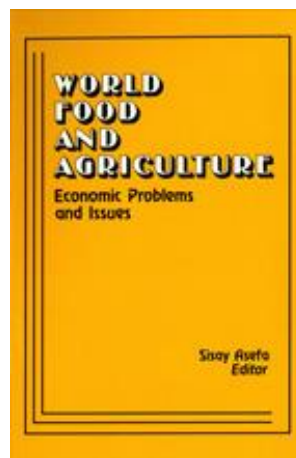




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The Political Economy of Agricultural and Rural Development

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The term *political economy* went out of fashion decades ago because economists wanted to concentrate on rigorous analysis of the strictly economic aspects of problems. The term has come back in favor, however, for many of us concerned with problems of development. We recognize that we simply cannot afford to ignore the political dimension that is so important to our understanding of the real world problems—and opportunities. Lasswell's classic definition of politics—who gets what, when, and how?—is also a fine definition of the political economy of development. In brief, political constraints are as important as the scarcity of economic resources in determining those things that are feasible and not merely desirable.

In addressing this large topic, I want to deal in summary fashion with three key questions.

My first question is, simply, why focus on agricultural and rural development?

Second, why should we in this country be concerned about the development problems of Kenya, India, and other third world countries?

Third, what have economists in general—and this particular agricultural economist—learned in the last 40 years about the critical elements or ingredients of successful strategies for agricultural and rural development?

I can deal quickly with the first question: Why the focus on agricultural and rural development?

For the less-developed countries that still have very low incomes—the Indias, Kenyas, or Indonesias in contrast with middle-income countries such as South Korea, Brazil, or Taiwan, some 60 to 80 percent of the population and labor force still depend on agriculture for their livelihood—for employment and income.¹ And it is not necessary to dwell on the fact that food is one of the most basic of “Basic Human Needs.” (See Mellor and Johnston 1984.)

On my second question, as to why we as Americans should be concerned about the development problems of third world countries, there are many answers. Let me mention two that I find persuasive.

The first answer boils down to this: We are part of the problem and therefore have a moral, a human obligation to try to be part of the solution. The most obvious way in which we are part of the problem is that we—the U.S., the countries of Western Europe, and the World Health Organization and other international institutions (including the Kellogg, Rockefeller, and Ford Foundations)—are mainly responsible for the explosive growth rates of population that became universal among the less-developed countries during the decades following World War II. I am referring, of course, to the opening up of access to immunization programs and other modern public health technologies and to modern medical knowledge. This lowering of death rates—above all by reducing infant and child mortality—has been a blessing for the families that have been spared the wastage of human life when, as was often the case, one out of three infants died before the age of five. Like many transfers of modern technology, however, it has been a two-edged sword. We have learned that it is much easier for external interventions to bring about a rapid reduction in death rates than in birth rates. Clearly, it is the dramatic decline in death rates—from crude death rates of 40 to 50 per thousand to current levels of 10 to 25 per thousand—that has given rise to the explosive growth of population of the past 35 years. (Johnston and Clark 1982, pp. 47-60.)

Again, this is a problem that applies particularly to the low-income countries. It also applies with special force to the countries of tropical Africa—and not only because so many of the low-income countries are in the region. In fact, tropical Africa is the one region in the world where

rates of population growth are continuing to increase because death rates are continuing to fall and birth rates are virtually unchanged.

The situation in Kenya epitomizes the way in which the task of raising per capita incomes has been made exceedingly difficult because of the emergence and persistence of very high rates of population growth. During the demographic transition in Western Europe and Japan, the period of rapid population growth was characterized by rates of increase of about 1.5 percent, compared to an estimated rate of 4 percent in Kenya. It is the nature of population growth to proceed at a compound rate. An upsurge in infant and child survival this year means an upsurge in the rate of increase in women of child-bearing age beginning 15 to 20 years from now. Hence the *momentum* of population growth that demographers emphasize. A growth rate of 4 percent means that a population will double in just over 17 years—and will increase seven times in 50 years. At first glance, a population growth rate of 2 percent doesn't seem all that different—a population doubling time of 35 years instead of 17. But continuation of a 2 percent compound rate for 50 years implies an increase of “only” 2.7 times compared to a sevenfold increase with a 4 percent growth rate.

Demographic projections for Kenya offer a striking example. For the 55-year period 1969 to 2024, the “most likely” set of assumptions point to an increase in Kenya's population from 11 million to 64 million. Those projections also considered the prospective change in the urban-rural composition of the country's labor force. Assuming continued rapid growth of the urban workforce, the rural workforce is projected to decline from 87 percent of the total in 1969 to 65 percent in 2024. In spite of the projected *sixteenfold* increase in the population of working age in urban areas, however, the rural workforce would still increase *fourfold* over that 55-year period (Shah and Willekens 1978). Those projections emphasize an important *structural* characteristic of countries with rapid population growth and where the share of the population dependent on agriculture is still very high.

But before I turn to the implications of these structural/demographic characteristics on the choice of an agricultural strategy, let me mention

another fundamental reason why I believe that it is important for the U.S. to continue to play an important role in providing economic and technical assistance for the contemporary low-income countries. Throughout most of human history poverty was widespread, but it was not perceived as a problem in the way it is today. Instead, it was seen as part of the natural order. “The poor are always with us.” Their plight should be alleviated by charity, but poverty was not viewed as a condition that could and should be eliminated by well-designed and vigorously implemented development efforts. However, with the remarkable advances that have been made in *science and technology*, the development goal of eliminating poverty has become a real possibility, not merely a utopian dream. (See Simon 1984.)

I turn now to the question of what economists—and this agricultural economist—have learned about the development process during the past 40 years. And that will bring me back to the implications of those structural/demographic characteristics of today’s low-income developing countries.

But first I want to draw on my work in Japan in the years immediately after World War II. With the benefit of a lot of hindsight, I see that I am very fortunate to have been influenced so strongly by Japan’s experience as my implicit “model” of agricultural development. During the critically formative period of the late 19th century and the early decades of the 20th century, increases in agricultural productivity contributed in some very important ways to the overall economic development of Japan. (See Ohkawa, Johnston, and Kaneda 1969; Johnston and Kilby 1975, chap. 5.) Three features of that experience were especially significant.

1. Agricultural production was increased within the unchanged organizational framework of Japan’s existing small-scale farming system. Between 1880 and 1960, Japan’s agricultural production increased about 3-1/2 times, slightly more than the increase in the U.S. over the same 80-year period. Because of technological change, specifically increases in the productivity of the existing on-farm resources of land and labor, this was achieved with remarkably small demands on the critically scarce resources of capital and foreign exchange.

2. Most of the nation's farmers were involved in increases in agricultural productivity associated with the use of improved crop varieties, fertilizers and other types of working capital—but remarkably little investment in farm machinery or other types of long-term capital investment. *Technological change* related to high-yield, fertilizer-responsive crop varieties was the driving force in increasing agricultural productivity. And the technical innovations and new purchased inputs were *divisible*. Therefore they could be used efficiently by small farmers subject to a severe purchasing power constraint. And the typical farmer unavoidably faced a purchasing power constraint. The cash income accruing to the agricultural sector was limited because of the structural/demographic characteristics emphasized earlier. When the number of farm households is still large relative to the domestic population dependent on purchased food, the cash income accruing to the average farm unit is inevitably small. When a country's pattern of agricultural development is *dualistic*, so that a relatively small number of atypically large and capital-intensive farm enterprises account for the lion's share of commercial production, those large farms escape the purchasing power constraint. But that is at the expense of intensifying the cash income and purchasing power constraint for the great majority of small farm units.

3. Agricultural and industrial growth went forward together in a process of concurrent growth. As the overwhelmingly agrarian character of the Japanese economy was gradually transformed by the process of economic growth, there were positive interactions between agriculture and industry. Moreover, the concurrent progress in agriculture and industry led to decentralized industrial development of a "semi-modern" industrial sector that relied upon relatively simple, capital-saving, labor-using technologies, which made possible more rapid growth of output in both sectors.

I want to dwell particularly on the first and second factors and the importance of *technological change*. All of the speakers in this seminar series are, I believe, in agreement on the great importance of technological change. This potential importance of technological change as a source of agricultural growth has some very important implications for the design of development strategies.

One terribly important implication is that we need to be as concerned with investments in human and institutional resources as in physical investments such as construction of irrigation systems or building factories for manufacturing farm equipment. James Bonnen, a distinguished professor of agricultural economics at Michigan State University, has emphasized that agricultural progress in the U.S. has been the result of interactions within a *system* of developmental institutions: farmers and their organizations, the United States Department of Agriculture and the land-grant colleges and universities, the Federal-State Agricultural Research and Extension programs, private sector firms engaged in the marketing and processing of farm products and the manufacture and distribution of farm inputs, and the federal and state political institutions involved in the formulation of agricultural policy. (See Bonnen 1987.) Experience in the U.S., Japan, Taiwan, and many other countries has demonstrated that efficient agricultural progress depends on the interacting effects of farm-level factors and what, for lack of a better term, I refer to as socially determined factors. The farm-level factors include the responsiveness of farmers to incentives and their investments of time and money in land improvement, in equipment, in fertilizers and other forms of working capital, and in acquiring knowledge and skills. The socially determined factors include educational institutions, investments in agricultural research, extension, and infrastructure, macroeconomic policies (e.g., monetary policy and interest rates), and a host of factors affecting the marketing of farm products and the distribution of inputs.

The twofold implication of recognizing the great potential importance of technological change concerns the need for investments in the various forms of capital—physical, human, and institutional—to be reasonably well-balanced. It is easy to state the economic principle. The rate of return on the last dollar invested in each type of capital should be approximately equal. But to realize that ideal in practice is enormously difficult. The emphasis by Hayami and Ruttan (1985) on “induced innovation” and the importance of avoiding price distortions is an important part of the answer. However, the decisions to make the long-term investment in building supporting institutions, including educational institutions to train agricultural scientists and administrators, re-

quires a vision, even a faith, that goes beyond perceiving trends in relative prices. Lessons of past historical experience can be enormously helpful—provided that they are well understood and properly interpreted. I believe that I have been very fortunate to have had an opportunity to learn about Japan's experience when I was still very young and impressionable. Every country confronts a unique set of problems. But I am persuaded that Japan's past experience is of much greater relevance to today's developing countries than the historical experience of the United States.

Another important lesson of past experience concerns the relative advantages of the public and private sectors in achieving successful agricultural development. The first proposition that I would stress is that we have to move beyond a doctrinaire faith in either government planning and direct action by government, or the equally blind faith in the private sector and "the magic of the market place." Experience in the U.S., in Japan and in many other countries demonstrates that successful agricultural development depends on an interacting system of public and private institutions.

There are good theoretical reasons and much evidence to support the view that independent private firms have a comparative advantage over public agencies in carrying out essentially *commercial* functions such as production or marketing farm products or distributing farm inputs. This is essentially because the hierarchical techniques of decisionmaking and operating within a bureaucracy are at a disadvantage as compared to the greater flexibility and the capacity and motivation for cost-minimization that characterize private firms responding to price and profit signals within a market system. It is equally important to stress, however, that a number of the socially determined factors that are of critical importance depend upon the public sector. This is because public agencies are needed to make available critical public goods such as education, agricultural research, extension, and family planning services. It is a defining characteristic of public goods and services that they will be provided in less than the socially optimal amount if their availability depends on private firms responding to private demands. Even from a strictly economic point of view, society's benefits from investing in

education, for example, exceed the private returns accruing to those who receive the education.

Finally, I want to make a few comments about the role of food aid. This is a complex and controversial topic. Some people who stress that the world's food problems are "merely a matter of distribution" conclude that *sending* our "surplus food" is a neat and simple answer. Food aid shipments *are* essential for famine relief. They are *not* the answer to the fundamental problems of poverty. And it is their poverty that makes poor countries so vulnerable to famine.

I sympathize with the prime minister who wanted to find a one-handed economist because he (or was it she?) was fed up with "on the one hand, on the other hand" answers. But there's no getting away from the complexity that characterizes food aid. Food aid can be used to promote development. It can and, I believe, often does have adverse effects on incentives to increase food production in a low-income, developing country. But rather than spend a lot of time trying to spell out the conditions that have to be fulfilled in order for food aid to have a positive impact, let me give you, as an illustration, my view on the food aid balance sheet for India. It seems to me that for the 1950s and up to the mid-1960s, it is difficult to say whether food aid yielded significant net benefits for India. Its greatest value was probably in saving foreign exchange that could be used to finance other imports including, for example, equipment for fertilizer factories and for irrigation facilities. But its availability undoubtedly had an adverse effect on farm prices and farmers' incentives. In addition, it probably weakened the resolve of the government to face up to the country's agricultural problems. There is no doubt in my mind that dollar-for-dollar the food aid was less valuable than, say, the investments that enabled some of our land-grant universities to assist in establishing a network of agricultural universities in India and in creating a more effective national agricultural research system. But that ignores two important political economy dimensions of the issue.

First, there is no doubt that to *some* extent the food aid was *additional* to other forms of aid. As long as agricultural "surpluses" are created as a by-product of our agricultural price support programs,

there is bound to be pressure in Congress to convert those "costly and burdensome surpluses" into a "valuable food resource." Second, I am convinced that the blunt way in which Lyndon B. Johnson carried out his "short tether" policy in making aid available to India during the acute famine in 1966 and 1967 resulting from two successive years of drought had powerful and positive consequences. There was great resentment among Indian politicians, policymakers, and officials at many levels at being treated in that way, e.g., in imposing many harsh "conditions precedent." Indeed the Indians involved were so infuriated that the episode created a resolve to never again be so dependent on food relief shipments. And fortunately the prior investments in strengthening India's human and institutional resources as well as U.S. and World Bank investments in expanding irrigation facilities and fertilizer manufacturing capacity meant that India's interacting system of developmental institutions could meet the challenge of virtually ending India's dependence on imported food.

In recent years, there has been a very substantial increase in food aid to countries in sub-Saharan Africa (Johnston et al. 1987, chap. 2).² Because of the tight budget situation in the U.S., together with current concern over the financial difficulties of American farmers as a result of the recent decline in agricultural exports and in farm prices, there is pressure to further expand food aid shipments; and exaggerated claims are being made about the benefits to be realized from such shipments. (See, for example, Reutlinger and Katona-Apte 1987.) Providing food aid as a substitute for commercial imports would help to ease the serious balance-of-payments problems faced by countries in Sub-Saharan Africa. As noted by Timmer in his chapter, however, using food aid to replace commercial imports is contrary to the intent and the regulations that are supposed to govern food aid programs of the U.S. and other countries. Moreover, sustained solutions to Africa's serious food and agricultural problems require economic and technical assistance to support the strengthening of national agricultural research systems and postsecondary educational institutions for training agricultural scientists and administrators, together with investments in expanding, rehabilitating, and maintaining rural transport networks and other rural.

infrastructure. Use of a certain amount of food aid for rural works projects could have a positive developmental impact, although such projects make substantial demands on scarce administrative and planning capacity. It is essential to recognize that food aid cannot be a substitute for supporting the long-term institution-building that is so desperately needed in Sub-Saharan Africa.

NOTES

1. The distinctive problems of such "late-developing" countries are examined in Johnston and Kilby (1975) and Johnston and Clark (1982).

2. For historical reasons, Africa has not been the focus of U.S. economic assistance. Since 1978, U.S. assistance to Africa has amounted to a little over 10 percent of the country's foreign aid to all regions; but prior to 1978, Africa received only about 5 percent of the total. For the six countries—Senegal, Nigeria, Cameroon, Kenya, Tanzania, and Malawi—included in the World Bank's study of *Managing Agricultural Development in Africa (MADIA)*, AID's bilateral assistance for projects and programs during the period 1963-84 amounted to \$905 million in constant 1983 dollars or only a little more than the \$836 million provided as food aid (Johnston et al. 1987, chap. 2, table 3).

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