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THE IMPACT OF THE INTERNATIONAL ECONOMIC
SYSTEM ON NUTRITION AND HEALTH

by

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FOREWORD

The Cornell Food and Nutrition Policy Program (CFNPP) was created in 1988 within the Division of Nutritional Sciences to undertake research, training, and technical assistance in food and nutrition policy with emphasis on developing countries. The Nutritional Surveillance Program (CNSP), which was formed in 1980 with support from the Agency for International Development, is part of the CFNPP.

CFNPP is funded by several donors including the Nutrition Office and the Africa Bureau of the Agency for International Development, UNICEF, the Pew Memorial Trust, the Rockefeller Foundation, the government of Indonesia, and the World Bank.

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The Pew/Cornell Lecture Series on Food and Nutrition Policy, which was initiated this year, is sponsored by the Pew Memorial Trusts of Philadelphia and the Cornell Food and Nutrition Policy Program to generate and exchange knowledge about how government policies affect the welfare of the poor including their food security and nutritional status.

This lecture, which was presented by Dr. Erik Thorbecke, II, Edward Babcock Professor of Economics and Food Economics, Cornell University, is the second of six lectures planned for the Fall 1988. In this lecture, Professor Thorbecke addresses the most critical links between changes in the international economic situation and malnutrition and health with emphasis on the nutrition and health implications of economic reforms currently being pursued in many low-income countries.

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Per Pinstrup-Andersen
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INTRODUCTION

This paper is divided into four parts. In the first part, we examine and analyze trends related to health and nutritional indicators in developing countries over the last quarter century. Emphasis is placed on exploring the relationship between nutrition and health, particularly, in those developing countries where nutritional indicators provide some evidence that conditions may be deteriorating.

The second part, identifies a number of distortions in the present international trade system, including food assistance programs that negatively affect agricultural production and nutritional status in many developing countries.

The third part, in turn, contains a discussion of distortions in the international monetary and financial system and their likely effects on poverty and nutrition in the Third World. In particular, worsening debt problems in many developing countries force them to undertake a stabilization and structural adjustment process, which has important implications for nutrition and health—at least in the short run.

The concluding part suggests some possible lessons and recommendations based on the foregoing analysis.

TRENDS AMONG HEALTH AND NUTRITIONAL INDICATORS, 1965-1986

Let us examine some important trends related to health and nutrition in the developing world. If an essential objective of socioeconomic development is to move towards and ultimately achieve a level of health that permits people to lead a socially and economically productive life, then the first issue is to identify health indicators that allow us to measure progress over time. At the international level, the number of similar indicators that are available in most countries is severely limited. The two most common indicators are life expectancy and the infant mortality rate. Both of these indicators describe length of life, but give no indication of quality in terms of good health. A third set of indicators, i.e. anthropometric measurements of preschool children (in particular, weight-for-age), reveal something about the quality of health. Unfortunately, corresponding indicators for the rest of the population (six years and above) are typically not available.

In a systemic sense, health is an output variable that is influenced by a set of input variables, such as nutritional intake, the prevalence of parasitic, bacterial and viral infections, the quantity and quality of health and medical care, the physical environment (i.e., air and water pollution), education (particularly female education), and a host of others. Here again, we are severely constrained by a scarcity of cross-sectional international data. Major available information includes, 1) on the nutritional front, dietary energy supply (daily caloric supply per capita) and some presumptive although incomplete and indirect evidence on the size of the "undernourished" population; and 2) on the health front, population per physician, population per nursing person, and public and private expenditures on health and medical care.

An examination of trends in health output and input indicators over the last two to three decades yields the following findings:

1. Health in a purely quantitative (length of life) sense has improved markedly.¹ Life expectancy at birth, for both men and women increased and the infant mortality rate declined in every one of the 129 countries covered by the World Bank. For the "low income economies," life expectancy at birth increased from 50 in 1965 to 61 in 1986, for women, and from 47 to 60 for men. If China and India are excluded (which performed best), in the remaining "low income economies," life expectancy for women rose from 44 to 54 and for men from 43 to 52; and the infant mortality rate dropped from 150 to 106.² Middle income economies registered even better improvements, with male life expectancy rising from 53 to 61 between 1965 and 1986 and the infant mortality rate falling from 109 to 65 per 1,000 live births. Regionally, Sub-Saharan Africa displayed the least improvement, with male life expectancy increasing from 41 to 49 and the infant mortality rate falling from 161 to 113.

2. Estimates of child nutritional status show that the improvements of the 1970s ceased, on average, in the 1980s.

Economic stress, as well as severe drought, have contributed to the overall picture of deterioration in Africa, and no significant improvement in South America, the latter contrasting with previous progress. However, proportions of the population estimated as having marginal access to food, referred to for brevity here as 'undernourished', are estimated to have fallen in South and Southeast Asia, Central America and the Neareast (United Nations 1987).

¹The most thorough and comprehensive sources for international cross-sectional information over time are the World Development Indicators which appear in the annual World Development Reports of the World Bank and cover 129 countries. Another source that is less detailed but provides information by region over time is the United Nations, First Report on the World Nutrition Situation (November 1987). Except when specifically indicated, the evidence presented here is taken from these two sources.

²Low income economies are defined as those with a 1986 (GNP) Gross National Product per person of \$US 425 or less.

3. Daily calorie supply per capita³ for the low income countries rose, on average, from 2046 in 1965 to 2329 in 1986. If China and India are excluded, available calories only rose from 1,998 to 2,100. However, the weighted averages presented above conceal very divergent performances from one country to another. In twenty low income countries and four middle income countries, daily calorie supply per capita actually fell between 1965 and 1985, and in nine additional low and middle income countries, it increased by less than 5 percent during the 20-year period (Table 1, p. 6). Again, Sub-Saharan Africa registered the worst regional performance, where this indicator declined, on an average, from 2098 to 2097. Note that a decline in this indicator does not always signify a relative or absolute worsening of nutritional status—at least as long as it remains above caloric requirements. For example, the population may have become younger, in this case average caloric availability per person could decline slightly without a marked change in nutritional status. Secondly income may be more evenly distributed and possibly the total calories available at the national level might become more equitably divided among households. These two factors are likely to have cancelled each other over time—the proportion of young people in the population of most developing countries has clearly risen but in many poor countries income distribution has become less equitable over time.

4. On the basis of presumptive evidence, the World Bank estimates that between 340 million and 730 million people in the developing countries did not have sufficient income to obtain adequate energy from their diet in 1980.⁴ Between 1970 and 1980, the largest declines in shares

³The daily calorie supply per capita is calculated by dividing the calorie equivalent of the food supplies in an economy by the population. Food supplies comprise domestic production, imports less exports, and changes in stocks; they exclude animal feed, seed for use in agriculture, and food lost in processing and distribution.

and numbers of people with inadequate diets were in East Asia and the middle East, regions that enjoyed rapid economic growth. In contrast, in South Asia and Sub-Saharan Africa, the share of the population with deficient diets increased slightly, and the absolute numbers increased markedly.

5. Two input indicators correlated with health, population per physician and per nursing person, improved, on average over the 1965-1981 period particularly the former.⁵ In Table 1, it can be seen that these indicators advanced (i.e., decreased) in every low and middle income country except for six in which population per physician increased (Ethiopia, Bangladesh, Mozambique, Sierra Leone, Guinea, and Uganda) and four in which population per nursing person also grew (Mozambique, Guinea, Peru, and Zimbabwe).

6. There is some evidence that, during the 1980s, another important health-related input indicator, public expenditures on health—both as a proportion of total government expenditures and on a per capita basis—have declined in a number of countries. Furthermore, as the World Bank points out “In health, most current public spending goes to non-essential drugs and expensive curative services provided largely by hospitals. Inexpensive health measures (in terms of the cost of each death averted) such as immunizations and prenatal care, are not as well financed” (World Bank 1988).

⁴This is based on a minimum calorie standard, i.e., below 80 percent of FAO-WHO requirements, that would prevent serious health risks and stunted growth in children, while the higher estimate—below 90 percent of FAO-WHO requirements—is not enough to allow an active working life.

⁵For “other low income countries” (excluding China and India) population per physician went down from 26,620 in 1965 to 17,670 in 1981 while the population per nursing person remained at almost exactly the same level during the same period.

Table 1. Nutritional and Health-related Indicators

A. Countries with Declining Daily Calorie Supply per Capita

	Daily Calorie Supply per Capita		Population per*	
	1965	1985	Physician	Nurse
1. <u>Low Income Countries</u>				
Ethiopia	1832	1704	+	
Burkina Faso	2009	2003		
Bangladesh	1964	1804	+	
Zaire	2188	2151		
Mali	1860	1810		
Mozambique	1982	1617	+	+
Madagascar	2486	2452		
Burundi	2391	2233		
Togo	2378	2221		
Somalia	2145	2074		
Central Afr. Rep.	2130	2059		
Kenya	2287	2114		
Sierra Leone	1836	1784	+	
Haiti	2007	1784		
Ghana	1949	1785		
Senegal	2474	2418		
Afghanistan	2203	2179		
Ghad	2393	1733		
Guinea	1899	1731	+	+
Kampuchea	2276	2171		
Total				
2. <u>Middle Income Countries</u>				
Nigeria	2185	2139		
Côte d'voire	2357	2308		
Peru	2324	2120		+
Chile	2591	2544		
Total				

B. Countries in which Daily Calorie Supply per Capita Rose less than 5%

Nepal	1931	1997		
Uganda	2383	2483	+	
India	2100	2126		
Zambia	2073	2126		
Mauritania	2070	2071		
Zimbabwe	2089	2144		+
Nicaragua	2389	2464		
Cameroon	2043	2080		
Ecuador	1942	2005		
Total				

*A "+" means that population per physician or nursing person went up (worsened) between 1965 and 1985. No entry means that these ratios declined (improved).

Source: World Bank, World Development Tables (1988).

Life Expentancy at Birth - Male		Infant Mortality (per 1000 live births)		Population (millions)
1965	1986	1965	1986	1986
42	45	165	155	43
37	45	193	140	8
45	41	153	121	103
42	50	141	100	32
37	45	207	144	8
36	46	168	120	14
42	52	201	130	11
42	47	142	114	5
40	51	153	96	3
37	45	165	134	6
40	48	167	134	3
46	56	112	74	21
31	40	208	154	4
44	53	178	119	6
46	52	119	89	13
40	46	171	130	7
				—
35	44	183	134	5
34	41	196	148	6
				—
				298
40	49	177	104	103
40	51	149	96	11
49	59	130	90	20
57	68	107	20	12
				146
41	48	184	130	17
44	46	121	105	15
46	57	151	86	781
43	51	121	82	7
36	45	178	127	2
46	56	103	74	9
49	60	121	65	3
44	54	143	96	11
53	64	112	64	10
				855

What do the above findings suggest? First, rather significant improvements in life expectancy and lower infant mortality rates in a large number of poor countries, combined with a worsening of average calorie intake over time (at already low average levels of intake) imply that the main improvement was in the length of average lifespan, while little absolute progress occurred in bettering the quality of health and life. People in poor countries are likely to live longer, more because of medical and health advances, such as immunization, successful treatment of infectious (particularly bacterial) diseases, and improved sanitation than because of the availability of more and better quality food. One can speculate that the poor in these vulnerable countries (Table 1) adapted their energy expenditures to low energy intake simply to stay alive—in the sense described by Lipton (Lipton, Pew lecture #1)—with the consequence that they are not able to enjoy a fulfilling, productive, and active life. Is a longer life characterized by drudgery and ill-health always a desirable goal?

The indicator that measures the proportion of underweight children (defined as children with a weight-for-age ratio more than two standard deviations below the norm) reflects, at least approximately, the quality of physical health. This indicator, after falling in the second half of the 1970s actually rose slightly in the first half of the 1980s in Sub-Saharan Africa; while falling at a decreasing rate in Southeast Asia and tending to level off in the Near East-North Africa region.

THE INTERNATIONAL TRADE SYSTEM, AGRICULTURE, AND NUTRITION

Compared to the ideal of free, unfettered international trade, the present system is characterized by a large number of artificial obstacles, which through their effects on world prices and the capacity of developing countries to export, influence household incomes, purchasing power, food

consumption, and ultimately nutritional status and health.

Historically the industrialized countries have protected and supported their farmers. Rising affluence in the developed world has gone hand in hand with a significant increase in the degree of agricultural protectionism. Through a variety of policies, such as price support programs and high tariff walls on inputs and subsidies, the industrial countries (and increasingly the so-called newly industrialized countries) have shielded their agricultural sector from worldwide competition. The worst culprit is Western Europe. The creation of the European Economic Community (Common Market) gave rise to a Common Agricultural Policy, which for all practical purposes closes Western Europe's considerable market for agricultural products off from the rest of the world.

A good indicator of the degree of protectionism enjoyed by a certain commodity in a given country is the so-called nominal protection coefficient (NPC), which is the ratio of the domestic price to the world price (the farm-gate price to the border price). The NPCs range from above 1 to almost 4 for different agricultural products in industrial countries (e.g., for wheat, 1.15 in the United States and 3.8 in Japan, while for rice, the corresponding NPCs are 1.3 in the US and 3.3 in Japan in 1980-82).

In contrast, most low income and many middle income countries discriminate against their agricultural producers through policies that maintain the domestic price below—often significantly below—the import price (thus, for example, the NPCs for wheat in India, Bangladesh, and Pakistan range between .6 and .8, and the NPCs for rice in Tanzania, Ghana, Cameroon, and Pakistan vary between .45 and .75). There are two reasons typically given for the discrimination against farmers in developing countries: 1) Effective taxes on agriculture through policy making are necessary because resources produced by agriculture need to be

transferred to the industrial sector to encourage, promote, and finance industrialization; and, 2) cheap food is desirable for urban workers and civil servants—two socioeconomic groups that the State tends to favor for political reasons. The State generally has a vested interest in effectively capturing and transferring resources produced by the agricultural sector to finance investment in nonagricultural areas (e.g., industrialization), the salaries of public servants, and cheap food for vocal, more politically powerful urban consumers.

What are some of the consequences of this diametrically opposed treatment of agriculture in the developed and developing world? First, the surpluses that accumulate in the industrialized countries must be periodically eliminated. This leads to artificially low world prices, and increases the dependence of poor countries on foreign sources of supply, reducing their “food-security” and enhancing their vulnerability to external fluctuations in price, which have been significant in the past two to three decades.

Second, the combination of low import and domestic producer prices acts as a powerful disincentive to agricultural production in many poor countries. In those countries where the bulk of the poor are engaged in agricultural pursuits and are net sellers of food (typical of much of South Asia and Sub-Saharan Africa), a regime of low producer prices reduces agricultural household output, employment, income, and ultimately, their capacity to feed their families. There is much historical evidence spanning the last three decades in many parts of the Third World regarding the negative impact on agricultural output of inappropriate agricultural strategies.

The process of capturing agricultural surplus is quite delicate. The goal is to generate a reliable and continuous flow of net resources from agriculture to the rest of the economy throughout much of the structural transformation. A lesson learned from those countries that were most

successful in achieving both growth and equity throughout their development history is that a continuing gross flow of resources should be provided to agriculture in the form of such elements as irrigation, inputs, research and credit, combined with appropriate institutions and price policies to increase productivity and the potential to contribute an even larger flow of resources to the rest of the economy. It is much easier to extract a net surplus out of increasing production than out of stagnant or falling output (Lecaillon 1987).

Thirdly, the mountains of surpluses accumulated by the developed countries have, in the past, influenced the composition of their foreign assistance packages toward more direct food aid. Now, it might be considered sacrilegious to argue against concessional food aid to needy countries. Let me immediately clarify and qualify what I am going to say next by making it clear that it does not apply to emergency food aid provided on humanitarian grounds. Some comparative evidence suggests that the availability of non-relief food aid is not always a blessing—rather it may, in some instances, be harmful. Studies undertaken in a number of francophone West African countries (in particular, Burkina Faso, Mali, and Senegal) indicated that, at times, the availability of imported cereals, provided through food aid, discouraged the production of domestic cereals destined for the market in the surplus producing zones of these countries. The potential danger is that if food aid is in the form of a more desired (palatable) product, such as wheat or rice, the latter may substitute in the diet for less desirable domestically produced staples such as millet and sorghum. If plentiful food aid does, in fact, encourage people to consume less local products, subsistence producers can be negatively affected and, in the long run, food self-sufficiency is reduced (i.e., import dependence is increased). This is a real risk because the flow of food aid cannot be relied upon with certainty over an extended period of time (Lecaillon 1987). Furthermore, local foodstuffs are often intrinsically more nutritious than

imported ones.

Fourthly, the welfare (efficiency) losses from distortions in agricultural trade are considerable. It has been estimated that if global trade was liberalized, the industrial and developing countries together would gain about 64 billion US dollars annually—more than double the level of official development assistance from OECD countries (World Bank 1986a). Another advantage resulting from liberalization would be the stabilization of world prices. In summary, under the present regime, industrialized countries tend to overproduce agricultural commodities, while many developing countries, particularly the low income ones, tend to underproduce. Higher prices, tariff walls, and other incentives encourage excess agricultural production in the industrialized world, while low producer prices tend to discourage production in the Third World.

Clearly, large potential gains can result from agricultural trade liberalization and the institution of appropriate agricultural policies in both the developed countries and the Third World. One paradox of the present system is that developing countries are expected to go through a structural adjustment process at home, which includes import liberalization, the removal of price distortions and increased reliance on competitive markets, within the context of a highly distorted international trade system in agricultural commodities. To make matters worse, the trend towards rising protectionism in the industrial countries in manufacturing, such as textile and leather product industries, is making it increasingly difficult for the labor-intensive exports of many Third World countries to penetrate industrial markets. It is not preposterous to ask whether a double standard exists i.e., structural adjustment for the poor nations but not necessarily for the rich.

Furthermore, if the prevailing international trade system provides the wrong price signals, e.g., artificially low food prices because of overproduction and resulting surpluses particularly in Western Europe,

and these prices are used as guidelines in the formulation of long-run development and structural adjustment strategies in poor countries, then these countries run the high risk of vulnerability to eventual policy changes in the industrialized world. The dramatic costs of the Common Agricultural Policy, which absorbs a large part of the European Economic Community budget are not sustainable over the long run. When subsidies are removed, even partially, international agricultural prices would move upwards. Such a crisis could well necessitate a new round of "structural" adjustments in the Third World.

INTERNATIONAL FINANCIAL SYSTEM AND NUTRITION

A whole constellation of factors converged following the 1970s to bring about the so-called debt crisis. Looked at from the viewpoint of developing countries, these factors included a worsening in their international terms of trade, a decline in exports caused by recessions in the rich countries, a tendency to live beyond their means and even financial mismanagement in a number of less developed countries, and the exertion of pressure by private international banks to recycle the windfall OPEC dollars.

Perhaps the best measure of the actual debt burden on a developing country is the ratio of the amount that it must annually pay out to amortize foreign debt (interest plus principal repayment) to the amount of export receipts. In 1970 only two presently low income countries had ratios above 12 percent; today we find one country with a ratio above 60 percent, three between 40 and 60 percent, eight between 20 and 40 percent and four between 12 and 20 percent. Among the present middle income countries, some of the more noteworthy cases of rises in this ratio between 1970 and 1986 are as follows: Congo 12 to 40 percent, Paraguay 12 to 25 percent, Tunisia 20 to 31 percent, Ecuador 14 to 34 percent, Colombia 19 to 32 percent, Chile 24 to 37 percent, Syria 4 to 29 percent and the

pathological cases: Brazil 13 to 42 percent, Mexico 44 to 52 percent and Argentina 52 to 64 percent.

It is difficult to imagine the unbelievable hardship that these ratios connote. A country that must use between one-fourth and one-half of its hard-earned foreign exchange to service foreign debt must give up an equivalent amount of often crucial imports—food, raw materials or machines. Some governments are left with pathetic choices. Should food imports be cut with resulting serious consequences for the nutritional status of the poor so that raw materials, machines or technical knowhow can be imported to achieve at least some economic growth; or should growth be sacrificed to maintain the struggle against poverty and hunger? The debt overhanging these countries is like a constant dark and menacing cloud on the horizon.

By the early 1980s, signs of serious external and internal disequilibria began to appear in the economies of many countries in two ways: 1) an external balance of payments deficit. This was artificially bridged with a variety of exchange control measures and import controls and/or through short-term borrowings abroad, which required an overvalued exchange rate; and, 2) an internal budget deficit. This was temporarily overcome by printing more money and/or by borrowing from the Central Bank, resulting in domestic inflation. The process leading to an economic crisis is by now well known. Foreign exchange reserves are gradually depleted, while the country may continue to support its deficits through foreign borrowing which, over time, results in an unmanageable external debt burden. Increasingly, a variety of exchange and import controls are imposed to reduce imports. This process continues until the government is no longer capable of meeting current payments or its debt, at which time it approaches the IMF for standby credit.

When the crisis point is reached, some form of adjustment is unavoidable. If the government does not undertake any new policy

actions, adjustment will be forced and chaotic. Alternatively, the adjustment process can be managed in a more orderly fashion if the government adopts a combination of stabilization and structural adjustment policies. The actors in this process are the IMF, the World Bank, and the government. The IMF provides short-term credit on a standby basis to help bridge immediate balance of payments gaps. In return, the IMF expects the government to undertake a series of stabilization policies including currency devaluation, the curtailment of money supply, and cuts in government expenditures enacted through a budget retrenchment program.

Whereas the focus of the IMF is short run, the World Bank provides program loans for balance of payments support in the medium run. In return for the funds, the Bank requires recipients to carry out a process of structural adjustment consisting among others of removing artificial price distortions in product and factor markets, deregulation, trade liberalization, and institutional changes at the sector level such as, for example, improvements in the effectiveness of the agricultural extension service. In a nutshell, the Fund's stabilization program is supposed to help restore economic equilibrium through its constraining effect on aggregate demand in the short run, whereas the World Bank's structural adjustment loans help to increase aggregate supply in the medium term. It can, however, be argued that both parts of the package jointly affect aggregate demand and supply over time.

Even though some form of structural adjustment is inescapable and, if accompanied by an appropriate package of measures, is likely to restore internal and external equilibrium while contributing to growth and socioeconomic development in the medium to long run, vulnerable groups may suffer during the transition phase. The poor, who are least equipped to shoulder extra burdens may be forced to carry most of the transitional costs of adjustment. This is particularly true when governments cut

expenditures on key social and economic services as part of their required budget entrenchment efforts. There is little doubt that cuts in these budgets contributed to the worsening nutritional picture that was noted previously in some parts of the world, particularly in Sub-Saharan Africa in the 1980s.

Two brief examples will illustrate some of these points further. In 1977 the new UPN regime in Sri Lanka enacted a major adjustment package. In the previous socialist regime, rice rations either subsidized or free were universally available to all households regardless of household income or assets. The cost of these food subsidies was enormous, reaching at one time almost 30 percent of total government expenditures and 4 to 5 percent of GDP. Evidence indicated that the poor definitely benefited from these rations, but that the bulk of the benefits accrued to those more economically advantaged. As a consequence, one of the first actions of the new government was to replace the old scheme with a Food Stamps Program based on an income and means test. Although the total cost to the government fell drastically, the new program did have a number of drawbacks that weakened its effectiveness. There is also some evidence that shows that the nutritional status of estate workers declined in the post-1977 period.

Morocco provides a second example of compensatory programs designed to reduce food subsidy expenses. There, it was estimated that only 16 percent of total food subsidy benefits reached the lowest 30 percent of expenditure groups. Therefore, the World Bank recommended a new, targeted intervention program based, among other things on the introduction of new food that could be substituted by poor households for currently available staples, as the subsidies on the latter were eliminated. The potential beauty of this approach is that this yet to be determined foodstuff would not be sought by the rich, so that a lower relative price would not encourage greater consumption by them. Where there are food

products that are nutritious and palatable to the poor but considered inferior by other groups, subsidizing this commodity can be a good way to target benefits. Unfortunately, it is very difficult to identify or develop through appropriate processing staple food products that have these characteristics. To my knowledge such a product has not yet been identified in Morocco. Incidentally, at one time Indonesia considered subsidizing cassava, which is consumed by the poor. There are, however, economic and technical problems with this suggestion that we cannot go into here.

In a more fundamental and pervasive sense the poor are indirectly touched by deflationary effects in the level of economic activity during the transition period, because of reductions in absorption and aggregate consumption, which are caused by the whole set of stabilization and some structural measures.

In particular, employment opportunities and the purchasing power of the urban unskilled (largely in the informal sector) are likely to be negatively affected. In contrast, small farmers may receive higher prices or have better markets after a devaluation, which raises the price of imported food. The prices of their food products (as long as they are tradeable) would rise by the full extent of the devaluation, encouraging them to produce more.

POSSIBLE LESSONS AND RECOMMENDATIONS

There are a number of possible recommendations that might help alleviate some of our contemporary world nutrition problems. These can be stated very briefly:

1. A restructuring of the world trade system through liberalization of current trade policies would be likely to benefit the mass of small farmers in the Third World, contributing to increased production and larger incomes, thereby improving general nutrition and health. It would

also provide the right price signals for the formulation of long-run development strategies and would contribute to more stable world prices and food security.

2. Food aid on concessional terms is an important tool in alleviating short-term crises, however it needs to be much more carefully programmed so as not to act as a deterrent to domestic food production by encouraging substitution of less nutritious but more palatable staples, such as rice and wheat, in place of domestic foodstuffs, such as millet and sorghum. The World Bank Study on "Poverty and Hunger" (World Bank 1986b) makes a number of valuable concrete suggestions.

3. The debt overhang—i.e., the continuing burden of existing foreign debt—has become totally unmanageable for a number of countries. Debt rescheduling only postpones the inevitable and is not really a solution. Some form of debt cancellation will probably be needed. After a very detailed study of the impact of structural adjustment on the Senegalese economy, I concluded that the donor community essentially had to decide between debt repayment or development. It is very unlikely that it can have both. Given the multitude of constraints that a country such as Senegal faces, the conflict between these two objectives appears inescapable. Continuation of the present emphasis on debt repayment will entail economic stagnation if not decline.

4. The short-term negative effects of adjustment on improvements in equity, nutritional status and health indicators and the elimination of poverty can be reduced in five different ways, which I have described in more detail elsewhere (Thorbecke 1987). First, poverty and malnutrition can be reduced by increasing the access that poor groups have to productive assets (such as access to land), thereby raising output of tradeable goods and incomes. Whereas this may well be the most effective means of improving equity through adjustment, it is also the most politically controversial and difficult to implement.

Secondly, adjustment can raise the rate of return on assets held by the poor by increasing prices of the outputs that they produce, lowering input prices or boosting productivity. The assumption here is that the poor do hold at least some productive assets, such as land. To the extent that the output of tradeables produced by poor groups can be increased, the objectives of adjustment and distribution are jointly met. This would be the case, for instance, where the bulk of the poor are net sellers of agricultural commodities.

Thirdly, adjustment can enhance the poor's access to human capital by protecting and targeting better education, extension, and health services.

Fourthly, measures and schemes that assist the poor in gaining employment, especially in the expanding tradeable sector, can likewise achieve both distribution and adjustment objectives.

Finally, if the poor are not economically active or if they cannot be encouraged to produce tradeable goods, income transfers may be the only means of assisting them during adjustment periods. In this case, the utmost care should be exercised to be sure that benefits are targeted as closely as possible to neediest groups such as the women, children, and the aged.

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