The Economics of Agricultural Self-Sufficiency

by

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I. Preliminary Observations

A. In analyzing the movement of an increasing number of countries towards food self-sufficiency, it is necessary first to be clear what we mean by the term. By self-sufficiency, economists usually mean the equation of domestic supply of a good (in this case, food) with domestic effective demand. This implies that:

1. Self-sufficiency does not imply adequate food intake by all people of the country concerned, as self-sufficiency is defined only with respect to that need for food which is backed up with either private or public purchasing power (i.e., effective demand).

2. Self-sufficiency can only be defined with reference to some price level. If a government wants to impose a high level of protection for domestic agriculture, the country can be self-sufficient, albeit at a high cost to consumers (via high food prices) or to taxpayers (via the tax cost of subsidized inputs and/or deficiency payments to agriculture).

3. Where domestic production fluctuates significantly from year to year, self-sufficiency needs to be defined with respect to some time period. Does the country mean by self-sufficiency that it will never import commodity X? Import it only 1 year in 5? etc.

4. Food self-sufficiency is not the same as food self-reliance. The latter refers to the ability of a country to feed itself either from own production or via imports paid for by foreign exchange earnings. This distinction is sometimes lost by low-income countries striving for food self-sufficiency.

5. Self-sufficiency is much more likely to be achieved quickly where the domestic market for the good in question is thin. For example, if most of

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the production is consumed on the farm, a relatively small increase in production results in a proportionately much larger increase in marketed surplus, which, if not offset by a large increase in effective demand, can quickly lead to market gluts. This is particularly relevant to the recent emergence of "surpluses" in some LDCs, especially in Africa.

B. Because food self-sufficiency is a function of both supply and effective demand, different countries' policies of encouraging self-sufficiency can be usefully analyzed by decomposing them into the effects they have on supply and the effects they have on effective demand. Furthermore, if the U.S. is interested in expanding exports to these countries (decreasing their self-sufficiency), understanding both the demand and supply sides of the problem will facilitate planning policies that could expand exports.

C. Self-sufficiency in a particular product may often be a secondary objective or a byproduct of policies aimed at reaching some other objective--e.g., income support to farmers.

II. Rationales for Pursuing Food Self-Sufficiency Policies

A. Risk/stability considerations

1. Recognition by government leaders of the domestic political and economic costs of short-term food shortages, coupled with the perceived unreliability of international markets or the inability of domestic entities that deal in those markets (private firms, parastatals) to handle such short-term shortages through imports.

2. Recognition of the international political costs of relying on food imports (potential use of food as a weapon by exporter--e.g., the case of the US tying food aid shipments to India in the late 1960s to concessions by India in its foreign and domestic policies). This rationale includes the oft-cited goal of "national prestige."

3. This view may overlook the stabilizing effect of international trade in offsetting fluctuations of local production. Capitalizing on this potential, however, requires developing domestic institutions that deal effectively in international markets (a major limit for some LDCs).
B. The country may have previously limited agricultural growth through high levels of explicit or implicit taxation of agriculture, often in hopes of extracting a surplus for investment in other sectors. The government may have changed those policies in recognition of their costs to the overall economy in terms of forgone growth (case of several LDCs recently).

C. Byproduct of other policies

1. Income support for farmers (EC, US dairy industry)

2. Import restrictions to deal with foreign exchange constraints, due to overvalued exchange rates

D. Attempt to channel domestic income into savings rather than consumption (USSR until 1972, China) or to channel consumption away from goods in which the country has no comparative advantage (e.g., Japan’s price policy with respect to beef.)

E. Infant industry argument--Attempt to build new industries in which the country may have a long-run comparative advantage (import substitution of various agricultural products).

III. Mechanisms Used to Influence Self-Sufficiency

A. Supply side policies

1. Policies that enhance domestic production

   a. High support prices, often enforced through trade restrictions. Question of how long such policies are sustainable (e.g., the European Community’s CAP)

   b. Input subsidies

   c. R & D and human capital formation to foster the development of new, lower cost technologies for agriculture or the importation and adaptation of those technologies from abroad (case of the Green Revolution)--Subsidized technological change

      i. Biochemical

      ii. Mechanical
2. Policies that restrict imports and/or redirect import sources
   a. Classical protectionist policies (tariffs, quotas, other non-tariff barriers)
   b. Foreign exchange controls
   c. Trade agreements, common markets, and customs unions

B. Demand side policies
   1. Policies to raise prices of specific products (e.g., beef in Japan)
   2. Subsidized domestically produced alternatives
   3. Persuasion (advertising, extension efforts, etc.)
   4. Policies that restrict overall level of aggregate demand
      a. Monetary and fiscal policies
      b. Capital-intensive bias of new technologies and of growth strategies (some LDCs)
   5. Nonprice rationing (e.g., Cuba, China until recently)

C. Some of the emerging self sufficiency, particularly among some LDCs, represents these countries' success in expanding supply due to improved technology (e.g., India) or good weather (sub-Saharan Africa) combined with fairly poor performance in expanding effective demand through employment generation. If these countries were as successful in expanding incomes (particularly rural incomes) as they have been in expanding food supplies, these countries' self-sufficiency would quickly disappear.