ECONOMIC DEVELOPMENT IN ASIAN PERSPECTIVE: A REVIEW ARTICLE

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I. INTRODUCTION

In *Economic Development in Asian Perspective*, Shigeru Ishikawa attempts to establish a "comprehensive framework of analysis" within which the problems of the developing nations of Asia can be studied.[1] He develops a structural model designed to focus attention on what he regards as the most significant initial conditions confronting the poorer Asian nations today, and he compares the implications of this model with available empirical data. Ishikawa gives special consideration to the question of net resource flows between agricultural and industrial sectors, and he makes a stimulating contribution to the discussion of whether or not the agricultural sector of a developing economy can be a net source of capital for economic development. Although the net-resource question is not the only focal point for Ishikawa's study, his conclusions about net resource flows are important in forming the general tone of his recommendations for development strategies. Hence much of this review will be devoted to the analysis of Ishikawa's viewpoints on this matter.

It must be pointed out that this choice of emphasis focuses attention on the most controversial aspect of Ishikawa's book. The critical discussion which follows must not obscure the many solid achievements of the book which are less controversial. Among these are the compilation of a great amount of Asian agricultural data, and the careful sifting of this data in the search for solutions to contemporary Asian problems. The problems upon which Ishikawa focuses valuable commentary include: the relationship between labor input and agricultural output (and the matters of unemployment and under-employment in agriculture); the analysis of the roles of such "leading inputs" as fertilizer and irrigation, and of the circumstances which determine the techniques most suitable to providing these inputs; the proper selection of technologies for dualistic ("cottage" and "factory") industrial sectors in developing Asian economies; and finally, the resource-flow question itself.

Ishikawa maintains that the agricultural sector cannot be counted upon as a net source of capital in the early stages of "contemporary" Asian development. He regards the claims made for the Japanese agricultural sector in this respect as open to serious question, and he argues further that, even if such claims are true, the Japanese agricultural sector performed under

[1] Shigeru Ishikawa, *Economic Development in Asian Perspective*, Tokyo, Kinokuniya Bookstore, 1967. All subsequent citations are references to this publication.

much more favorable circumstances. Specifically, population growth was much less rapid, the capital-output ratio in agriculture was much lower, and the investment-inducement coefficient (discussed below) was higher than in those Asian countries only now beginning along the development path. For the latter, Ishikawa feels that development planners must willingly accept a net flow of resources into agriculture in the short run, minimizing it insofar as possible, but *not* choking off the capital needed to eventually reverse the resource flow (pp. 344–347).

However, it would seem that Ishikawa has shown only that there are conceivable circumstances in which his conclusions might be valid; the conceptual framework and the analytical model he employs to define these "circumstances" may well be inappropriate. Section II discusses the conceptual framework within which Ishikawa examines empirical evidence on net resource flows; Section III evaluates the "answers" which his analytical model provides.

II. THE CONCEPTUAL FRAMEWORK

Ishikawa correctly emphasizes that before net inter-sectoral resource flows can be determined, it is essential to define precisely the sectors to be considered. However, the particular definitions which he actually chooses to use may be questioned on at least two grounds, as will be shown below.

Ishikawa divides the developing economies, not into "agricultural" and "non-agricultural" sectors, but rather into "traditional" and "modern" sectors. The "traditional" sector of an economy is defined to include all economic activities of "farm" households.[2] In Ishikawa's framework these households are assumed to account not only for the agricultural output of the economy, but also for certain kinds of non-agricultural production. Furthermore, the traditional sector receives from the modern sector payments for the use of certain factors of production belonging to the former. (The most conspicuous examples would be payments of wages and salaries to members of farm households who work in the modern sector.) The income generated by these factors must properly be attributed to the traditional sector. Thus the total income (Y) of the traditional sector is the sum of three components:

$$Y = Y_A + Y_N + Y_F$$

where Y_A is the agricultural production of the economy.

Y_N is the nonagricultural production of the farm households.

Y_F is the factor income received from the modern sector.

The first objection to Ishikawa's usage may be raised here. His choice of traditional and modern (rather than agricultural and nonagricultural) sectors may be understandable in terms of the desires of developing nations to transform their economies from traditional to modern modes of production. However, it is clearly a choice which obscures rather than answers the question of whether agriculture can be a net source of resources for development. An important goal of the development process is to raise productivity in

[2]   Ishikawa uses the term "farm sector" for what is called here the traditional sector.

agriculture so that an increasing percentage of the population may occupy themselves with economic activities other than that of raising food for domestic consumption. If members of farm households can be made available in increasing numbers for nonagricultural production activities and for employment off the farm, this in itself constitutes a type of economic development. Assuming that the economy remains roughly self-sufficient in food production, the agricultural sector may contribute heavily to development whether or not these members leave the traditional sector for the modern.

It is surely arguable that the agricultural sector will *not* be a net source of resources for development. It may be that the amount of capital required to raise agricultural productivity and free workers for other pursuits will prove to be greater than the contribution which these workers make to the net national product. (The advocates of the agricultural sector as a potential net source of resources claim that substantial increases in productivity would be possible with relatively small amounts of the right kinds of capital.) The point here is that the conceptual framework used by Ishikawa does not allow the dispute to be settled one way or the other (pp. 294–296).

The second objection which may be raised against Ishikawa's conceptual framework is of an entirely different type. In deriving the expression for the "import excess" of (i. e., net flow of resources into) his traditional sector, Ishikawa writes the "income-expenditure identity" of the traditional sector as:

$$Y = Y_A + Y_N + Y_F = I + C - (M - E) + Y_F$$

where I is the investment of the traditional sector.

C is the consumption of the traditional sector.

M is the quantity of imports into the traditional sector.

E is the quantity of exports from the traditional sector.

It seems curious that the term Y_F should appear in the third expression in the above equality. Y_F represents, by definition, the quantity of goods produced by the traditional sector through traditional-sector resources which the modern sector hires. It is debatable whether it might not be easier to define such resources into the modern sector and leave Y_F goods out of the traditional-sector equations. But if factory workers who remain in farm households, for example, are to be treated as a traditional-sector resource, then there is no reason why the products imputed to them should not fit into the "ordinary" categories of C, I, and E. It seems in fact that such products really must all be treated as "immediate" exports; that is, they are products which the modern sector purchases (with factor payments) as the traditional resources produce them.

This is not to deny that Y_F "exports" could usefully be separated from exports of the more conventional kind. It is, after all, not clear just which portions of which products of a factory should be credited to traditional-sector workers; it is therefore understandable that the magnitude of such exports (as measured by factor payments to the traditional sector) might be kept separate from those which can be identified as specific goods. Thus Ishikawa's usage would be unobjectionable if he noted that E represented only part of

the exports of the traditional sector, and that Y_F must subsequently be treated as the second component of total exports. The "net balance of commodity trade" (R) would then be:

$$R=M-E-Y_F=I-(Y-C)$$

Ishikawa, however, identifies R as:

$$R=M-E=I-(Y-C)+Y_F$$

This biases Ishikawa heavily toward concluding that there is a net flow of commodities into agriculture (p. 305).

It must be noted that Ishikawa does not use R itself as the measure of net resource flow between sectors; he makes allowance for the changing price levels of both the modern and the traditional goods which are traded. Nevertheless, R is a key factor, and the way in which it is defined is most important.

III. THE ANALYTICAL MODEL

Ishikawa's analytical model is not sufficiently detailed to permit the type of net-resource-flow study which his conceptual framework suggests. Rather he is forced simply to compare the quantity of agricultural products used by the modern sector with the quantity of manufactured products used by the agricultural sector. (Ishikawa claims specifically that inclusion of other activities of the traditional sector would make a net inflow of resources to agriculture an even more likely conclusion (p. 326).) Solutions to the model using various assumed values for key parameters lead Ishikawa to the opinion that a net outflow of resources from the agricultural sector would be possible only under very special conditions. These conditions include such things as restraint of population growth to very moderate levels and the operation of an agricultural sector with a very low capital-output ratio. Ishikawa feels that while such conditions may have characterized Japan in its early stages of development, they certainly do not hold in the nations of Asia in those stages today.

Two comments seem relevant. First, Ishikawa may be only partially correct in his analysis of contemporary conditions. The high rate of population growth in developing Asian countries is an undisputed fact and a definite problem. On the other hand, there is no general agreement about how high capital-output ratios are, or whether they need remain so high. Those who claim that agriculture can be a net source of resources for development tend to feel that capital-output ratios could be lowered by wise use of certain kinds of capital. This leads to the second comment.

Ishikawa's model assumes that many important parameters remain fixed as the development process proceeds. This precludes consideration of many of the possibilities which are open to a developing nation. The assumption of an absolutely fixed quantity of agricultural land is no doubt somewhat conservative, even in Asian countries. Much more important, the capital-output ratio in agriculture (V_A), the average product per labor force unit in agriculture (l_A), and the fraction of agricultural capital which must come from the modern sector ($1/\sigma$) are assumed constant. (In Ishikawa's terminology, one unit of "modern" capital invested in the agricultural sector "induces"

the latter to invest (σ–1) units of its own). If V_A and l_A are to be constant, investments of the type that would use presumably plentiful farm labor to make efficient use of small amounts of key capital goods are impossible within the workings of the model. And the choice of a value for σ binds the agricultural sector (within the model) to acquire one unit of investment goods from the modern sector for every (σ–1) units it produces itself. There may or may not be a realistic hope of improving upon the values of such parameters at V_A, l_A and σ in the early stages of development. But it is chiefly upon such a hope that the case for the agricultural sector as a net source of development resources is argued, and a model which simply assumes that such parameters will remain constant does not really address the main issue of the "net source" debate. In his text discussions, on the other hand, Ishikawa is considerably more flexible, and it is here that the greater merits of his book lie. An important example is provided by his stimulating discussion of choices between "major" and "minor" irrigation projects. In this context, the investment inducement coefficient is seen to be a parameter subject to manipulation by planning authorities, and Dr. Ishikawa provides valuable insights into the ways in which the "induced" (local) share of investment can be maximized (pp. 137–153).