people, tools, plants, animals, and methods of cultivation and animal raising. While colonization transported to America the domestic plants and animals of the Old World (wheat, rice, sugarcane, cattle, sheep, goats, etc.), American plants (maize, potatoes, cassava, tobacco, tomatoes, sunflowers) moved in the opposite direction.

During this time, from the sixteenth to the nineteenth century, the farms of Asia and northwest Europe continued to develop. In Asia, double annual rice cropping and animal traction gained ground, while in northwest Europe a new agricultural revolution developed, in close relation with the first industrial revolution. This agricultural revolution made it possible to double agricultural production and productivity once again by replacing fallowing with the cultivation of fodder and row crops.

So, in the middle of the nineteenth century, after thousands of years of the differentiated evolutions and interactions of agrarian systems, the peoples of the world ended up the inheritors of quite different and unequally productive agricultures. To appreciate these inequalities better, let's represent side by side on a graph the maximum net labor productivity attainable in the main agricultures in existence at that time (*Figure 11.1*). Estimated in quintals of grain-equivalent, this productivity is calculated as follows: maximum cultivable area per worker multiplied by the yield per hectare attainable in good conditions of fertility, after deducting seeds, losses, and the quantity of grain necessary to cover the cost (small enough in these systems) of inputs and the amortization of equipment. For each main type of system, the maximum area per worker and the maximum yield per hectare varies as a function of the different regions in question, which explains why the attainable net productivity varies to a certain extent.

As Figure 11.1 shows, the systems existing at that time can be classed in order of increasing net productivity in the following manner:

- *Systems of manual cultivation*, in which maximum net yield is on the order of 10 quintals per worker. These include part of the rainfed cultivation systems in the intertropical forests and savannas and some temperate forests in America and Asia as well as irrigated and wet rice-growing cultivation systems with one harvest per year.
- *Systems of animal-drawn cultivation based on fallowing and use of the ard*, in which maximum net productivity is on the order of 20 quintals per worker. These include grain-growing systems based on fallowing of the Mediterranean regions and some regions of Asia and South America and irrigated and wet rice-growing cultivation systems with one harvest per year.

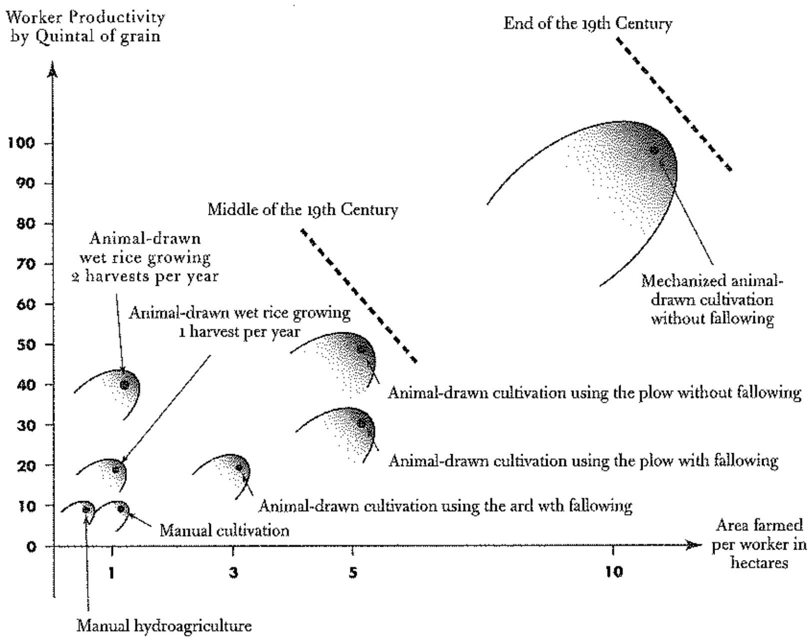
- *Systems of animal-drawn cultivation based on fallowing and use of the plow*, which persisted in some temperate regions of Europe and America, and in which maximum net productivity is on the order of 35 quintals per worker and irrigated and wet rice-growing cultivation systems with two harvests per year using animal traction, in which productivity is on the same order of magnitude.
- *Grain-growing systems based on animal-drawn plows and without fallowing in the temperate regions*, in which yield is on the order of 50 quintals.

In the middle of the nineteenth century, the ratio of net productivity between the least effective manual cultivation systems in the intertropical regions and the most effective systems of cultivation using animal-drawn plows without fallowing in the temperate regions was on the order of 1 to 5. As Figure 11.1 shows, this disparity in yields between systems was already higher than disparities in yields existing inside each system.

The End of the Nineteenth Century: A Productivity Ratio of 1 to 10

In the second half of the nineteenth century, the disparities in productivity widened even more. In northwestern Europe and North America, rapidly expanding industry began to supply farmers with new animal-drawn mechanical equipment (Brabant plows, reapers, harvesters), which made it possible for them to double the farmed area per worker and the productivity of agricultural labor, while the transportation revolution (railroads, steamships) made it possible for them to obtain amendments and fertilizers from distant locations and begin to sell their products in distant markets and specialize their production. At the end of the nineteenth century, the new grain-growing systems using mechanized animal traction and no fallowing in the temperate regions reached a net productivity on the order of 100 quintals (10 hectares/worker x 10 quintals/hectare = 100 quintals/worker), or around ten times more than the productivity of manual cultivation (*Figure 11.1*).

Note that at this time manual cultivation still existed in the most advanced areas of Europe, America, and Asia. In all the villages of these areas, next to the rich farmers who were well provided with draft animals and equipment and produced several dozen quintals per worker, there existed numerous peasants using manual cultivation, whose yield barely exceeded 10 quintals. Also let's note that in some deltas of East and Southeast Asia, the maximum attainable productivity by the best-equipped rice growers, resulting in two harvests per year, was not far below that of the most advanced farmers in the most advanced cold temperate countries, though it was undoubtedly a bit higher than that of farmers using the ard in the perimeter of the Mediterranean region.



System of manual cultivation in forests and intertropical savannas
(P_{max} = 1 hectare/worker x 10 quintals/hectare = 10 quintals/worker); and systems
of manual irrigated cultivation and manual wet rice growing with one harvest per year
(P_{max} = 0.5 hectare/worker x 20 quintals/hectare = 10 quintals/worker).

Systems of grain growing based on fallowing and animal-drawn cultivation using the ard
(P_{max} = 3 hectares/worker x 6 quintals/hectare = 18 quintals/worker);
and systems of animal-drawn irrigated cultivation and wet rice growing with one harvest
per year using the ard
(P_{max} = 1 hectare/worker x 20 quintals/hectare = 20 quintals/worker).

Systems based on animal-drawn cultivation using the plow with fallowing
(P_{max} = 5 hectares/worker x 6 quintals/hectare = 30 quintals/worker);
and systems of animal-drawn irrigated cultivation and wet rice growing
with two harvests per year using the plow
(P_{max} = 1 hectare/worker x 2 harvests per year x 20 quintals/worker = 40 quintals/worker).

Systems of grain growing based on animal-drawn cultivation using the plow
without fallowing
(P_{max} = 5 hectares/worker x 10 quintals/hectare = 50 quintals/worker).

Systems of grain growing based on mechanized animal-drawn cultivation without fallowing
(P_{max} = 10 hectares/worker x 10 quintals/hectare = 100 quintals/worker).

Figure 11.1 Comparative Productivities of the Major Agricultural Systems Existing in the World in the Middle of and at the End of the 19th Century

The Weak Penetration of the Contemporary Agricultural Revolution into the Developing Countries and the Explosion of Global Inequalities in Agricultural Productivity

As significant as they were at the end of the nineteenth century, the disparities in productivity between the different agricultures of the world still pale compared to those that have developed since. Indeed, in the twentieth century, these disparities literally exploded. In several decades, the second agricultural revolution (motorization, selection, mineral fertilizers, treatment products, specialization) spread to the developed countries, vigorously increasing agricultural productivity dozens of times, while the largest part of the agricultures in the developing countries remained isolated from this movement. In fact, only a small fraction of these underequipped agricultures were affected by this agricultural revolution, and then in an often incomplete and deformed manner.

Limited Motomechanization and the Persistence of a Manual Agriculture Among the Largest Number of People

The large grain, cotton, and sugar-growing estates in Latin America adopted motorization, large-scale mechanization, and mineral fertilizers somewhat later than their North American equivalents. Some of the large and medium-sized farms of Latin America and the Near East took the same road. In these regions of the world today, the tractor is used on more than one-third of the farms. But in Africa and the Far East, tractors are found on fewer than 10 percent of the farms.

The small farms practicing manual cultivation—the great majority in Africa, Asia, and Latin America—have never had the means to acquire any form of motomechanization, even on a small scale. The large majority among them have never even had the means to attain animal traction that, even today, is present in fewer than 15 percent of the farms in intertropical Africa, fewer than 20 percent in Latin America and the Near East, and fewer than 30 percent in the Far East. Strictly manual cultivation, which is not very productive, continues to be predominant in the developing countries. More than 80 percent of the farmers in Africa, and 40 to 60 percent of the farmers in Asia and Latin America use manual cultivation. It should be added that many of them have benefited very little from selection of crops and the use of agricultural chemicals.

Mazoyer + Roudart (2000)

Selection and Synthetic Mineral Fertilizers—The Green Revolution Pulls Up to the Gates of Poor Agriculture

During the colonial period, and sometimes well after, tropical agronomical research focused most of its efforts on export crops, selecting improved varieties and advocating cultivation methods better adapted to the production conditions of large plantations than to the needs and means of peasant farms. Food crops were often neglected.

After World War Two, international centers of agricultural research, financed by large American private foundations (Ford, Rockefeller), selected high-yield varieties of rice, wheat, maize, and soya requiring high inputs in fertilizers and treatment products and developed appropriate cultivation methods on experimental stations. In the 1960s and 1970s, the diffusion of these varieties and cultivation methods made it possible to increase yields and seed production in many countries of Asia, Latin America, and, to a lesser degree, Africa. This large-scale expansion of some elements of the second agricultural revolution (plant and animal selection, mineral and synthetic fertilizers, treatment products, pure culture of genetically homogeneous populations, partial mechanization, strict control of water) to three main grains widely grown in the developing countries was called the "Green Revolution." But the gains in yield and production connected to the Green Revolution, as significant as they were, benefited above all the fertile regions most able to get a return on the necessary costly inputs and benefited the farmers with adequate means to buy those inputs and apply the corresponding technical advice. Marginal regions and the poor peasantry, once again, remained largely outside of this movement.

Moreover, many food crops considered as secondary (millet, sorghum, native peas, taro, sweet potato, cassava, yam, plantain) were not the objects of significant research. Most of the local species and breeds of large and small livestock (zebus, yaks, buffalos, donkeys, sheep, goats, native pigs) were also neglected, as were multiple varieties of vegetables and fruits, however significant in the diet.

The research effort above all focused on the most specialized production systems and on standardized methods of cultivation (the famous "technology packages"), conforming to the conditions of relatively well-equipped farms. Complex production systems (associated crops, mixed systems combining crops, animal raising, arboriculture, or fish farming), with flexible and diversified cultivation methods that were less risky, used fewer inputs, were more labor intensive, and much more appropriate to the needs and possibilities of small underequipped farms, were neglected.

Although the Green Revolution made it possible to greatly increase production in numerous countries, it could hardly, at the beginning anyway, contribute

to saving and developing poor peasant agriculture from less favored regions of the developing countries.

The End of the Twentieth Century: An Agricultural Net Productivity Ratio of 1 to 500

All things considered, at the end of the twentieth century and beginning of the twenty-first century, the advanced sectors of agriculture in the developed countries and in some limited sectors of agriculture in the developing countries are at a level of capitalization that allows them to attain a net productivity (variable inputs and amortization deducted) on the order of 5,000 quintals of grain equivalent per worker (100 hectares/worker x 50 quintals net/hectare). At the same time, in the developing countries manual cultivation, producing on the order of 10 quintals net of grain-equivalent per worker, continues to be overwhelmingly predominant. Hence the ratio of net productivity between the least productive and the most productive agriculture in the world, which was 1 to 10 at the beginning of the century, is today 1 to 500. In a little less than one century, this ratio has increased by 50 (*Figure 11.2*).

Motorization of Transportation, International Competition, and the Tendency for Agricultural Prices to Fall

The second industrial revolution has not only produced the means to increase the disparity of productivity between manual agriculture and the most successful motorized agriculture by *fifty times*, it also has provided the means to put them in actual competition with one another. Since the Second World War, the motorization of road transportation, extending that of marine, rail, and air transportation, has gradually penetrated into every region of the world, including the most remote regions of the developing countries. The capacity and speed of this transportation has increased and its costs have diminished to such a point that most of the world's agricultures are no longer sheltered from competition from the most productive agricultures, which continue, moreover, to advance. Certainly, distances have not been abolished, transportation costs have not vanished, and institutional obstacles to international trade (taxes, quotas) remain quite real. But as a result of the reduction in transportation costs and the liberalization of international trade, the prices of basic food commodities, particularly grains, are today more and more the same in most of the countries of the world. They are determined by the low-priced exports from the surplus countries with high agricultural productivity in North America, South America (Argentina, Brazil), Europe, and Oceania (Australia, New Zealand).

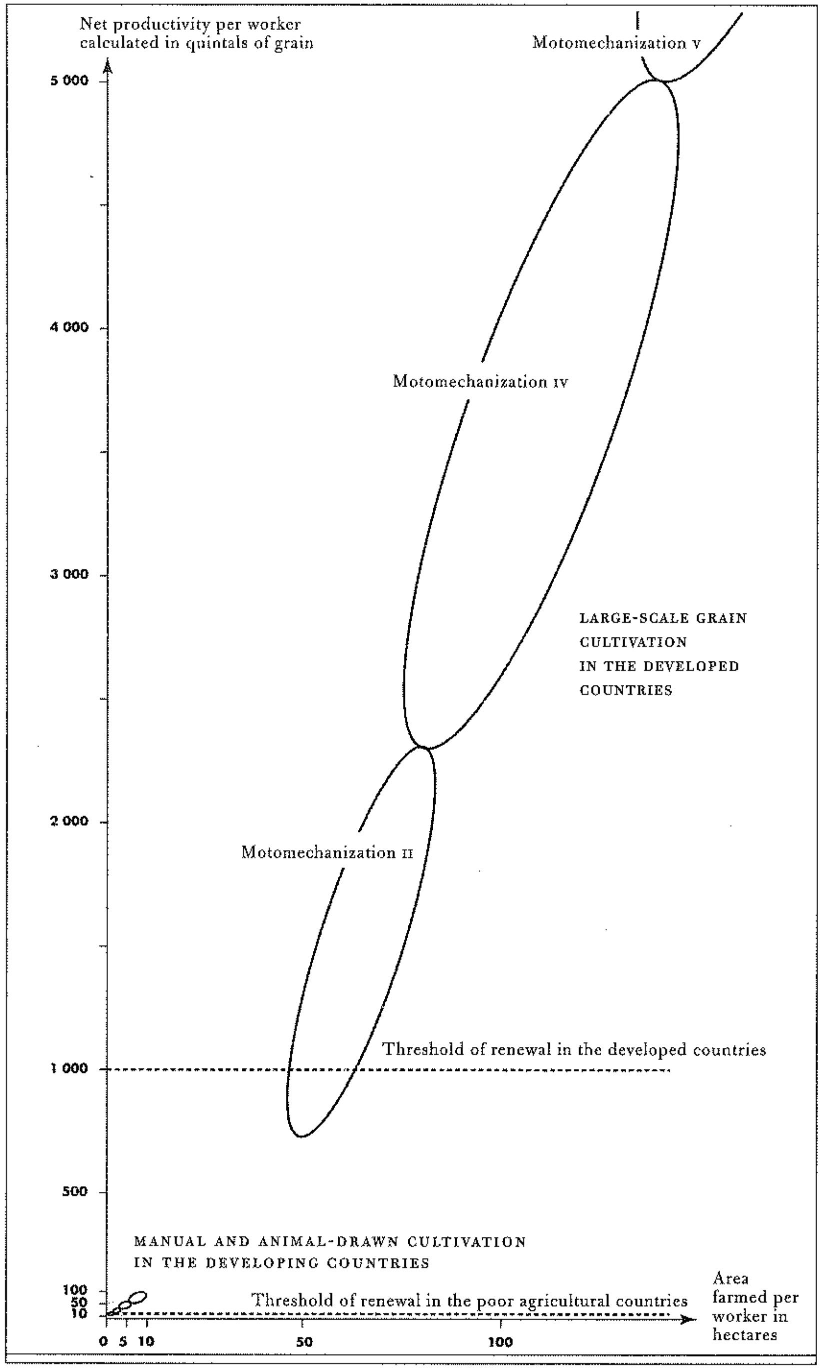


Figure 11.2 Gaps in Net Productivity of Labor Between Motomechanized Grain-Growing Systems that Use Agrichemicals and Systems of Manual or Animal-Drawn Cultivation in the Developing Countries

The Fall in the Prices of Basic Food Commodities

Over the last decades, the appearance of low-priced grains has caused a significant fall, in real terms, in the domestic prices of grains and substitute food commodities in most of the developing countries. The first consequence of this tendency for uniformity in grain prices and substitute commodities has been to make apparent the enormous disparity in productivities existing between farmers using a hoe, producing on the order of 10 quintals net per worker, and high-equipped farmers, who produce several thousand quintals. As soon as food commodities are priced approximately the same for workers from both systems, the disparities in productivity per worker are expressed purely and simply as disparities in incomes.

At $20 per quintal of grain, for example, a well-equipped European grain grower, working alone, producing 5,000 quintals net (variable inputs and amortizations deducted), receives $100,000. This $100,000 represents a net creation of wealth (that is, net value added for the grower's country) that this grain grower must possibly share with the landowner if he is a tenant farmer, with the banker if he is indebted, and with the tax department if he is subjected to taxes. After that, there will remain between $20,000 and $50,000 per year to pay for his own labor and to invest.

Paid at the same rate, $20 per quintal of grain, a Sudanese, Andean, or Indian manual farmer producing 10 quintals net would receive $200 if the entire production were sold. But since 7 quintals of grain must be saved to feed the farmer and the farmer's family, the monetary income is barely more than $60 per year. Again, that is on condition that there is no farm rent, interest on borrowed capital, or taxes to pay.

At the rate of $20 per quintal of grain, it would require one life of labor (33 years) for a manual farmer having a monetary income of $60 per year to acquire a pair of oxen and small animal-drawn equipment costing $2000, supposing that this farmer can devote all of the monetary income to this purchase. It would require 100 years to acquire sophisticated animal-drawn cultivation equipment. It would require 300 years of labor to buy a small tractor at $20,000, and it would require 3,000 years to buy the complete set of motomechanized equipment, with a value of $200,000, comparable to that of a European or American farmer.

Food Dependence. Grains, and the other food products replaceable by grains, were the first affected by the competition with the agriculture of the developed countries and by the lower prices that resulted from that competition. Without abandoning the food crops used for self-consumption, the farmers in the developing countries then reduced or abandoned cultivation of food crops intended for sale in order to devote an increasing part of their resources to tropical export products, which encountered less competition. In doing this, they chose the most advantageous products, taking into account the physical conditions of each region. Thus large agro-exporting specializations were formed or strengthened: coffee, tea, cacao, tobacco, peanuts, cotton, pineapples, bananas, etc. These export crops developed, in successive waves, during periods of rapid growth in world demand and high prices.

The relative decline of food crops intended for sale, at the same time that urban demand increased, plunged many developing countries into growing food dependence. In intertropical Africa, from 1965 to 1985, grain imports (wheat and flour, rice and the main secondary grains) per inhabitant more than tripled, going from 10 kilograms to around 35 kilograms. At the same time, production fell from 135 to less than 100 kilograms of grains per inhabitant.[1] Consumption per head thus fell (close to 10 percent) and this despite or because of the low-priced imports.

Agro-Export Specialization. Naturally, the large agro-export plantations were the first to take advantage of periods of high prices. They profited from those prices by adding to their equipment and sometimes by expanding their operation, to the detriment of the peasant economy. However, in countries where the land was not monopolized by the large estates, export crops also brought higher incomes to the peasantry than those it would have obtained with grains or other substitute food commodities. Those higher incomes made it possible for part of this peasantry to invest and develop. Hence, peasant plantations of coffee, cacao, rubber trees, etc., expanded in Africa, Asia, and Latin America, in regions having forested land reserves. In the years 1950–1960, the least deprived fraction of cotton and peanut producers in West Africa could adopt animal traction.

Lower Prices Spread to Export Commodities

But many tropical export crops were also affected by competition from identical or substitute commodities produced by the highly productive agriculture of the developed countries. Tropical sugarcane, for example, has for a long time had strong competition from sugar beets, a crop pivotal to the agricultural modernization of temperate Europe. Peanut oil and peanut oilcake was subjected and is still subjected to competition from large American production of soya. According to the World Bank, from 1950 to 1984, the price for oils and fats relative to the price of manufactured goods imported by the developing countries fell 1.29 percent per year.[2]

Moreover, some export products important for the developing countries, such as natural rubber and cotton, saw their prices greatly reduced by competition from competitive substitute industrial products. Most tropical export crops were also affected one after another by the progress of the second agricultural

revolution: selection of varieties that both require more fertilizers and are more productive as well as the development of synthetic fertilizers and specific pesticides, guidelines for cultivation, and sometimes even large, specialized machines, for harvesting or other activities.

These new and costly means of production were only adopted in their totality by large capitalist or state production units and by the wealthiest strata of peasant agriculture employing same wage labor, even though, for want of means, the large majority of the peasantry went no further than manual cultivation or animal-drawn cultivation with the ard and had only limited access to improved varieties and fertilizers. The fact remains that the second agricultural revolution, after having led to the fall in prices for basic food commodities, also led to a fall in the prices of most tropical export commodities. From 1950 to 1984, the average price of tea, coffee, and cacao, tropical commodities not affected by competition from countries in the north, fell 1.13 percent per year in relation to the price of manufactured products imported by the developing countries.[3] The same causes produced the same effects. The producers of export agricultural commodities were affected, in turn, by the fall in their incomes, as were the producers of grains and other basic food commodities.

Competition Among the Poor. Since the range of relatively profitable products continued to narrow in many regions, increasingly numerous peasants turned toward the few still profitable products. In order to do that, millions of peasants around the world abandoned their homes and moved thousands of kilometers. Sahelian and Sudanese peasants abandoned peanut and cotton crops to grow coffee and cacao in the equatorial forest zone. Rice growers in Southeast Asia colonized the last forests of the region to cultivate rubber trees. Peasants of the Andes came down from the mountains to cultivate vegetables on the periphery of coastal cities or to cultivate coffee or coca on the Amazonian slopes.

Any export product still profitable at a given moment attracts such a large number of deprived producers, ready to accept poverty wages, that supply increases and prices fall, even for products not affected by the second agricultural revolution and without competition from synthetic products. The prices of these commodities fall, then, up to the point where the income they obtain becomes equal to the income obtained by the sale of devalorized food commodities. Moreover, it should be noted that when the price of the last practicable export crop falls below this level, peasants abandon this export crop and return to food crops, however poorly remunerative.

Consequently, over a long period of time a system of relative prices for food and export products is formed, such that the income per worker obtained by the peasantry from these different products tends to become more equal, conforming to the lowest income. Certainly, it is a question of a general law as tendency, which cannot be verified at every moment in all places because the patterns of price fluctuations of different commodities are not the same. But if the curves representing the evolution of real prices of some important agricultural commodities, such as wheat, sugar, rice, maize, and rubber, are placed on a graph, it is possible to take into account simultaneously the enormity of the fluctuations, the extent of the tendency of the prices of these commodities to fall, and the close correlation of these downward trends over the long term (*Figure 11.3*).

The Development of "Naturally Protected" Products

The only commodities that escape, to a certain extent, the competition of imported products are quickly perishable commodities intended for the domestic market, such as certain fruits and vegetables, fresh dairy products and eggs, or commodities of low value such as firewood. These "naturally protected" products benefit from growing urban outlets. Truck farming, fruit growing, and small-scale livestock breeding in the interior and on the periphery of the cities of Africa, Asia, and Latin America have all undergone a strong development to meet the growing demand. There has also been an expansion of woodcutting with the consequent deforestation occurring in an increasingly larger ring around urban centers.

But the growth of urban and peri-urban agriculture is nevertheless limited by the weak buying power of the majority of city populations and by the imports of replacement products (deep-frozen products, powdered milk, various kinds of fuel). Moreover, urban agriculture is thwarted by the new construction that continually whittles away at its territory, regardless of how much labor went into its development, and peri-urban agriculture is always pushed back further by land speculation. The time and the delivery costs for products increase continually, which accordingly reduces the income of the producers.

While basic food and export crops, which encounter too much competition and pay too little, languish, this strong development of urban and peri-urban agricultural activities shows that the adaptability and courage of the poor peasantry are quite high. All it takes to be convinced is to see the truck farmers of Kenskof, who supply Port-au-Prince from the heights above the city, carrying heavy loads at night on top of their heads over many kilometers, or the armies of porters with palanches converging at dawn on the large cities of Asia, or the bicycles overloaded with bananas tearing down the hills surrounding Bujumbura at breakneck speed, or lines of carts and donkeys and dromedaries with packsaddles carrying, from more than a 50-kilometer radius, their daily wood delivery to the households of Niamey.

The Crisis of the Poor Peasantry

The Mechanism of the Crisis

For the mass of peasants using manual cultivation in the developing countries, the fall in real agricultural prices over more than a half-century led first to a fall in their purchasing power. The majority of them have quickly found themselves unable to invest in more effective tools and even sometimes unable to buy improved seeds, fertilizers, and pesticides. In other words, the fall in agricultural prices has been expressed by a true blocking of development for the vast majority of the least well-equipped and least well-situated peasants.

With the continuing fall in agricultural prices, the peasants who have not been able to invest and achieve gains in productivity have clearly fallen below the threshold of renewal. In other words, their monetary income has become inadequate to renew their tools and inputs, buy consumer goods they have not produced themselves (such as sheet metal for their roof, salt, cloth, shoes, kerosene, medicines, pencils, paper) and, if need be, pay taxes, all at the same time.

In these conditions, in order to renew the minimum set of tools necessary to continue working, these peasants have had to make sacrifices of all kinds: selling livestock, cutting back on purchases of consumer goods, etc. At the same time, they have had to expand as much as possible the crops grown for sale, but since their production capacity is strictly limited by the inadequacy of their tools, in order to do that they have had to reduce the area allocated to food crops grown for self-consumption. In other words, the survival of a peasant farm where income falls below the threshold of renewal is possible only at the price of reducing its capital (sale of livestock, poorly maintained and limited tools), underconsumption (peasants in rags and barefoot), and undernourishment.

Ecological and Health Crisis. Peasants are increasingly unable to work because they are more poorly equipped, undernourished, and poorly cared for than ever before. They are obliged to concentrate their efforts on tasks that are immediately productive and neglect maintenance work for the cultivated ecosystem. In hydraulic systems, poorly maintained installations deteriorate. In slash-and-burn systems, in order to reduce the difficulty of clearing, peasants attack regenerating forest lands that are younger and less remote, which accelerates deforestation and the deterioration of fertility. In systems combining cultivation with animal breeding, the reduced number of livestock leads to diminishing transfers of fertility to the cultivated lands. Generally, cultivated lands that are poorly weeded become "messy," and the cultivated plants, deficient in minerals and poorly maintained, are increasingly subject to diseases.

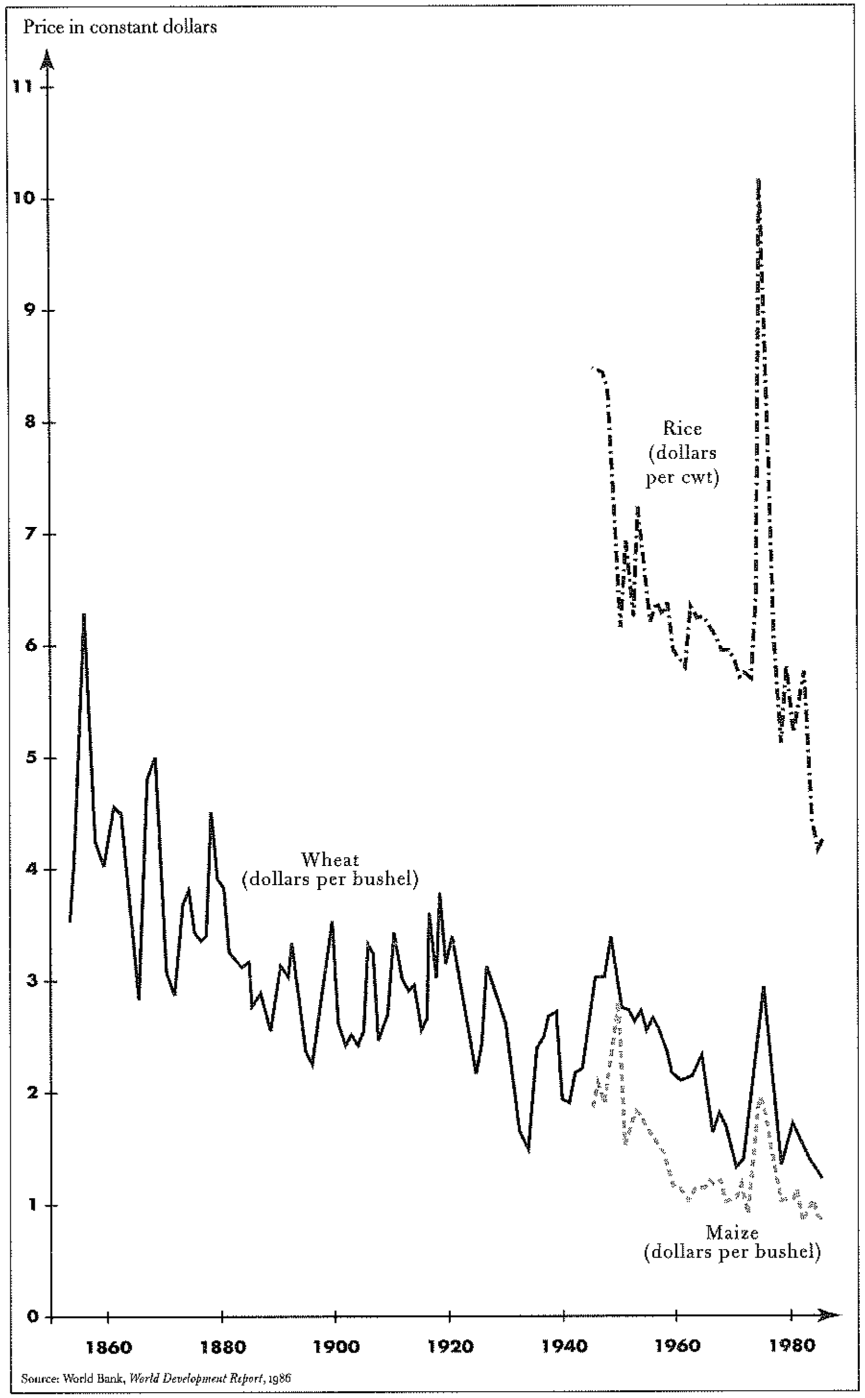


Figure 11.3 Tendency of Real Prices to Fall and Fluctuations in those Prices for Some Major Agricultural Commodities in the United States

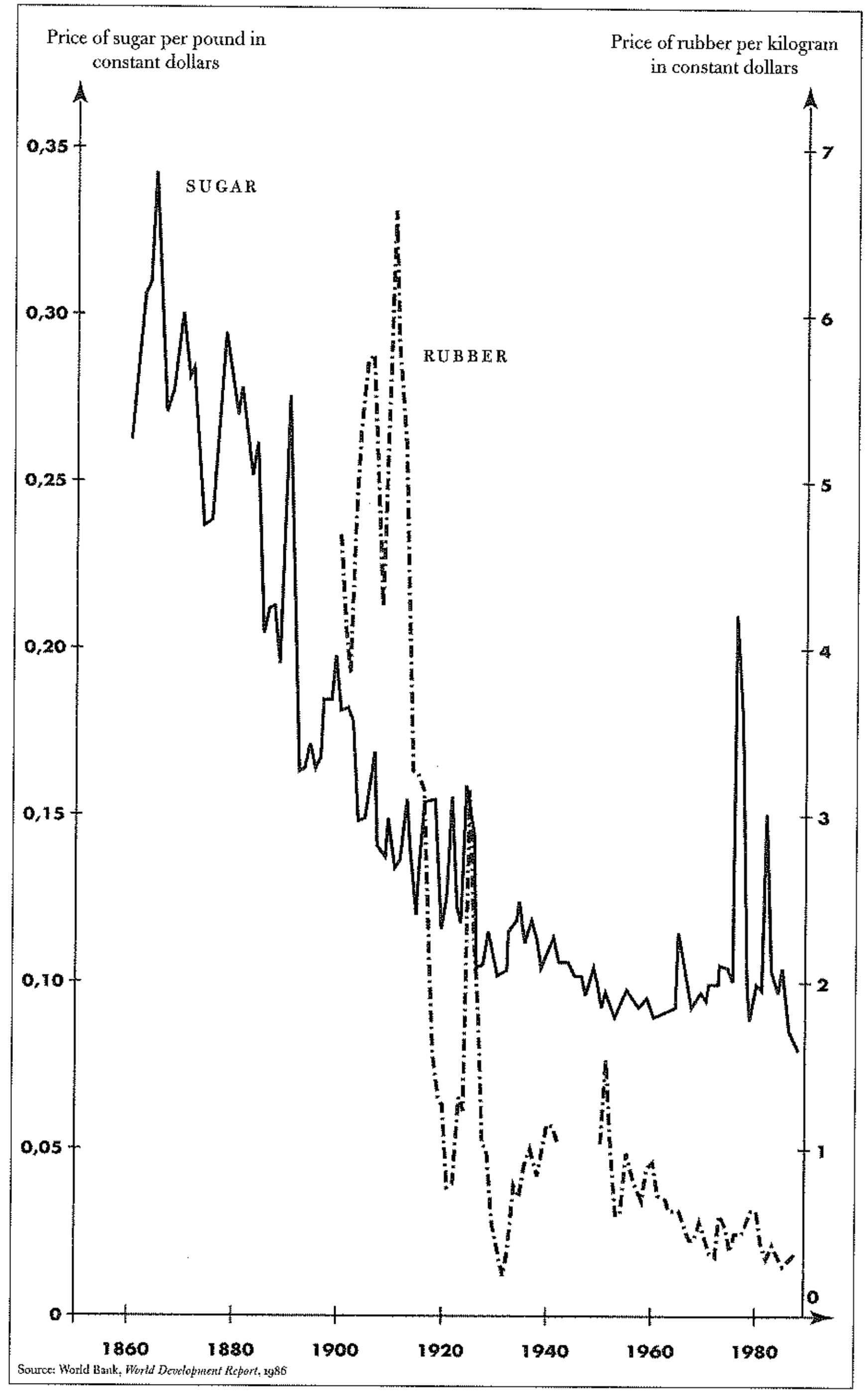


Figure 11.3 (continued) Tendency of Real Prices to Fall and Fluctuations in those Prices for Some Major Agricultural Commodities in the United States

The deterioration of the cultivated ecosystem and the weakening of labor power also lead the peasants to simplify their systems of cultivation. "Poor" crops, requiring less fertility, water, and labor, supplant crops with higher requirements. The diversity and quality of vegetable products intended for self-consumption declines which, added to the near disappearance of animal products, leads to dietary deficiencies in proteins, minerals, and vitamins.

Thus the farm crisis spreads to all components of the agrarian system: declining equipment, deterioration of the ecosystem and lowering of its fertility, undernourishment of plants, animals, and humans, and a general deterioration of health (see chapter 7). The economic instability of the productive system leads to the ecological instability of the cultivated ecosystem.

Indebtedness and the Agricultural Exodus. Impoverished, undernourished, and farming a degraded environment, weakened peasants are dangerously close to the threshold of survival. One bad harvest suffices to force them into debt, if only in order to eat during the months between harvests. At this stage, a good harvest can even make it possible for an indebted peasant to pay off the principal and the heavy interest of his debt, eat poorly, and save seeds for the next sowing season. But with his diminished conditions of production, good harvests are rare, the average harvest becomes smaller, and, most often, after repayment of the debt, there is hardly any food left for several months. The peasant is therefore forced to go into debt sooner and deeper.

Even being deprived of food up to the limit of survival, the possibilities for repaying the debt diminish and there comes a moment when the indebted peasant no longer finds a lender. The only remaining course of action, if it has not already happened, is to send able members of the family to search for outside employment, either temporary or permanent, which decreases even more the peasant's production capacity. And then, if the outside incomes are not adequate to ensure the survival of the family, there is no other recourse than to leave the countryside and move to the urban shantytowns, unless the peasant resorts to illegal crops.

Illegal Crops. In some remote and poorly controlled regions of Africa, Asia, and Latin America, illegal crops of opium poppies (Golden Triangle), coca (the Andes), and Indian hemp (Africa, Near East) are both possible and remunerative enough to make it possible for hundreds of thousands of poor peasants to survive. Since these crops are actually prohibited in most countries, they suffer less international competition. Furthermore, even in poorly controlled regions, they are nevertheless suppressed, so much so that they benefit from a sort of risk premium.

Famine. Although a peasantry having significant surpluses can support one or even several bad harvests, a peasantry that is reduced to the limits of survival is at the mercy of the least accident that could suddenly reduce the volume of its harvests or revenues. Whether this accident be climatic (flood, drought), biological (plant, animal, or human disease, invasion of predators), economic (drop in product sales, downward price fluctuation), or political (civil war, troops passing through), the peasants are condemned to famine on the spot or to refugee camps, if any exist nearby.

After more than a half-century, continually renewed strata of poor peasants in the developing countries were blocked in their development by competition and impoverished by the tendency of prices to fall. One after the other, they were excluded from agricultural production and forced to leave the country for the shantytowns or emigrate, or, in extreme cases, reduced to famine on the spot. This process of exclusion, which reduces agricultural labor power, has not yet affected all peasants using manual cultivation. It has, however, affected the most deprived peasants in the most disadvantaged regions. It is clear that if the fall in agricultural prices continues, new strata of the peasantry will also be excluded from production.

Aggravating Circumstances of the Crisis of the Poor Peasantry

Our intention is not to add to the exposé of the world's miseries and still less to go one better than the apocalyptic visions which appeared at the beginning of this millennium. In the long run, pity and fear lead more to despair, indifference, and abandonment than to lucidity and supportive and lasting commitment, which are necessary to go beyond the simple continuation of sporadic assistance and eliminate the sources of mass poverty on a long-term basis. But in order to find the way, it is necessary that we examine, beyond the general mechanisms of the peasantry's impoverishment and exclusion we have just explained, the particular circumstances that still aggravate the crisis of the poor peasantry in the developing countries. These peasants are unequally affected; some suffer more on a long-term basis than others from particular disadvantages, be they natural or infrastructural, economic or political. The world economy of today is a game of comparative advantages. But some countries, some regions, some categories of peasants reap only disadvantages.

Natural Handicaps. Some of these disadvantages can be considered natural. Tropical regions having only one rainy season (Sahelian and Sudanese regions, for example) are disadvantaged in relation to equatorial regions with two rainy seasons, where it is possible to make two harvests per year. Sahelian regions with one small rainy season are more disadvantaged in relation to wetter Sudanese regions. In an analogous manner, cold, high-altitude regions of Central Asia and the Andes have a significantly smaller production potential. These dry or cold regions are sometimes even so handicapped that no production intended for export or the domestic market allows the producers to attain the threshold of renewal. The populations concerned support themselves just above the threshold of survival. They are at the mercy of the least climatic or biological accident. They are plagued by shortages and, quite often, political troubles that also contribute to and aggravate the crisis in these regions (Ethiopia, Somalia, Sudan, Chad, Colombia, Bolivia, the Peruvian Andes, Yemen, Afghanistan).

Deficiencies in Hydraulic Infrastructures. But if, in areas with rainfed cultivation, it is possible to consider the lack or excess of water as a natural handicap that aggravates the crisis of the poor peasantry and can precipitate famine, it is not the same in areas with hydraulic agriculture. There the lack or excess of water results from hydroagricultural installations inherited from the past and from the ability of current hydraulic institutions to maintain and extend these installations when needed. As we know, in this type of society the squandering of potential investment surpluses and the decline of institutions have particularly catastrophic consequences for the peasantry.

In China and Egypt at different times, because of the shortcomings of the state and hydraulic institutions, the developed lands were not extensive enough in relation to the number of people and their needs. Today, many rice-growing valleys, deltas, and coastal basins in Asia and Africa do not have the hydraulic infrastructures necessary to deal with prolonged droughts or deadly floods, whether the latter come from the land or the sea. Bangladesh, for example, lacking protective dikes, is periodically ravaged by devastating floods. There are also countries where the hydraulic infrastructures, while remaining extensive and strong enough, are neither maintained regularly nor repaired quickly enough in case of deterioration.

The Smallest Farms. Outside of these natural and infrastructural handicaps, one of the worst things that can happen to an underequipped peasantry is to have insufficient land to employ the family labor force completely and ensure its survival. While a manual farmer can cultivate from 0.5 to 2 hectares depending on the system practiced, there are many regions in the world where the majority of the peasantry does not have half, or even a quarter, of this area. These very small farms, or minifundia, are the result either of unequal land distribution among the farms or of overpopulation and excessive subdivision of farms, or of both simultaneously.

Latifundia and Minifundia. The most extreme case of unequal division of the land is the combination of excessively large and excessively small farms, i.e., *lati-minifundism*, a widespread agrarian social structure in the Latin American countryside. In this region of the world, large agricultural estates of several thousand, indeed even of several tens of thousands of hectares, often underexploited, monopolize the largest part of the agricultural lands, while the poor peasantry is confined on ridiculously small farms, which do not even produce enough to cover the minimum dietary needs of the peasant families.

These families are forced, in order to obtain the necessary additional income, to sell their surplus labor to the large estate owners, who are often the only employers in the countryside. This underpaid labor force comes to be added to the mass of "landless peasants," sometimes homeless, who go to look for work from region to region according to the agricultural seasons. For the large estate owner, this landed property structure presents the double advantage of avoiding competition from a true peasant economy and having available a numerous labor force, at the lowest price possible.

Unequal Land Distribution and Minifundia. The largest part of the land does not have to be concentrated on a few large estates for a significant fraction of the peasantry to be confined on minifundia or totally deprived of land. In regions with hydraulic agriculture, in particular, the organized farmable area is often hardly sufficient for all peasant families to have a farm in keeping with their means and their needs. In such conditions, it suffices that there be just a slightly unequal distribution of the land to reduce a portion of the peasantry to minifundist status. In many rice-growing valleys and deltas of Asia, in the Nile Valley, etc., it suffices that a minority of "rich" peasants (peasants who are often just a little less poor than the others) hold more than half of the lands for a majority of the peasantry to be deprived of land. But that can also be the case in regions with rainfed cultivation where the cultivable lands cannot be expanded at will.

Overpopulation and Minifundia. Demographic pressure can be, alone, a cause of the proliferation of minifundia. In any agricultural system, when the population density increases, there inevitably arrives a moment when all the cultivable lands have been taken advantage of and the cultivated area per farm is reduced. In order to maintain productivity and income, the peasants therefore increase the quantity of labor and production per unit of area. They "intensify," as it is called, by increasing the number of crops (associated crops, accelerated crop sequences, fruit plantations) and the care and attention given to them. But as can be seen in many regions of the world (Rwanda, Burundi, overpopulated deltas), this type of gardening has limits. Beyond a certain threshold, the additional labor does not yield very much. Consequently, if this peasantry does not have additional means that allow it to adopt a new, more productive system, the increase in population is expressed purely and simply by a growing underemployment of the labor force, a fall in income per worker, and impoverishment.

It is exceptional that this process of proliferating minifundia due to overpopulation is not worsened by inequalities arising from distribution of the land. But it remains the case that in some regions overpopulation is indeed the essential cause of the proliferation of minifundia. Thus, in the delta of the Red River, the Vietnamese government conducted at the end of the 1980s a redistribution of the lands of the former cooperatives to peasant families. This relatively egalitarian redistribution was made in proportion to the number of people to feed in each family. However, the area of the farms formed in this way does not exceed one half hectare, and it is often less than half of the area that could be cultivated by each of these families.

Policies Unfavorable to Agriculture. But beyond these natural, infrastructural and land ownership disadvantages, many countries have also carried out economic and agricultural policies that are unfavorable to agriculture in general and to the poor peasantry in particular. In this regard, the costly policies of infrastructural and administrative modernization, the overvaluation of currencies and the protection of industry have been particularly harmful for agriculture.

Modernization, Overvaluation of Currency, and Protection of Industry. Ruinous investments, oversized in relation to the needs and financial capacities of countries, and to a great extent not too productive or even unproductive, have abounded. They not only have taken capital away from agricultural production, but they have also attracted a significant fraction of the young labor force away from agriculture, and that all the more so since the minimum legal wage observed in the administration and in public works has often been much higher than the income attainable for a peasant. Insofar as this reduction in the agricultural labor force has not been compensated for by investments that make an increase in productivity possible, the effect has been a reduction in agricultural production per inhabitant. In Congo, for example, in thirty years half of the working population of the country went from the countryside to the cities. The number of mouths to feed per agricultural worker doubled, going from 4 to 1 at the end of the 1950s to 8 to 1 in the 1980s. Since the productivity of manual cultivation of forests and savanna did not increase one iota during the same period, the country depended on food imports for nearly half of its food needs.[4] In order to finance all these modernization expenses, the poor states have resorted to large-scale borrowing, both domestic and foreign, and to creating money, which in turn generated inflation. This inflation has been much higher in the developing countries than in

their commercial partners among the industrialized countries, which has led to a loss in the relative value of their currencies. Rather than devalue to compensate for this loss in relation to foreign currencies, governments generally have preferred to maintain the overvaluation of their currencies, which comes down to subsidizing imports and taxing exports and is particularly unfavorable to agricultural producers in the developing countries.

Naturally, the overvaluation of national currencies could be harmful to industrial production, too. But because of the high priority accorded to industrialization in most of these countries, the industrial sector has not only benefited from all sorts of tax exemptions, low-interest loans, subsidies, and a significant part of the public investments, it has also often been protected from foreign competition by all kinds of measures (high import taxes, quotas, etc.). By limiting imports, this industrial protectionism has contributed to the overvaluation of national currencies, and by causing the internal prices of manufactured products bought by farmers to rise, it has degraded the terms of exchange even a bit more, to the detriment of agricultural products. According to a study conducted in seventeen countries in Africa, Asia, and Latin America, the protection of industry has been the economic policy measure that, from 1960 to 1985, has exerted the most influence on the relative fall in agricultural prices in relation to other prices.[5]

Agricultural Price Policies. Generally, agricultural price policies have only reinforced this tendency, because in many developing countries, the poor urban population has become excessive, indeed even the majority, and its political influence, as in Rome of the past, has become much greater than that of the peasantry. To respond to the pressure of urban consumers and limit wage increases in industry and the administration, governments have attempted to supply cities with low-priced food commodities. The most commonly implemented measures to lower food prices, and thus agricultural prices, have included resorting to food aid, commercial imports at the lowest possible prices, subsidies for the consumption of imported food products (grains and flour, in particular), and sometimes obliging peasants to deliver specific quantities of products at low prices.

But in order to have the means to pay for the growing imports of all kinds, governments have often heavily taxed exports of agricultural products. These taxes have formed in many cases one of the principal sources of revenue for the state budget. The prices paid to the producers have then been cut back drastically in proportion. In some countries, this taxation, by being added to other factors lowering agricultural prices, has even ended up leading to a decline in production. This is what happened in several countries of Africa (Togo, Congo) when the coffee producers first stopped planting, then stopped maintaining the plantations, and finally, even refrained from harvesting.

The Pillage of Agriculture in the Developing Countries. In many poor countries, policies of increasing investments of dubious value and unproductive employment, protecting industry, overvaluing the national currency, taxing agricultural exports, subsidizing food imports, and compulsory deliveries at low prices have been combined to devalorize yet again the fruits of agricultural labor. The study cited earlier demonstrated that for the seventeen countries of Africa, Asia, and Latin America considered in the period 1960–1985, the cumulative effect of these policies was generally a significant deduction from prices paid to farmers, which led to a fall even more significant in proportion in their net income.[6] All things considered, this deduction took effect as an enormous transfer of income toward the state, industry, and urban consumers, a transfer so significant that the authors of the study do not hesitate to view it as a veritable "pillage of agriculture in the developing countries."

This study demonstrates moreover that the "taxation" of agriculture harmed agricultural development. The countries that strongly taxed their agriculture had a rate of agricultural growth less than half that of countries that weakly taxed theirs. It also demonstrates that the countries that strongly taxed their agriculture had a much lower rate of general economic growth than the others. It shows, in addition, that countries like South Korea that protected their agriculture instead of taxing it had the highest rates of economic growth.

Not every developing country has carried out policies unfavorable to its agriculture. But above all, let us not forget, in cases where policies unfavorable to agriculture existed, the cumulative effect of these policies on the prices paid to farmers, as significant as it was, generally remained much less than the effect on prices from competition from more productive agricultures. It is necessary to recognize that the economic and agricultural policies carried out in the developing countries have had the advantage of not completely passing along the effects of strong fluctuations in world prices for agricultural products to domestic prices and thus generally stabilizing production prices. In fact, in countries where the great majority of producers and consumers are poor, the negative effects of fluctuations in agricultural and food prices are disastrous.

The Disastrous Effects of Price Fluctuations

As for export crops, periods of low prices reduce the monetary income of peasants in a dramatic manner. The most poorly situated and most destitute of the producers in the developing countries are, by the millions, plunged below the threshold of survival and condemned to leave the countryside or even to suffer famine on the spot. Then, in the periods of high prices that follow, since most of the producers previously excluded from production do not have the means to

return to the land, their market shares are partly taken over by better-equipped producers in more favored regions and countries.

As far as grains are concerned, when the world market is saturated and the prices are low (as was the case at the end of the 1960s and in the 1980s), food aid is abundant and the large producer countries even subsidize their commercial exports. Grains imported at low prices increase their share of the markets and consumption in the poor countries, so that the local producers of other food commodities (millet, sorghum, local rice, yams, cassava, sweet potatoes, taro, plantains, etc.) are plunged into crisis, and food dependence is widened. Some years later, when world production and reserves of grains are insufficient (as was the case in the 1970s), high prices return. But the producers excluded during the previous period are no longer there to take advantage of the price increases and the revival of domestic production in the poor countries is weakened, while the needs of the cities continually increase. In this situation, food aid becomes scarce, the bill for food imports becomes overwhelming, and, unless basic food commodities are subsidized, consumption by the poorest is reduced and shortages and famines reappear.

Natural or infrastructural handicaps, proliferation of small farms and harmful policies up to and including the "pillage of agriculture" contribute in no small measure to the agrarian and food crisis of the poorest agricultural countries. In countries and regions where several of these particularly unfavorable circumstances intersect, the multiple factors combine to take a devastating toll. This is what happened in northeast Brazil, where the aridity of the climate, lati-minifundism, and the predominance of one crop, sugarcane, which has suffered many vicissitudes, combined. Such is also the case with Bangladesh, which suffers from the shortcomings of an inadequate hydraulic structure and a minifundism resulting from both the unequal distribution of land and overpopulation. Such is still the case in many Sahelian countries.

But as unfavorable as they may be and as dramatic as their consequences may sometimes be, these worsening circumstances should not mask the fact that the essential cause of the agrarian crisis and of the rural and urban poverty that strikes the poor agricultural countries lies elsewhere. This crisis and poverty were inevitable from the moment that the underequipped and poorly productive agricultures of these countries were confronted with competition from forms of agriculture several hundred times more productive and with the resulting fall in agricultural prices. And there is no doubt that if the tendency of grain prices to fall and the subsequent fall in the prices of all other agricultural commodities continues, the huge agricultural exodus—the excessive increase in the population of shantytowns, and emigration—will also continue.

In the same way that the contemporary agricultural revolution and the revolution in transportation led to the elimination of the underequipped and poorly productive small peasantry in the developed countries, the expansion of the agricultural revolution to tropical branches of production and the extension of the transportation revolution to the developing countries are leading to the impoverishment and massive elimination of the underequipped peasantry in these countries.

But the analogy stops there. In the developed countries, tens of millions of workers excluded from agriculture since the beginning of the twentieth century were, except during crisis periods in the 1930s and since 1975, gradually absorbed by the development of industry and services, without reducing the production potential of agriculture, which was actually more productive. On the other hand, in the developing countries, there are not tens but hundreds of millions of poor peasants who, in only a few decades, were condemned to an agricultural exodus. As noted, in most of these countries, this massive exodus was not compensated for by gains in agricultural productivity, and investments from the whole world have not sufficed and will not suffice, not by a long shot, to absorb this uninterrupted stream of the rural poor looking for a new means of existence.

2. FROM THE AGRARIAN CRISIS TO THE CRISIS OF THE DEVELOPING COUNTRIES

From Rural Poverty to Urban Poverty

In the course of the last decades the exodus of hundreds of millions of poor peasants from the countryside has led to an excessive increase in the size of the cities of Latin America, Asia, and Africa, an excessive increase in the sense that these cities did not have the necessary infrastructure to accommodate them nor the industrial and service businesses able to employ them.

From that moment on, these immense migrations have led to the formation of megalopolises split into two distinct parts. In one part, an urbanized core, the so-called *formal* administrative and economic activities are concentrated along with the social groups having jobs and regular incomes. In the other part, proliferating shantytowns, populated with a growing mass of poor people. These are poor who have come directly from the countryside, as well as descendants of those who had taken the road to the city a generation earlier.

Among the masses of these job seekers, only a minority of the able-bodied and well-adapted is in a position to gain the skilled and regularly paid jobs offered by the government and by well-established national or foreign businesses. These few, stable jobs are often reserved to persons coming from well-off circles (large landowners, planters and wealthy peasants, merchants and businessmen, officials and other regularly paid wage earners), when they are not given to "expatriates" coming from the developed countries.

Visible Unemployment and Hidden Unemployment

The immense majority of the poor in the cities is doomed either to unemployment or to insecure, thankless, and underpaid employment in businesses in the so-called *informal sector*, or even small individual jobs produced by the profusion and endless subdividing of service activities: the last resellers of cigarettes sell them one at a time, lit or not, at the corner of each street, to buyers who do not have the means to pay for a whole pack. This is not to mention prostitution, criminality, and begging that, because they transgress public morality, are the origin of other forms of exclusion and suffering.

Many informal activities (resellers, shoe-shiners, windshield washers, guards for cars and houses, occasional porters) require availability for long periods of time everyday (eighteen to twenty hours) for insignificant actual work time. By occupying a large number of people as much as possible, they contain and conceal more unemployment and poverty than they actually supply jobs and income. Low levels of capitalization, productivity, and labor income generally characterize the unregistered businesses of the informal sector, which escape all labor legislation. These levels are, in fact, hardly above those of poor agriculture but, as minimal as they are, this tiny advantage explains why the shantytowns are nevertheless attractive for the most destitute country people, in particular for the young without family responsibilities.

Since the agricultural exodus greatly exceeds the labor needs of the formal and informal sectors, significant structural unemployment appears, and this is only the visible part of an immense, hidden underemployment.

The General Depreciation of the Fruits of Labor in the Developing Countries

In this context of massive unemployment, officially recognized or not, the wages of the unskilled labor force are established in the following manner. The daily wage of an occasional worker is hardly above the price of his daily food. The annual wage of an unskilled employee, occupying a relatively undemanding job, is set in the range of the price of ten quintals of grains, or of what inadequately feeds a family of four or five persons. The annual wage of a relatively unskilled or completely unskilled employee occupying a job requiring daily attendance, sustained attention, and reliability covers the dietary needs of a family as well as a minimum of other essential needs.

This is why the basic wage paid by a business, whether national or foreign, even were it the most modern in the world, is without any relationship to the productivity of labor in that business. The wage is in line with the market price of the local labor force. In other words, in countries that are already relatively industrialized and that protect their agriculture, like South Korea, the basic wage approaches that paid in the developed countries, but in the still largely agricultural poor countries, like China or Vietnam, it is thirty to forty times lower.

The extremely low price of the relatively unskilled labor force reduces to next to nothing the costs of production and the prices of goods and services produced and consumed locally, which leads to a lowering of the wages of other categories of employees. Thus, with equal skills and work, the expert or interpreter originally from a developing country, employed in his country by a firm or an international organization, is paid up to ten times less than his counterpart in a developed country.

The integration into the same market of less industrialized countries, heirs of a relatively unproductive agriculture, and of industrialized countries, heirs of a highly productive agriculture, is characterized by the establishment of an exchange relation seriously unfavorable to the former. It takes dozens of years of labor for a peasant or wage laborer in a developing country to buy the product of one year of work in a developed country. Conversely, several days of labor for a wage laborer or a farmer in a developed country are adequate to buy the product of one year of labor in a developing country.

Deterioration in the Terms of Trade

Most of the economic studies concerning the prices of different categories of commodities show that over the course of the last decades, the prices of agricultural and nonagricultural raw materials fell in relation to the prices of manufactured products.[7] According to the World Bank, between 1950 and 1984, the average weighted prices of grains, in relation to the average prices of manufactured products imported by the developing countries, fell 1.3 percent per year, while the prices of all agricultural products and of raw materials respectively fell 1.03 percent and 1.08 percent per year.[8]

As a result, many developing countries that are essentially exporters of raw materials and importers of manufactured products were subjected, in the long term, to a strong "deterioration in the terms of foreign trade." But in this context it is necessary to point out that many developing countries became importers of grains and other basic food commodities, that some even became *net* importers of agricultural products, and that a handful of new industrialized countries are already principally exporters of manufactured products. It is then possible that the differential evolution of commodity prices became less unfavorable than in the past for some developing countries, indeed even became favorable in some cases. But these hypotheses, difficult to verify, are still controversial.

The Failure of Modernization Policies in the Poor Agricultural Countries

Except for some Asian and Latin American countries, which had a productive enough agricultural subsector to be able to extract a non-negligible surplus while continuing to advance, and except for some large petroleum-exporting countries, which had and still have very significant incomes, tax revenues, and exports, most developing countries are poor agricultural countries, which inherited a completely underequipped agriculture and possibly some mineral resources. Now, despite their mediocre incomes and receipts, almost all these countries, like the others, have embarked on policies aimed at rapidly modernizing their infrastructure and their state apparatus, in order to create, at least that was their hope, the necessary conditions for industrial takeoff and growth.

The rulers of the poor countries, like most of their advisors from West and East, equated underdevelopment with a simple infrastructural, industrial, institutional, and educational backwardness, and they had the ambition of catching up, in a historically short time period, with the level of development and income of the developed countries. They also expected that, following the example of nineteenth-century Europe, North America, and Japan, the agricultural sector of their countries would be able to free the necessary capital and labor for the development of industry, infrastructure, and services. But by doing this, they underrated the notable weaknesses of their agriculture and, certainly, were unaware of the lowering of agricultural prices (in real terms) that was going to swoop down on their economy during the following decades.

Public and Foreign Deficits

The heavy public expenditures for urban infrastructure, communication (ports, railroads, highways, airports, electrification, telecommunications), education, health, general administration, defense, etc., not only greatly exceeded the meager tax revenues of the poor countries but, more seriously in most cases, did not engender the expected dynamic of investment and agricultural and industrial development. Despite an often advantageous investment code, modernization was not enough to retain or attract the mass of capital that would have been necessary to lead to a true economic takeoff. The available capital was oriented first toward the developed countries and their vast market, then toward a small number of Latin American and Asian countries that offered it maximum economic advantages and political guarantees, countries that today have become or are becoming the "new industrialized countries."

Taking note of the insufficient productive private investments, but fearing the grip of foreign capital on their economy and undoubtedly impressed by the industrial progress recorded in the 1930s and 1950s by the Soviet Union, a number of governments committed their countries on the path of more or less extensive state control of mining, agricultural, industrial, and commercial activities. The additional heavy expenditures in inconsistently profitable productive investments came to be added to the public expenses of general modernization.

Whether their rulers claimed to adhere to liberalism or interventionism, the poor countries were plunged into significant chronic deficits. From 1972 to 1982, for all the non-petroleum-producing developing countries, the public budget deficit went from 3.5 to 6.3 percent of their gross domestic product.

On the other hand, since modernization was conceived on the model of the industrialized countries, it required numerous imports of goods and services from them and heavy expenditures in foreign currencies. Except in transient periods of high prices for raw materials, these expenditures largely exceeded the foreign currency receipts of the poor agricultural countries, leading to a chronic deficit in the foreign balance of payments. From the end of the 1960s to the beginning of the 1980s, in fifteen years, according to the statistics of the International Monetary Fund, the deficit in the current balance of payments for all of the non-petroleum-producing developing countries went from some $6 billion to nearly $100 billion.

Overindebtedness

The foreign deficits, a good part of which were created from public deficits, were then covered by massive borrowing from foreign states (developed countries or petroleum-exporting countries), commercial banks, and international financial institutions. In the 1970s, the corresponding loans were granted all the more easily since a lot of capital was poorly invested and the ephemeral high prices of raw materials made it possible to overestimate the potential of the developing countries to repay them. In many poor countries, the foreign debt came to represent a significant part of the gross national product, and sometimes even came to exceed it (Ivory Coast, Costa Rica).

At the end of the 1970s, after the collapse of raw materials' prices, these heavily indebted countries found themselves unable to pay back their debts, at the same time that they continued to pay for their imports of manufactured goods, food products, and petroleum. As had already happened in the nineteenth century in countries like Egypt and Peru (see chapters 4 and 5), the desire to catch up quickly with Western modernity was transformed into a veritable financial trap and therefore a political one.

Policies of Stabilization and Structural Adjustment

Except for opting not to pay the debt service, which would have consequently led to the loss of all international credit, the inevitable collapse of their imports, and de facto harsh austerity, the overindebted countries had no other alternative than to seek a rescheduling of their debts as well as additional loans. Since it is acceptable in such circumstances, these "generous gifts" were granted to requesting states only on condition that they implement "stabilization" policies, that is, austerity policies aimed at reducing in the short term public budget deficits and foreign payments, while continuing to pay back old and new debts.

These stabilization policies, carried out under the aegis of the International Monetary Fund, consist of reducing investments and consumption in a draconian manner. In order to do that, various measures are applied: reduction in wages and in the number of officials, reduction in the costs of operating the administration, reduction of public subsidies and welfare payments, increase in taxes, generalized wage austerity, increase in the interest rates, restriction of credit granted to the state, to businesses and to households, and currency devaluation. But if these policies indeed contribute to reducing budget and foreign deficits, without always succeeding in reestablishing the corresponding equilibria, they also inevitably have negative effects on economic growth and on the purchasing power of countries that implement them.

This is why these short-term stabilization policies are accompanied with "structural adjustment" policies in the medium term, which aim, under the aegis of the World Bank, at stimulating production and trade. These policies are based on the premise that free enterprise and free trade are, in all circumstances, the best way possible to promote economic development and social well-being and, consequently, advocate liberalization of prices and foreign trade, deregulation of markets, particularly the labor market, the organization of financial markets, and, where these exist, the improvement of their effectiveness, the disengagement of the state from all economic activity, and privatizations. But this premise, which is advanced by only some neoliberal economists, is far from being accepted by the majority of economists.

The 1980s: A "Lost Decade for Development"

After fifteen years of a more or less strict implementation of these policies, the least that can be said is that they have not had all the expected effects relative to the stimulation of economic growth. In the 1980s, the average per capita income fell 10 percent in Latin America, 25 percent in sub-Saharan Africa, and, in some countries, real incomes were reduced by more than 50 percent.[9] However, this "lost decade for development," according to the expression used by the United Nations, was not lost for everyone. In these same years, the average per capita income increased by 50 percent in South and East Asia. There are many reasons to think that these quite contradictory developments are the result of the unequal economic and social legacies of different regions of the world, and their relative positions in the world economy, rather than of the more or less strict application of adjustment policies.

The Case of the Petroleum Countries and the New Industrialized Countries

In the system of international trade established over the last few decades, the developing countries that have had sufficient capital to invest and significantly increase their population's income are the exception. Some exceptions are a few large petroleum-exporting countries such as Saudi Arabia, the United Arab Emirates, or Brunei, whose export receipts are so large in relation to their population that imported modernity has been pursued quite far and poverty has almost disappeared. These countries even attract a numerous labor force from poor countries and, in addition, realize savings, a large part of which is deposited in foreign countries. But most of the petroleum-exporting countries, such as Mexico, Venezuela, Algeria, and Nigeria, do not have such high per capita export receipts, which does not prevent the capture and redistribution of petroleum income from exercising a multiplier effect on imports and a sort of eviction effect on activities directly productive of goods and services. Thus these countries are far from having reduced poverty and unemployment and are even today among the most heavily indebted countries, their repayment potential having been widely overestimated following the two "oil crises."

Otherwise, some countries of Southeast Asia and Latin America have been able to accumulate capital, ensure that all or part of their infrastructure and administration comply with "international standards," and create favorable enough conditions to attract large amounts of international capital. Some of these countries have even found the way to strong and long-lasting growth. In commercial and financial centers without hinterlands, such as Hong Kong and Singapore, and in small territories such as Malaysia, unemployment has almost disappeared. However, even in countries such as Taiwan and South Korea, which have been able to base their industrialization in part on their own agricultural surpluses and where there is a clear tendency to increase wages and enlarge the internal market, unemployment and poverty have not been eliminated. As for the large, partially industrialized countries, such as Indonesia, Thailand, India, China, Brazil, Mexico, Argentina, Chile, etc., unemployment and rural and urban poverty remain immense, and industrialization has only a limited effect on the basic income level, which remains very low.

Beyond the developed countries already industrialized at the beginning of the twentieth century and setting aside a handful of developing countries endowed with relatively productive agricultural activities or large enough commercial or petroleum rents, the large majority of the world's countries have inherited only an underequipped, largely unproductive agricultural sector, incapable of financing a rapid and costly modernization imported from the developed countries.

Integrated into a system of international trade that has put them in competition with developed countries having a much more productive agriculture, these underequipped and relatively unproductive agricultural countries have suffered a severe depreciation of the fruits of their labor. This depreciation has been worsened by the tendency of agricultural prices to fall resulting from the sustained progress of the most productive agricultures. These so-called countries in development have in fact become impoverished agricultural countries, that is, countries with very low agricultural incomes and very low wages, with little or no industrialization, producing little, having low public revenues and low foreign currency revenues. These are indebted countries that do not have the means to accumulate capital in order to begin a real development, or even the means to modernize sufficiently in order to attract foreign capital. These are countries long in crisis, where unemployment and mass rural and urban poverty reach unsustainable proportions; countries in which hunger and massacres are not uncommon, where the impotence and disintegration of the state are increasingly manifest.

In these conditions, it is illusory to think that national policies exist that would make it possible for each of these states to lift their countries out of poverty. Not that the policies that they carry out are unimportant, as we will see. But it is clear that in order to raise all of the incomes of the poor agricultural countries significantly, allow them to accumulate capital, develop, and modernize, it would be necessary to establish first a totally different system of international trade. Not a system in which agricultural prices tend to be standardized and fall in real terms, thereby reducing the revenues of these countries to the poverty level of their agrarian heritage, but a more equitable system of international trade in which prices would be differentiated and raised so as to compensate for the formidable handicaps in equipment and productivity from which these countries suffer.

3. FROM THE CRISIS OF THE DEVELOPING COUNTRIES TO THE WORLD CRISIS

The Twenty-five "Glorious" Years of Sustained Growth

From the end of World War Two to the beginning of the 1970s, the world, in particular the developed countries with market economies, experienced nearly three decades of strong and sustained economic growth. Supported particularly by technology and the high financial capabilities of an American economy that had ended the war greatly enlarged, the countries of Western Europe and Japan were first rapidly reconstructed. Then, learning from the underconsumption crisis of the 1930s and the demonstrated successes of Keynesian policies of stimulating production by stimulating demand, the developed countries carried out policies aimed at maintaining demand at a sufficiently high level to stimulate production and achieving full employment of the labor force: public investments, public expenditures in the general interest (defense, education, health), wages indexed in practice on productivity gains, extended social welfare, steady agricultural prices, investment assistance, etc.

These policies were facilitated by the international monetary, financial, and commercial system put in place by the Bretton Woods Accords in 1944. This system rested in the first place on the stability of exchange rates, in order to secure the forecasts and estimates of investors and avoid a series of competitive currency devaluations, like those that had been carried out by most countries in the 1930s. The exchange rates were nevertheless adjustable. A country confronted with a fundamental disequilibrium in its economy (a rate of unemployment or inflation considered to be unsupportable) could decide to devalue its currency. Moreover, in this system the monetary and budgetary policies of each country remained independent and capital movements were controlled.

But the Bretton Woods system, like previous systems for that matter, left to the country experiencing a long-lasting trade deficit the responsibility to reestablish the equilibrium of its external balance by carrying out policies to reduce internal demand (consumption and investment). This arrangement ran counter to the proposals of John Maynard Keynes, who had recommended that trade balances between countries be reestablished by increasing demand in the surplus countries rather than reducing it in the deficit countries. From this perspective, J. M. Keynes had also proposed to create an international currency that was not convertible into gold, and not to use for that purpose the U.S. dollar guaranteed by gold, as imposed by the American government. Moreover, during this whole period of exceptional growth, the cold war, the armaments race, and a few hot wars (Korea, Algeria, Vietnam) also contributed to keeping economic activity at a high level.

Thus, from 1950 to 1973, the wealth produced in the world increased an average of 4.7 percent per year, and world trade advanced at the rate of 7.2 percent per year.[10] Further, it should be noted that from 1965 to 1973 the average annual rate of growth of developing countries exceeded that of developed countries: 6.2 percent versus 4.4 percent. But since these rates of growth corresponded to initial, inordinately unequal levels of wealth, the increase in the quantity of wealth produced and consumed in absolute value was much larger in the developed countries than in the developing countries. In 1973, at the end of these twenty-five glorious years of sustained expansion of the world economy, the global purchasing power of all the developing countries remained very low in comparison to that of the developed countries.

Insufficiency of Effective Demand and the Slowdown in Growth

From 1973 to 1990, the growth in production and world trade slowed down considerably. The annual rate of growth for production fell to 2.5 percent and that of trade to 3.9 percent, or a fall of nearly half in relation to the previous period. From the beginning of the 1970s, the development of world production potential began to come up against the limits of planetary buying power. In the 1960s, medium and long-term studies of the market, carried out by large economic research departments (Rand Corporation in the United States, Société d'économie et de mathématiques appliquées and Metra International in France and Europe) or by specialized services of large businesses and banks, had already demonstrated that, for numerous goods and services, expected demand for the beginning of the 1970s was going to be far below expected supply according to the investment and development plans of the industries concerned. Armed with these predictions, large investors then revised downward their development plans, taking into account the predicted limits to effective demand.

Note that in the 1920s, relatively dispersed businesses did not have the means to make studies and effective economic predictions, which would have made it possible for them to adjust their investments as a function of expected demand. That explains why in the 1970s, contrary to what happened in the 1930s, the weakness of demand did not result in the formation of excessive production capacities, the accumulation of unmarketable stocks, the collapse of prices, the multiplication of failures, mass business closures, massive layoffs, an enormous stock market crash, and a financial debacle.

Unemployment, Speculation, and Stagflation

If, in the 1970s, the crisis resulting from the insufficiency of demand relative to productive capacity did not take the catastrophic turn of an overproduction crisis, as in the 1930s, it nonetheless remains the case that the curbing of productive investments was still characterized in the developed countries by a net slowing in growth, the development of unemployment, and the appearance of a mass of capital in search of profitable investments. A growing part of this "floating" capital was directed, depending on circumstances, toward all kinds of speculation: currencies, raw materials (oil crises, doubling of grain and soya prices in the middle of the 1970s), gold, real estate, securities (shares, bonds, holdings), and derivatives (hedging in the futures market, options).

These multiple types of speculation were made possible by the dismantling of the system of fixed exchange rates (1973) and by the financial deregulation (suppression of controls on international movements of capital by the United States in 1974, then by most other countries in the 1980s). In the 1970s, these various types of speculation contributed to making goods and services more expensive, while, in the OECD (Organization for Economic Cooperation and Development) countries, policies of supporting demand and creating money fed inflation, without succeeding in stimulating economic activity. This paradoxical combination of two phenomena, inflation and stagnation, until then considered incompatible, was simply baptized with the name *stagflation*, instead of being clearly explained.

Living on Credit

In order to find uses for an abundant savings with few profitable investment outlets, public, private, and international financial institutions embarked on extensive campaigns to make loans to the governments of the developing countries, as well as to the governments of the socialist countries and the developed countries. From the beginning of the crisis, almost every country in the world ended up living largely on credit. Further, if this credit contributed to enlarging consumption and to stimulating production a bit in the short term, its repayment was necessarily a burden on purchasing power in the medium and long term, barring, of course, cancellation of the debts. Lacking the potential to invest immediately in production, a growing part of world savings took refuge in investments that lived on profits from speculation and interest on loans.

Modernizations, Relocations, and Reduction of World Effective Demand

In this context of a weak expansion of demand, businesses able to invest could hardly develop other than to increase their share of the market to the detriment of competing businesses. In order to accomplish this, they had to lower their costs of production and prices and search for a significant improvement in quality, marketing, and after-sales service for their products.

In branches where significant productivity gains were possible, businesses that had the means (that is, those with financial reserves, credit, and possibly government aid) carried out heavy investments in modernization, which made it possible to reduce their labor force greatly. In the automobile industry, for example, Japanese, then American and European businesses automated their manufacturing from 1970 to 1990 to an extent that the necessary labor time to assemble an average car was reduced by around half. These modernizations led to the elimination of numerous jobs in the branches concerned, which, because of insufficient growth elsewhere, was characterized by significantly increased unemployment and thus reduced demand for consumer goods.

In branches using a large labor force that would be difficult to reduce (textiles, shoes, etc.), businesses that had the means reduced the costs of production by subcontracting their manufacturing, or building new factories in low-wage countries that offered attractive conditions for effective investments and political guarantees—that is, in a few Asian and Latin American countries in the process of industrializing and in several formerly socialist countries with low wages.

Insofar as the relocated factories are substituted for factories in the developed countries, they lead, in some of the latter, to reductions in employment and income, not only in the activity directly concerned but also in upstream and downstream activities and in all other activities that are linked to it. Since these reductions in employment and income are not compensated for by creating employment and income in other sectors, this type of movement is characterized by a distribution of incomes to the developing countries far below the incomes eliminated in the developed countries, and therefore by a reduction in world demand for consumer goods.

Certainly, the relocation drives in the 1970s entailed additional demand in capital goods, which had some stimulating effect in the developed countries. But this phenomenon was considerably less in the 1980s, in part because some newly industrialized countries began to produce their own producers' goods, which they even exported to the developed countries, and in part because many developing countries had to reduce their imports of capital goods in order to repay their debts.

In the final analysis, in a world economy with few outlets, the relocation of industrial activities from a country with high wages to a country with low wages has the effect of restricting growth in world demand for consumer goods. That is particularly true when the relocation takes place in countries that are only just beginning their industrialization process, such as China and Vietnam where the wages are thirty to forty times lower than in the developed countries. That is less true for countries already largely industrialized, such as South Korea and Taiwan where wages are relatively higher.

Of course, it is not the industrialization of the developing countries as such that is at issue. Any productive investment in a low-wage country that meets an increase in purchasing power and is expressed by a net creation of income on a world scale is welcome, because it contributes greatly to the expansion of global demand. However, industrialization of the developing countries on the basis of absurdly low wages and at the price of deindustrialization of countries with higher wages poses a problem. In sum, for industrialization of the developing countries to give rise to a global net creation of jobs and incomes, it must not rest on the very low wages existing in these countries and aim principally to export products to the high-income countries. It must be founded on a growth in local purchasing power that, to be significant, must involve the mass of poor people in the countryside and cities, which necessarily presupposes, as we have seen, a *preliminary* raising of the incomes of the peasantry.

Growing Unemployment and Lowered Wages in Developed Countries

As a result of the slowdown of investment in industry and the services, modernization and relocation, and the continuing exodus of millions of farmers, unemployment has increased considerably in the developed countries from the middle of the 1970s. Some branches of mining (coal, iron ore), primary processing (steel metallurgy), and manufacturing (textiles, shoes, watches) were partially dismantled, cities and whole regions (Liverpool, Lorraine) were deindustrialized. In the OECD countries, between 1975 and 1995, employment in the manufacturing sector fell 8 percent. It fell 20 percent in the European Union and 35 percent in the United Kingdom.[11] In the OECD countries again, the number of unemployed passed 30 million at the beginning of the 1980s and reached 35 million in 1994. Moreover, more than 10 million persons now work part-time, against their will, and many more, having given up looking for work, no longer even appear in the unemployment statistics.

Unemployment and increasingly stiffer competition from modernized or relocated companies exercises a strong downward pressure on wages, in particular

on incomes of less skilled workers. In some countries, particularly the United States and United Kingdom, the labor market was largely deregulated and the wages of these workers fell greatly. But if the lowest-wage Scottish or American workers are now close to Korean wages, they are far from having fallen to a level as low as in all the countries "in the process of industrializing." A wage of $600 per month in the Midwest of the United States is still thirty times more than $20 a month in Vietnam or China. Relocations are continuing to occur, and even if the fall in wages in some developed countries has already contributed to retaining or attracting some investments, unemployment has not disappeared as a result.

Deregulation, Speculation, and Austerity

So-called neoliberal policies, which have been dominant in the world since the end of the 1970s, only worsen the general crisis. In the developing countries, these policies are expressed by the abandonment of autocentered development strategies, based on public investments aimed at satisfying the internal market by the production of import-substitution goods, and by the adoption of eternal-oriented development strategies, based on private investments from many sources, attracted by low wages and focused on exports. These new strategies, encouraged by the World Bank and other development institutions, widen the field for relocations, although they do not increase world demand.

In the developed countries, policies of full employment and maintenance of a high level of public and private demand were abandoned and replaced by policies of generalized deregulation and denationalizaton, which widen the possibilities for capital to move and profitably invest, without proportionately expanding global demand for consumer goods. These neoliberal policies favored the explosion of speculation in financial markets, derivative markets, and currency exchange markets. In the middle of the 1990s, it is estimated that 90 percent of the transactions on the exchange markets were speculative in nature. And, since there no longer exists an international system for regulating exchange rates and financial flows, each country is constrained to adopt policies that aim to maintain the parity of its currency and attract or retain capital, which is henceforth mobile and sensitive to the least risk and the least variation in the rates of return on capital. To do that, it is advisable to limit inflation and reduce deficits, both the public deficit and the deficit in the balance of payments current account. That explains the convergence of economic policies in the developed countries and the conformism of the thinking that justifies those policies.

The Failure of Austerity Policies in the Developed Countries

Certainly, in theory, austerity policies have the effect of improving the competitiveness of companies in the countries that carry them out. By reducing public expenditures (reduction in investments, elimination of jobs, and freezing of wages for officials, reduction of social welfare, restriction of military programs) and by exercising generalized downward pressure on wages, an attempt is made to reduce social, fiscal, and wage obligations for companies, and thus increase their profits. But since that is obtained at the price of a reduction in demand from households and the administration, in a world economy where productive investments and job creation are precisely limited by the insufficiency of demand, austerity policies can only worsen the general crisis of the world economy. Moreover, the additional profits that investors retain from austerity policies are used more for speculation or to accelerate and accentuate movements of modernization and relocation, which reduce employment and income, than to create new jobs in the developed countries.

These policies, which pretend to be "virtuous" on a national scale in the countries that carry them out, are intrinsically "perverse" for the whole world. Further, it should be noted that if these policies have generally succeeded in reducing inflation and slowing down the increase of deficits, they have not led to a long-lasting return of growth or to the restoration of full employment.

The Failure of National Policies of Stimulation in a Globalized Economy in Crisis

In this context, countries that attempted, in isolation, to carry out policies of stimulation through public investments and household and administrative consumption (as in France in 1981–1983) also failed. In a country where the production capacity is underutilized because of insufficient outlets, the increase of solvent demand leads to a certain stimulation of internal production. But if this country is open to competition from countries more competitive than it is, the increase in demand is expressed above all by a "stimulation" of imports. Then, if this increase in demand is obtained by increasing wage and fiscal obligations of companies, their competitiveness diminishes, causing a new increase in imports, another, more significant slowdown, indeed even a decline in national production, an accelerated relocation of investments, and an increase in unemployment.

In other words, a national policy of stimulation through demand contributes much, relatively speaking, to expanding the world market and to stimulating production, which is eminently "virtuous." But insofar as this country is open to competition and is less competitive, this policy in the end worsens its own crisis and benefits the more competitive countries. It cannot be sustained for very long.

In any case, the contemporary crisis cannot be treated as a particular crisis in the economy of any specific country, be it developed or developing, nor as the sum of particular crises of this type. Rather it is the global crisis of this completely new "world economy," which has been constructed in the last thirty years by means of reduction in the cost of transportation and communications and the liberalization of the movement of commodities and capital.[12] This is a global crisis that is worsened by the destabilization of the international monetary and financial system, by speculation, by the abandonment of policies of full employment and support for demand, and by the nearly general adoption of deflationist policies, which reduce employment and income.

In these conditions, the national policies of stimulation (through demand) or austerity (stimulation through investment), which only attack the symptoms of the crisis in each country, cannot bring the contemporary general crisis to an end. There can only be a solution to the global crisis of the world economy in a *global policy devised for every country*, which attacks the profound cause of this crisis. As we have seen, the profound cause of this crisis, which has lasted for more than a quarter-century, lies essentially in the massive fall in incomes and purchasing power in the poor agricultural countries, a fall that results both from the tendency toward a unified world market in basic agricultural commodities, beginning with grains, and the tendency of real agricultural prices to fall.

4. FOR A WORLD ANTI-CRISIS STRATEGY FOUNDED ON SAFEGUARDING AND DEVELOPING THE POOR PEASANT ECONOMY

To resolve this crisis of the completely new, increasingly decompartmentalized world economy that lacks solvent outlets for investments, it is necessary to raise purchasing power in the poor countries, where the largest sphere of unsatisfied social needs resides and therefore the largest possibilities for increasing world solvent demand.

In 1993, while barely a billion persons living in 24 countries "with high incomes" had an average income per capita of $63 per day, more than 3 billion persons living in 45 countries "with low incomes" had an average income of $1 per day, that is, 60 times less than the former. Moreover, 1.6 billion people living in 63 countries "with middle incomes" had an average income of $7 per day, or 7 times less than the high-income countries.[13] In addition, the poor peasantry, a majority in the developing countries, has incomes much lower still than the average. A simple doubling of its income would then have a limited effect on the increase of world demand. In order for this peasantry to get out of poverty and stimulate the world economy, it is necessary to envisage at least a tripling or quadrupling of its income. Perhaps this increase in income would be sufficient to reduce the pockets of extreme rural poverty, slow down the agricultural exodus, make possible a real return of productive investment for the poor peasantry (purchases of tools and inputs, improvement of fertility, etc.), and lead to a significant increase in agricultural production, thereby creating the conditions of an expanded development of the peasant economy that is both self-supporting and cumulative. In that way, in the medium term, the increase in the incomes of the poor peasantry will go much further than the tripling or quadrupling initially envisaged and would likely lead gradually to an increase in the incomes of other parts of the poor population, rural and urban. In the long term, beginning with a certain threshold of development, peasant agriculture, having become clearly more productive, will be able to support the costs of modernization and industrialization in the poor countries. Then, and only then, will these countries have sufficient purchasing power to contribute effectively to the stimulation of the world economy.

For a Significant Increase in Agricultural Prices in the Poor Countries

If this analysis is correct, the most appropriate and powerful lever to reduce the immense sphere of poverty that slows down the development of the world economy resides in a *gradual, significant, and prolonged increase in prices of agricultural commodities*, beginning with basic food commodities, in the poor countries.

Reduce Taxation and Protect Poor Agriculture. In order to raise agricultural prices in these countries, it is first necessary to roll back policies of direct or indirect "taxation" of agriculture where it is still carried out: taxes on agricultural exports, subsidies on food imports, compulsory deliveries at low prices, overvaluation of the national currency, excessive protection of industry, etc. Policies of "removing taxation" on agriculture have already been adopted by numerous countries, but are not even close to being sufficient to move the mass of the peasantry to above the threshold of capitalization, which is the necessary condition of its development.

In order to increase the incomes of the poorest farmers in the world in a significant way, it is not sufficient, as proclaimed for fifteen years, to abolish the "taxation" and the "pillage" to which they have been subjected in the course of previous decades. It is still necessary above all to *protect* them, that is, *to tax the imports of basic agricultural commodities, beginning with grains.* The total absence of intervention in agricultural prices, i.e., the pure and simple free

exchange of agricultural products, will not suffice to increase the purchasing power of the peasantry and other social classes in the poor agricultural countries significantly and persistently and get them out of the crisis.

A Significant but Progressive Protection. In order to put an end to rural poverty, the increase in the prices of basic food commodities must be *significant.* Naturally, such an increase in prices should not be established suddenly, because its positive effects on the production of foodstuffs, on wages, and on other types of incomes will not be rapid, while, conversely, the increase in the prices of food commodities and the negative effects that will result for buyers will be immediate. The increase in the prices of basic agricultural commodities should, then, be *gradual*, enough so that at any moment of the process the negative effects on buyers will not prevail over the positive effects for the producers. In other words, it should be gradual enough so that the economic agents have time to adapt and possibly move into a new type of employment. It takes time for the peasants who wander in search of a job and extra monetary income to rejoin the newly viable family farm. And it will take still more time for a part of the capital and the population exiled in the cities to be redirected to agriculture. The increase in agricultural prices, in order to be both large and gradual, must persist for a long time—ten years or twenty years if necessary. It is not possible to reverse in a few years the disastrous consequences of a half-century of low agricultural prices.

For a Significant Increase in Wages in the Poor Countries

It is also indeed necessary to assess whether this policy of protecting the peasant economy in the poor countries will have the desirable consequence of raising all wages, today ridiculously low, and therefore raising the costs of production and the prices of products exported by these countries.

Of course, the raising of the prices of agricultural products and raw materials exported by the developing countries will have an effect on the economy of importing countries, in the first place, the developed countries. But in view of the fact that imports from the 86 poorest countries (45 countries with low incomes and 41 countries from the lower bracket of the countries with medium incomes) represent *less than 2.5 percent* of the gross domestic product of the high-income countries, this effect will be limited.[14] It is no less the case that, here too, a gradual approach will be necessary. The explosion in the prices of agricultural products, other raw materials, and above all petroleum in the 1970s demonstrated at what point a significant and sudden increase of these prices could worsen the general crisis.

The raising of prices of manufactured products exported by the developing countries will reduce the competitive pressure that the relocated industries in these countries exercise on those of the developed countries. But the outlets for the companies established in the developing countries will not be reduced since the expected result, and by far the most significant one, resides precisely in a strong increase in demand in these countries.

In other words, as opposed to national policies of stimulation through demand, which rapidly turn back against those who carry them out in isolation, and as opposed to austerity policies, which reduce employment and income, a global anti-crisis strategy, based on the expansion of the world market due to a significant and gradual increase in prices and incomes in the developing countries, will benefit simultaneously the poor agricultural countries, the new industrialized countries and the developed countries, because such a strategy attacks the true root of the crisis, to wit, the mass poverty in the developing countries and the resulting narrowness of world demand.

The Necessity of a Hierarchical World Organization of Markets

The global strategy of raising prices and incomes in the developing countries should not be uniform: *the level of agricultural prices and thus the degree of protection of agriculture should be established in inverse ratio to its productivity*. It should, for example, be higher for the countries of intertropical Africa than for the countries of Southeast Asia and some Latin American countries.

With this intention, it is advisable, then, to select regional subgroups of countries whose agricultural productivities are of the same scale. Each of these main regions of the world would then form a customs union enjoying a degree of protection and a sufficiently high level of agricultural prices to safeguard the poor peasantry and allow it to develop. The selection of these main regions and the determination of the most pertinent level of prices for each of them could be within the competence of a new organization of the United Nations, charged with regulating international trade and rates of exchange. This is not the place to propose such groupings. However, beyond western Europe and North America, there are possible groups of countries in intertropical Africa, continental Asia, Southeast Asia, eastern Europe, the Near East and North Africa, etc. In each of these regional unions, raising the prices of basic food commodities will lead subsequently to an increase in the prices of all exported raw materials, which will then have to be raised and differentiated according to their region of origin.

This proposition is similar to the recommendations formulated by Maurice Allais, winner of the Nobel Prize for Economics (1988), in his speech to the first European food summit in 1993. After having underlined the dangers of generalized free trade under a system of floating rates of exchange, he asserts: "Total liberalization of trade is only possible, only desirable, in the context of regional

groups that bring together economically and politically associated countries, of comparable economic and social development, and mutually agree not to make any unilateral decisions, yet still ensure a market that is large enough for effective competition to take place."[15]

Such a world organization of trade, with hierarchical prices, fixed in inverse ratio to the levels of agricultural productivity of each region of the world, presupposes negotiation and international agreement per product, bearing on the prices and quantities to produce in each region, as well as the organization of one or several international funds for balancing out prices for purchasers and funds for stabilization.

In order to have some chance of success, a world strategy based on a new organization of trade of this type should be devised and accepted by all countries, beginning with the developed countries. It would be enough for one group of developing and developed countries to agree on a policy of low prices and low wages to ruin such a strategy. In this respect, one should be suspicious of the current tendency to form large regional economic blocks that group developed and developing countries, such as the North American Free Trade Agreement (NAFTA), or the enlargement of the European Common Market to eastern Europe and North Africa or the association of Japan with Asian and Pacific countries. In fact, if these vast groupings were to lead to a new division of the world between a few large competing groups, focused more on economic war than cooperation, it would go precisely against the anti-crisis strategy proposed here.

Increasing Prices and Incomes Rather than Financial Assistance

The anti-crisis strategy we propose comes down to improving the terms of trade to the benefit of the poor countries, in order to increase their income and their purchasing power. This raising of prices could be considered as a sort of income transfer from the rich countries to the poor countries, as a form of assistance. The great advantage of assistance by means of prices comes from the fact that it has a much better chance of directly benefiting the agricultural producers and indirectly the rest of the population than classic financial assistance. Of course, this is on condition that the price increases are not massively captured by the state under the form of taxes or by other economic agents under the form of unjustified margins.

Undoubtedly, such a policy of development assistance, by way of differentiated prices in an organized world market, will be difficult to negotiate and manage. But will it be more difficult than the current aid policies, which work via gifts and loans between institutions? Moreover, these forms of financial aid are quite often lost in unproductive expenditures or private savings that return to sustain banks and financial markets. They are increasingly discredited in the eyes of public opinion,

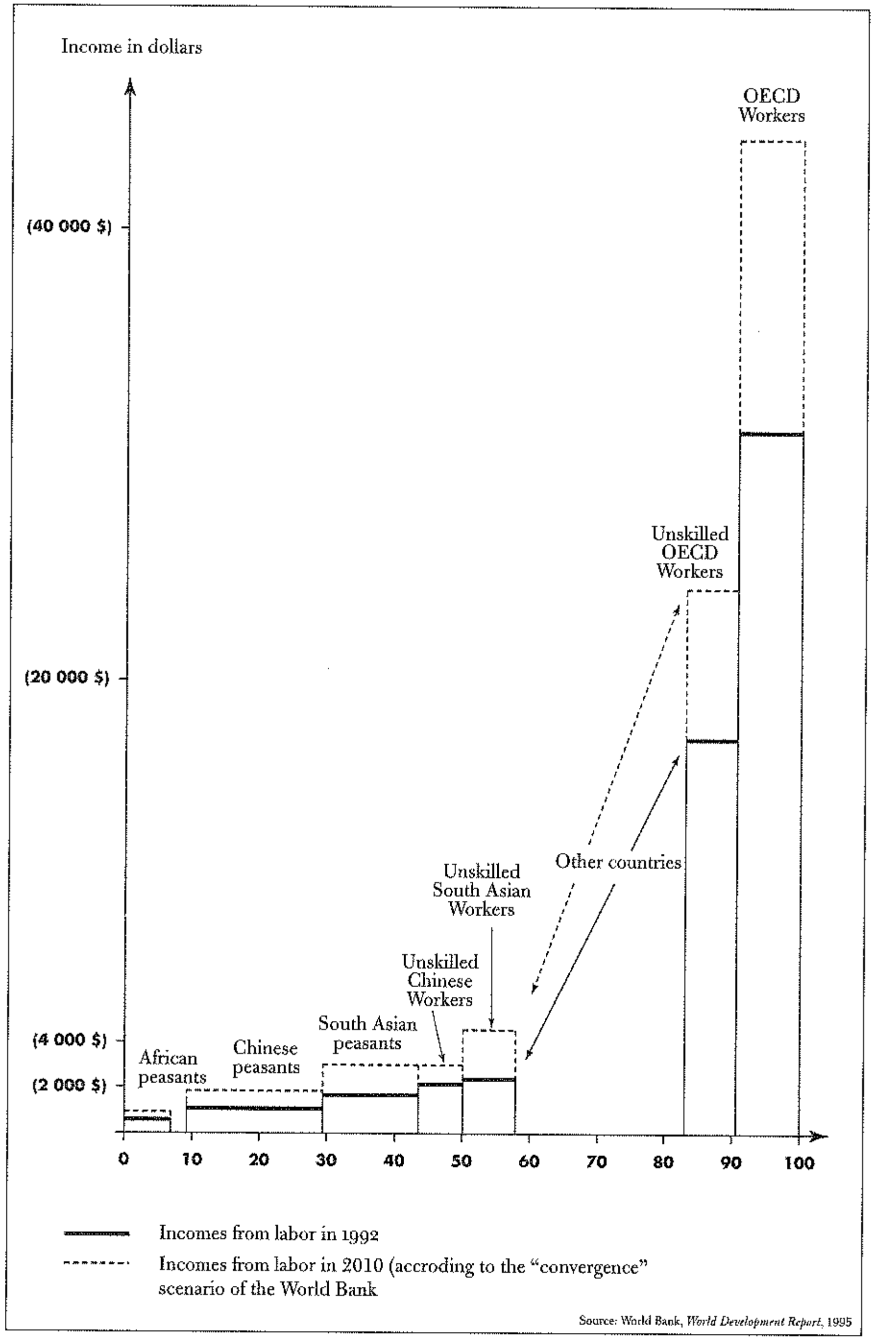


Figure 11.4 Level of Annual Incomes from Labor in the World in 1992 and According to the World Bank "Convergence" Scenario For 2010

as much in the developed countries as in the developing countries. In any case, financial assistance today comes up against increasingly limited public budgets in the developed countries and weaker repayment capabilities in the developing countries. It also encounters the limits of management capabilities of national and international development assistance institutions and national institutions in recipient countries. Experience has shown that it has no success in leading the poorest countries into a true process of development.

If, contrary to the scenario proposed here, liberalization of trade continues into the future, then there will be neither a strong reduction in unemployment or poverty in the developing countries nor the creation of adequate purchasing power to stimulate the world economy in a persistent manner nor, therefore, a reduction in unemployment and poverty in the developed countries.

Moreover, the projections established for 2010 by the World Bank show that, in the event of increasing liberalization of world trade, the gap between the highest wages (those of skilled workers in the developed countries of the OECD) and the lowest ones (those of African peasants) could still increase enormously.[16] Under this assumption, this gap would go from around $31,000 to $43,000 between 1992 and 2010. In other words, according to this scenario, the gap would again be increased by close to 1.4. This is far from a scenario of convergence. To realize this, it is sufficient to represent the large range of agricultural incomes and wages in different regions of the world by adopting an ordinary scale and not a logarithmic scale, which hides the gaps (*Figure 11.4*). This graph shows at what point, under the assumption of an increasing liberalism, these immense gaps in incomes will only grow larger. It also aims to show that the level of wages in each region of the world is indeed established, as we maintain here, as a function of the level of income, and thus of the productivity, of peasant agriculture.

Necessity for National Policies of Safeguarding and Developing the Poor Peasant Economy

But if this international strategy of reorganizing trade to the benefit of the poor countries is necessary, it will not suffice alone to save the most underequipped peasant economy and provide vigorous stimulation for its development. Again it will be necessary that this peasantry actually has access to land, to credit, to adequate hydraulic installations in good repair, and to the results of research appropriate to its needs. Again it will be necessary that this peasantry benefits from a stability of prices and a security in land tenure sufficient to ensure that it collects the fruits of its labor and its investments, and that it benefits, in the end, from good maintenance of and improvements in the fertility of the lands it farms. Again it will be necessary that the incomes of this peasantry not be eroded by exorbitant processing and marketing costs or by excessive land rents, taxes, or duties. That is, to support this international strategy of development for the poor peasant economy, national economic and agricultural policies will have much to do.

Agrarian Reform and Development Policies for the Poor Peasant Economy

In countries where the proliferation of minifundia and mass peasant poverty come from unequal distribution of land, agrarian reform is the first of the policies to implement. Naturally, agrarian reform is a domestic policy decision that is difficult to take and apply because it provokes violent opposition. It cannot, then, be decreed from the outside, but it could nevertheless be supported more vigorously than it is presently by international development institutions such as the United Nations Food and Agriculture Organization (FAO), the International Fund for Agricultural Development (IFAD), the United Nations Development Program (UNDP), the World Bank, and the regional development banks. In the context of the international strategy proposed here, these institutions would have to monitor the price increases for agricultural commodities to ensure they only benefited those countries that had actually carried out an agrarian reform where it was necessary and that practice a policy of development favorable to the poor peasantry.

Indeed, to have a lasting impact, an agrarian reform should be followed by an enlarged and not costly credit policy, making it possible for deprived peasants to stock and sell their harvests at opportune times, buy necessary inputs, and gradually equip themselves (installment plans for equipment). Without these measures, the beneficiaries of the reform are deprived of capital for farming, go into debt, mortgage, and soon lose their lands. An agrarian reform should also be followed by a consistent land policy, which aims to prevent the process of land concentration and unequal development from getting the upper hand again: an anti-accumulation law, priority allocation of freed or newly organized lands to the most deprived peasants, specific aid for setting up young poor farmers, etc. These land and credit policies would certainly not be necessary only in regions having recently benefited from agrarian reforms. They would be necessary in all countries with a peasant economy, to prevent the obstruction of the small peasantry's development and the reappearance of mass poverty that would result from continual unequal development between regions and farms.

Policies for managing the infrastructure (service roads, terraces and other anti-erosion works, irrigation, drainage, etc.) will have to be revised by avoiding disproportionate and nonprofitable projects dear to large institutions and by favoring more appropriate projects, worked out and managed in cooperation

with the population, which rely greatly on off-season agricultural labor, experience of the peasantry, and other local resources. Moreover, the organization of markets will have to facilitate the selling and best increase in valorization of the peasantry's products.

Redirection of Research Policies

Lastly, in order that the international strategy and national policies for stimulating the poor peasant economy have all the necessary assets, agricultural research policies must be massively directed, or more precisely redirected, to the benefit of the peasantry and disadvantaged regions. To contribute effectively to the reduction of poverty, research for agricultural development will have to be much more attentive than in the past to the needs and possibilities, but also and above all, to the knowledges and know-how of the peasantry. It will have to take advantage of all the diversity of local species, varieties and breeds of plants and domestic animals that it has previously neglected, in order to improve them to the benefit of the greatest number. Such research will have to focus on complex systems of production that the peasantry gradually developed, which combine crop growing, stockbreeding, and arboriculture, in order better to renew fertility and reduce the biological and economic risks with which that peasantry is confronted, risks that are more serious the greater the level of poverty.

Densely populated regions of the world today where the peasantry develops complex, sustainable forms of agriculture with high yields that are not costly in nonrenewable resources are undoubtedly the laboratories in which the most invaluable forms of agriculture for the future of humanity are elaborated. Only the deep ecological and economic study and accurate comprehension of these agrarian systems, which are the fruit of many centuries of continually renewed peasant experience, can make it possible for researchers to identify and propose appropriate improvements, and transfer, through adaptations, benefits from one agriculture to another.

In this regard, it seems that the Consultative Group on International Agricultural Research (CGIAR), a body that groups the research centers of the Green Revolution and is today essentially financed by thirty mostly developed or newly industrialized countries, and some national research services have begun to orient their work in this direction, indeed more than in the past. But for such a reversal in perspective to materialize, it will require much effort and many changes in attitude, not only in research but also in education and administration.

In a competitive economy, capital and knowledge are generally attracted to the most immediately profitable activities, regions, or types of farm. Policies and projects that aim at a balanced and long-lasting planetary development certainly do not consist in reinforcing this spontaneous tendency by allocating additional public means, both financial and human, to those who can develop without that. On the contrary, it involves struggling continually, across a large front, against stagnation and the impoverishment of the most disadvantaged by devoting, as a priority, the necessary public means to that struggle.

5. CONCLUSION

The experience of twenty-five years of rapid world economic growth, followed by more than twenty years of slow growth and latent crisis, shows that the lowering of transportation costs, the opening of national economies, and the growing liberalization of international trade have not reduced the disparity in equipment, productivity, and income between the poorest countries and the richest countries, nor resolved the problem of unemployment and poverty in the world. On the contrary, during the latest period, poverty, unemployment, and the inequalities between the most deprived and the most affluent have increased. Scenarios of the future resting on assumptions of continuing world economic integration and increased liberalization of trade show that these disparities are going to increase more. Is that surprising?

Among the developing countries that were still essentially agricultural at the end of World War Two, only a small group of them, which had inherited a relatively productive agriculture and, moreover, carried out a policy favorable to the latter, succeeded in extracting an agricultural surplus sufficient to develop the other sectors of the economy significantly and create the conditions for a high level of profitability for investments. These newly industrialized countries saw a portion of their population escape poverty.

But, in most of the developing countries, the dominant underequipped and relatively unproductive peasant agriculture, often taxed and in all cases insufficiently protected, did not have the means of equipping itself and developing. It was subjected to a North-South competition and a South-South competition above its resources and sustained a fall in prices that led hundreds of millions of peasants to ruin, rural exodus, unemployment, and extreme poverty.

Even if a small fraction of the ruined peasants, unemployed and poor from the developing countries, were able to emigrate to the industrialized countries and attain poorly paid employment, the great majority of them had neither the means nor permission to do so. And they still had less access to agricultural lands, however overabundant and to some extent lying fallow, or to agricultural credit from the developed countries. In other words, even if, in the world of today, the free circulation of commodities and capital is increasingly effective, there is no free circulation of people and even less free access to land and credit. It is capital that moves toward the immense reserves of low-priced labor formed by the most accommodating developing countries.

If, in the future, agricultural prices, incomes, and, following from them, wages in the developing countries should remain as low as they are today, then the industrialization of a handful of these countries would be principally directed toward exports to the countries still having a significant purchasing power (developed countries, petroleum-exporting countries, and some newly industrialized countries) and it would be to the detriment of already industrialized countries with higher wages. According to this scenario, industrialization of countries with low wages would, in the developed countries, lead to a large expansion of unemployment and lowering of wages that would, in turn, lead to a gradual strangulation of world demand and, in the end, to a reduction of global possibilities for productive investments and job creation, an upsurge of speculation, and generalized recession.

If the industrialization of the developing countries is to participate in a true stimulation of the world economy, it must be based on a significant and lasting growth of purchasing power in these countries. In order to form in this "two-thirds of the world" an effective demand equal to human needs and the possibilities of lasting growth in the world economy, it is necessary, as we have tried to demonstrate, to begin by raising the prices of basic agricultural commodities in a significant, gradual, and sustained manner. Such an increase in agricultural prices is the best means of increasing the incomes of the underequipped peasantry, favoring its development and consequently curbing the agricultural exodus, limiting the rise in unemployment and urban poverty, raising the general level of wages and other incomes, significantly increasing the potential for tax revenues and foreign exchange earnings in the developing countries, and, finally, releasing investment capabilities, thereby making it possible for these countries to modernize and industrialize.

To promote this anti-crisis scenario of stimulating the world economy, both through vigorous development on a broad front of the poor peasant economy and a huge enlargement of solvent demand in the developing countries, there is no other way than a world organization of trade, based on regional customs unions grouping countries having comparable levels of agricultural equipment and productivity. Each of these regional unions would benefit from a sufficiently high level of prices for agricultural commodities and raw materials, negotiated internationally, making it possible for peasant agriculture to develop and get the majority of the population out of poverty.

But for this strategy of stimulating the world economy to succeed, it is still necessary for it to be followed up by a policy of balanced agricultural development in each country, strongly directed—or rather redirected—toward the peasantry and disadvantaged regions. Further, it will be necessary that the world give itself a new international monetary and financial system that assures the preservation of relatively stable rates of exchange that vary within reasonable limits around fundamental equilibrium exchange rates, penalizes speculation, and favors concerted policies of development in all countries. These policies aim at full employment and an increase in solvent demand proportional to production and investment capacities existing in the world, rather than deflationist policies that reduce jobs and income.

Conclusion

Today's world agricultural and food economy is less disorganized and chaotic than the price jolts, surpluses, shortages, famines, and hostile international trade negotiations lead one to believe. Just as the waves and tides of an ocean reflect the organization and functioning of the solar system, movements of the atmosphere, and marine currents, the surface agitations of markets and agricultural policies reflect the organization, functioning, and dynamics of the world agricultural and food system. This system has been formed only in the course of the last few decades by bringing together the diverse agricultures produced by 10,000 years of an agrarian history which is extraordinarily differentiated throughout the world.

This world agricultural and food system, composed of relatively specialized, competing, and unequally productive regional subsystems, develops in a contradictory and divergent manner. On one side, a reduced number of farms and regions of the world continually accumulate more capital, concentrate on the most productive crops and animal breeding operations, and continually conquer new market shares. On the other side, extensive regions and the majority of the world's peasantry are plunged into crisis and poverty, up to the point of being excluded from the world economy altogether. On one side, an agriculture that is able to be profligate through an excess of means. On the other side, an agriculture that, lacking the means, no longer renews the fertility of the environments it exploits.

This colossal distortion of the world agricultural and food system is the basis of the enormous inequalities of income and development that exist among countries. If, unfortunately, the world were allowed to drift according to such a violently contradictory law of development, it must be feared that the world will come to resemble more an archipelago of well-guarded islands of prosperity dispersed in an ocean of poverty than a universe of prosperity that conquers and absorbs, one after another, the residual pockets of poverty.

The crisis of the underequipped and relatively unproductive peasantry, by far the most numerous, is the cause of the rising tide of rural and urban poverty that makes the development of the poor agricultural countries impossible. This mass poverty—in other words, the unmet needs of more than half of humanity—is the cause of the manifest inadequacy of world effective demand, the slowdown in economic growth, and the rising unemployment and poverty that reach right into the developed countries themselves. As a result, capital, in search of profitable investments, is oriented more and more toward profuse speculation, a modernization that reduces employment and relocations that reduce income, all of which only worsen the general crisis, with its trail of poverty, despair, criminality, corruption, and wars.

If one really wants to get out of the contemporary general crisis and build a world of full employment and lasting, extensive, and equitably distributed prosperity, a world to which the great majority of the world's inhabitants aspire and in which everybody would be able to take advantage of opportunities, both material and moral, it is necessary to create the conditions for a real development of the underequipped peasant economy and an accumulation of long-term productive capital in the poor countries. In order to accomplish this, it is necessary to attack the roots of the problem—which is to say, the enormous inequalities in income that result from the thoughtless competition among highly unequal agrarian heritages.

These inequalities of income and development will remain insurmountable so long as a much more equitable world monetary, financial, and trade system has not yet been brought into being, to correct the huge inequalities of yield inherited from history and geography. These inequalities will remain insurmountable as long as the policies, the projects, and the pursuit of development in each country are not principally directed toward the most disadvantaged regions and toward safeguarding and developing the poorest peasant economy. In order to move in this direction and be both legitimate and effective, these policies and projects will have to be conceived and carried out in a democratic manner, with the effective participation of the populations concerned.

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By placing agriculture at the center of our analysis of the contemporary crisis and by crediting it with a primary role in the solution of that crisis, it was not our intent, certainly, to reduce the problem to this essential aspect. Moreover, we have taken into account many other aspects of this many-sided crisis, even if we have not treated them in a detailed manner. But insofar as agriculture generally forms the blind spot in analyses of the crisis, we have tried to emphasize and share what our personal origins and our professions allow us to understand better—to wit, that it is not possible to explain the contemporary world crisis without taking into account the immense and contradictory transformations that drive today's agricultures and without evaluating the part they play in the formation of planetary poverty and unemployment. Further, it is not possible to

remedy a crisis of such magnitude without protecting the impoverished peasant economy and without turning to the immense possibilities this peasant economy, representing nearly half of the world's population and the majority of the poor, presents for creating employment and income.

This book is too global in perspective to present the daily life of the peasants who, for 10,000 years, have continually built and rebuilt the agrarian base upon which we live. Others with more talent than we have are doing that. For our part, we wanted to honor the work of yesterday's peasants and defend the work of today's peasants.

We have viewed from below, over a very long period of time, the world's self-construction based on agriculture. Thus we have given a quite different representation of this process than that obtained by viewing it from the heights of timeless theory or the heights of the financial and political conjuncture of the moment. As a result, the ideas we have presented of the causes and solutions for the contemporary crisis are quite different from the ideas that are politically dominant today. According to the latter, the ills of this world come essentially from insufficient competition, and the best economic policies are those that continually facilitate this competition, limiting and mitigating the most negative effects, which are viewed as transitory. But our position is close to the increasingly numerous analyses that point to the necessity for a coordinated world policy that focuses on the equitable reorganization of international trade, as well as of the international monetary and financial system, and on a balanced development of every country as the remedy for a crisis that is more global than ever.

In truth, this world, which is crumbling today from the bottom much more quickly than it is being built from above, has become a colossus with clay feet, a cracked colossus whose foundation must be reconstructed in all urgency. As the beautiful motto inscribed on the front of the house of the storyteller Charles, close to Lekana on the Koukouya plateau in Congo, declares: "When one wants to climb a tree, one does not begin at the top."

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