Viewpoints

TRANSFORMING TRADITIONAL AGRICULTURE: COMMENT

Professor Schultz has made a number of notable contributions to the study of agricultural development. One of the most recent of these deals with a type of agriculture which is assumed to be characteristic of many low-income countries and which is described as "traditional agriculture" [4].

Schultz's model of traditional agriculture contains the following major propositions: All resources of the traditional type are efficiently allocated, and the rate of return to increased investment with the existing state of the arts is too low to induce further saving and investment. The development of traditional agriculture, therefore, depends on breaking the established equilibrium. A change in technology involving the introduction of new modern inputs (especially human and material capital) can provide the breakthrough. It is a simple economic model based on a theory of the price of income streams.

Perhaps because of its simplicity, the model raises a number of outstanding issues; but, no doubt on that same account, it leaves a number of unsettled questions of substance: Is traditional agriculture as described by Schultz truly representative of the farming sectors of low-income countries? How realistic is the assumption of efficient resource allocation in the agricultural economies of these countries? What is the real likelihood of a "long-established equilibrium" being achieved and maintained? And, finally, can economic influences alone induce a transformation? These questions are considered briefly in the rest of this note.

Traditional agriculture is defined as an agriculture that is in economic equilibrium, this state having been achieved after a considerable period of time during which the state of the arts, preferences, and motives remain constant [4, pp. 29–37]. In a later publication [3], Schultz adds that traditional agriculture contributes little to economic growth and gives the impression that it exists everywhere outside of North America, Western Europe, Australia, New Zealand, and Israel.¹ What seems certain is that the

¹ See also my review of Schultz's book [1].
description does not fit the total farming sector of most (if any) of the low-income countries. Clearly, it does not fit the plantation economies of the Caribbean, Central America, parts of South America, and Asia; nor the peasant export-economies of parts of Africa; nor the European-owned estate sectors of parts of that continent. The description may, to be sure, apply to certain pockets in low-income countries, to Panajachel in Guatemala, for example, and to Senapur in North Central India [4, pp. 41-48]. It seems fair to conclude, however, that the model relates to a very insignificant part of underdeveloped agriculture and therefore has limited applicability.

Efficient resource allocation and the established economic equilibrium are two sides of the same coin. The literature on underdeveloped agriculture is crowded with cases of inefficiencies in resource allocation. But, then, as already pointed out, it seems that Schultz is dealing with only a small subset. Nevertheless, the fact that he has stimulated others to undertake empirical research on this matter is all to the good. The notion that a long-established equilibrium exists at a time when all countries are in one way or another exposed to the influences of modern civilization is worrying indeed. According to Schultz, "the critical conditions that generate this type of equilibrium" are that the state of the arts and the state of preferences and motives relating to income all remain constant long enough [4, p. 71]. It is suggested here that this is unlikely to happen if only because of population growth—a factor which Schultz fails to give explicit consideration to in his analysis. A recently published study by Clayton [2] substantiates this point. The traditional system of shifting cultivation in areas of Kenya had to be altered within a relatively short period of time (after the beginning of British colonization) on account of expanding population.

It follows quite logically from the postulates of efficient resource allocation and low returns to incremental traditional factors that the transformation of traditional agriculture must involve the introduction of new inputs. But it is not the logic of the model that is in question. So far as agricultural development in low-income countries is concerned, once it is established that the basic postulates do not apply, then it follows that the policy prescriptions derived from the model are insufficient to cope with the problem.

Even within the narrow framework defined by Schultz, the process of transition is oversimplified, because attention is directed only to the proximate economic factors influencing the demand and supply of new inputs. That is why real world situations seem "puzzling" in the context of the model. For example, Schultz cannot explain why large farmers in parts of South America do not seek out modern agricultural factors [4, pp. 169, 194] or why plantation owners did not seek to extend the life span of slaves. And it seems accidental to him that the U.S. South is relatively poorly provided with research establishments.

See, for example, Delane E. Welsch [5], where the inspiration of Schultz is acknowledged.
The explanation of these phenomena is to be found in the structural features of the plantation system. As Schultz himself recognizes, "plantations based on slavery were nowhere known for technical progress; they were based on a massive routine in the use of forced labour." And underinvestment in farm people may result from political factors; for example, "where large land owners are powerful politically, it is to be expected that they will have a strong vested interest in maintaining the status quo" [4, pp. 180–181, 196]. In short, the nature of the transformation must be considered in terms of the constraints posed by the economic, social, and political environment, and not simply in terms of proximate economic influences. Non-economic factors are of over-riding importance, since they often govern the economic variables.

The sum and substance of these remarks is that on account of the specific definitional assumptions, Schultz's model of traditional agriculture and the implied process of transformation have little direct relevance to the problem of agricultural development in low-income countries. Policy makers in these countries need to be aware of this, especially in view of the recurrent practice of generalizing models out of their original context.

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References

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I am indebted to Professor Beckford for his succinct statement of my approach to traditional agriculture. The questions that Beckford raises are not about theory but about what the evidence will show. These are questions that can be answered only by empirical investigations. He finds no fault with the economic logic underlying my conception of traditional agriculture; he is explicit in saying that "it is not the logic . . . that is in question." So I turn to his empirical analysis.

In the empirical world of Beckford there are only a few small pockets of traditional agriculture; these pockets, so he tells us, are "a very insignificant part of . . . agriculture." Thus, in his view, almost all farmers in the less-developed countries are significantly inefficient in allocating the resources already at their disposal; and with regard to investment, there are sig-