but both are time-consuming. Therefore, those who would transform their country's traditional agriculture have to be patient. This is the lesson the reviewer sees in this small book, and, the reviewer thinks, is the one most important lesson Japanese experience can teach the world too. The book warrants careful reading. (*Kenzō Hemmi*)