

Food and Agriculture in National and International Settings

Poverty and agriculture

Except in most of sub-Saharan Africa, developing countries are making progress towards the UN goal of halving the incidence of poverty by 2015. Growth in agriculture and in non-farm rural activities, as well as improvements in nutrition, will be central to continuing success. Sub-Saharan Africa's continuing descent into poverty is cause for serious concern.

Undernourishment is not merely a symptom of poverty but also one of its causes. Poverty is not simply a lack of income or consumption but includes deprivation in health, education, nutrition, safety, legal and political rights, and many other areas. All these dimensions of deprivation interact with and reinforce each other.

Over the past decade, poverty and the related issue of inequality have moved to the top of the international development agenda. At various summits from the early 1990s onwards, world leaders have proclaimed their commitment to poverty reduction and adopted a series of related targets. These cover a wide range, from infant and child mortality to school enrolment, from gender equality to maternal mortality, from access to health and reproductive health services to the adoption of

national strategies for sustainable development. The UN Millennium Declaration, adopted in September 2000, consolidated most of these targets, including that of halving the proportion of people living in extreme poverty by 2015. The international targets, and the indicators used to assess progress towards them, should be viewed neither as finely tuned criteria to guide policy and spending priorities nor as accurate measures of progress. In many poor countries the necessary data are not reliable and may not even be up-to-date. Nor are they necessarily comparable between different countries. But the targets are useful in drawing attention to persistent poverty, and in influencing opinion and creating a sense of urgency among the public, politicians and the development community. The indicators can also serve as rough guides to assess whether progress is being made.

Overall progress and prospects

At the beginning of the twenty-first century, over 1.1 billion people are living in extreme poverty, subsisting on less than US\$1 a day. Significant, but uneven, progress is being made towards meeting the 2015 target of halving the proportion of people living in poverty in developing countries. This proportion fell from 32 percent in 1990 to 25 percent in 1999. However, because of population growth, the reduction in numbers was less dramatic, from 1 269 million to 1 134 million.

The regional picture was highly diverse. In East Asia, poverty fell very steeply during the 1990s. In South Asia, although the proportion of

Selected targets associated with the United Nations Millennium Development Goals

The following targets are to be achieved by 2015, against a base year of 1990:

- Halve the proportion of the world's people whose income is less than US\$1 a day
- Halve the proportion of people who suffer from hunger
- Halve the proportion of people without access to safe drinking water
- Ensure full primary schooling for all children
- Ensure equal access to all levels of education for boys and girls
- Reduce under-five child mortality by two-thirds
- Reduce maternal mortality by three-quarters
- Halt and begin to reverse the spread of HIV/AIDS, malaria and other major diseases.

poor fell, the total number remained almost constant. In sub-Saharan Africa, the proportion remained virtually unchanged, while the number rose steeply.

The latest World Bank projections suggest that the target of halving the *proportion* of people living in poverty in the developing countries by 2015 can be achieved. However, even if this target were met, because of population growth the result would be a fall of less than 30 percent in the absolute *number* of poor. In sub-Saharan Africa the target seems unattainable: projections suggest only a small reduction in the proportion and a continued rise in the number living in poverty.

Even the World Bank projections assume faster economic growth rates than in the past. The Bank stresses that, if the slow growth of the 1990s persists, then the number of people living in extreme poverty will remain near current levels for the next 15 years.

Faster growth of incomes is essential for poverty reduction everywhere. Reducing inequality is equally crucial, especially in countries where this is pronounced. According to some estimates, countries where inequality is high will need twice as much growth as those where it is low to meet the poverty target.

Why better nutrition has to come first

Food and agriculture are centrally involved in both the generation and the reduction of poverty.

Undernourishment is a characteristic feature of poverty and a direct violation of a universally recognized human right. It also deepens other aspects of poverty, in the following important ways:

- It leaves people more susceptible to illness. Episodes of illness in turn reduce the intake and absorption of food, producing a vicious downward spiral in which hunger and disease feed off each other.
- When pregnant and nursing mothers are undernourished, babies are born underweight and start life with a nutritional handicap that can affect their health throughout their lives.
- Undernourishment can affect brain development in the womb and attentiveness in class, and so is associated with poor educational performance.
- When energy and protein intakes are inadequate for the requirements of work, muscle mass and labour productivity can be reduced. Along with illness, this affects wages and earnings. Studies have shown that a 1 percent increase in body mass index (BMI, a measure of weight for a given height) is associated with an increase in wages of more than 2 percent, at least over part of the range of BMIs.
- Micronutrient deficiencies can also reduce work capacity. Surveys suggest that anaemia caused by iron deficiency is associated with a 17 percent loss of productivity in heavy manual labour.
- Investment and risk-taking are essential for economic growth, but people who live on the edge of starvation are likely to be extremely cautious about investing, since they cannot afford a drop in production or earnings.
- All this means that widespread hunger can depress the performance of whole economies. Studies in Bangladesh, India, Pakistan and Viet Nam estimate that adult productivity losses due to the combined effect of stunting and deficiencies of iodine and iron considerably reduce the growth of incomes.

Growth in incomes is essential if under-nourishment is to be reduced, but it is not enough by itself. Better public services — such as improved female and nutrition education, safe drinking water and improved health services and sanitation — are also needed. Interventions in these areas must be carefully targeted towards the most vulnerable groups.

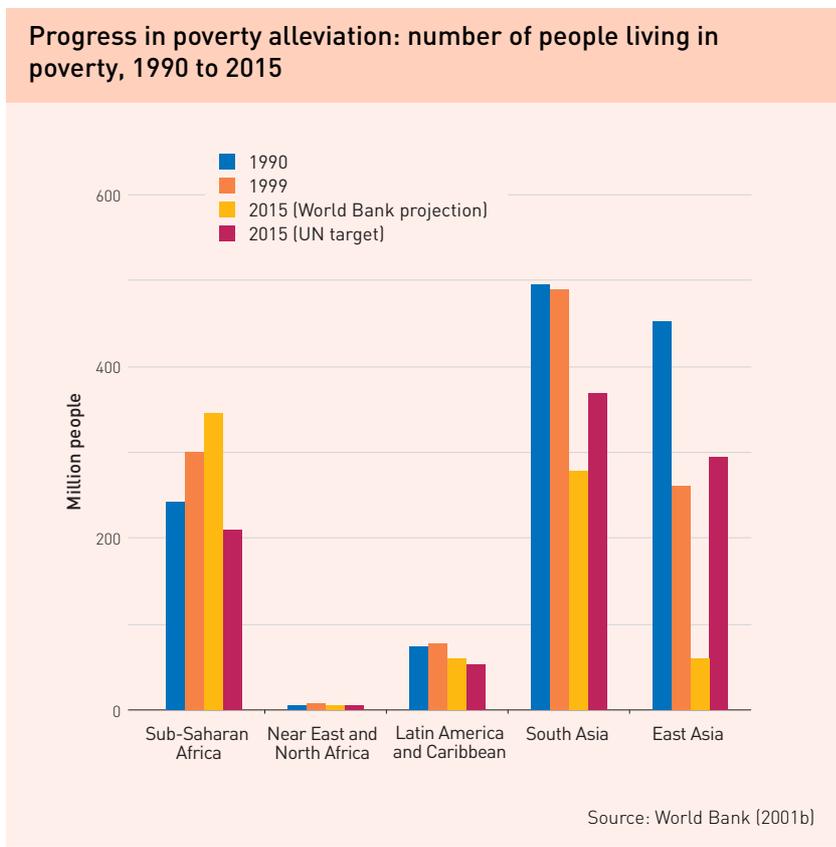
Agriculture holds the key

The development community today shares the same broad recipe for poverty reduction. The recipe involves fostering pro-poor economic growth and favouring poor people's access to all the services and other factors that support poverty eradication and define an acceptable standard of living: markets, credit and income-producing assets, basic education, health and sanitation services, safe water, transport and communications infrastructure, and so on. Providing access to these basic human rights is seen as an end in itself, but it will also boost economic growth.

Growth in the agricultural sector has a crucial role to play in reducing poverty. The International Fund for Agricultural Development (IFAD) estimates that seven out of ten of the world's poor still live in rural areas. They include smallholders, landless labourers, traditional pastoralists, artisanal fishers and marginalized groups such as refugees, indigenous peoples and female-headed households.

Many of the rural poor work directly in agriculture, as smallholders, farm labourers or herders. Their incomes can be boosted by

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pro-poor measures, such as ensuring fair access to land, water and other assets and inputs, and to services, including education and health.

Agricultural growth spreads its benefits widely. Growth in the incomes of farmers and farm labourers creates increased demand for basic non-farm products and services in rural areas. These include tools, blacksmithing, carpentry, clothes, processed food bought from roadside kiosks, and so on. These goods and services are often difficult to trade over long distances. They tend to be produced and provided locally, usually with labour-intensive methods, and so have great potential to create employment and alleviate poverty. Surveys in four African countries have shown that between one-third and two-thirds of income increases in rural areas are spent on such local goods and services.

For the poor, the rural non-farm sector offers a relatively easy escape route from



Growth in agriculture and in associated rural non-farm employment can have a broad impact in reducing poverty in rural areas, where seven out of ten of the world's poor live.

poverty. Rural non-farm enterprise often requires little capital or training to set up and so offers many of the rural poor opportunities to find work and raise their incomes. Non-farm activities provide 44 percent of rural jobs in Asia and 25 percent in Latin America. In rural India they provide 60 percent of the income of the poorest 20 percent of the rural population.

But the rural non-farm sector cannot grow independently: agriculture must grow first, to generate the increased demand for non-farm products. There can be a general rise in local wages only when growth in both farm and non-farm activities has soaked up most of the pool of rural underemployment.

And agricultural growth alone may not always produce a decline in rural poverty. If landholdings are very unequal, increased incomes from farming may accrue almost entirely to large-scale farmers or absentee

landlords, who may either save it or invest it outside the rural areas, on urban or imported goods. In such cases the impact of agricultural growth on poverty may be limited, and policies to reduce inequality of access to assets such as land, water and inputs will be needed instead.

What economic policies at national level foster agricultural growth in developing countries? During the 1950s and 1960s it was widely believed that only industrial growth could deliver economic development. As a result, industry was protected while agriculture was heavily taxed or afforded low priority. By the end of the 1970s, there was increasing emphasis on the structural reform of economies. It was hoped that privatization, the liberalization of internal and external trade, lower taxes and reduced government intervention would produce higher economic growth and reduce the bias against agriculture.

These measures have been widely adopted. However, there is little evidence to show that they have done much to increase growth, either in gross domestic product (GDP) as a whole or in agricultural GDP. This suggests that, badly needed though they were, these measures are not enough in themselves and need to be supplemented with other policies.

International trade and globalization

Freer trade is highly prized as a route to peace and prosperity. In developing countries, particularly in the least developed economies, freer trade in agriculture can raise incomes greatly, be an important source of foreign exchange and act as a catalyst for overall development. For most countries, food imports are already an important source of supplies and will continue to contribute to food security.

Rising agricultural trade deficits in developing countries

The trade patterns of developing countries have changed rapidly over the past 40 years:

- Agricultural exports have grown modestly compared to those of manufactured goods, resulting in a dramatic decline in the share of agricultural exports in total traded merchandise, from about 50 percent in the early 1960s to about 6 percent by the year 2000.
- The overall agricultural trade surplus of these countries has virtually disappeared and the outlook to 2030 suggests that they will become, as a group, net importers of agricultural commodities, especially of temperate-zone commodities.
- The least developed countries (LDCs), also as a group, became net importers of agricultural



Trade reform has lowered the barriers to trade, increased global economic integration, enhanced productivity and boosted incomes — and will continue to do so. Not all countries or stakeholders have been winners, but national and international policy interventions could soften the impact on losers. Special measures could ensure that a greater share of the benefits of trade go to developing countries.

from the developing world. These trade distortions impose high costs and create widespread inefficiencies. In the countries that use them, they exact higher prices and taxes from consumers and taxpayers. For other countries, they limit access to export markets and introduce unfair competition in domestic markets. They hold world commodity prices down and so hold back the development of agriculture, especially in developing countries where less government support is available.

On the market side, growth in agricultural exports from developing countries has been held back by sluggish and largely saturated demand in developed markets, in particular for tropical products such as coffee, cocoa and tea.

products as early as the mid-1980s. Their agricultural trade deficit has been widening rapidly and could quadruple by 2030.

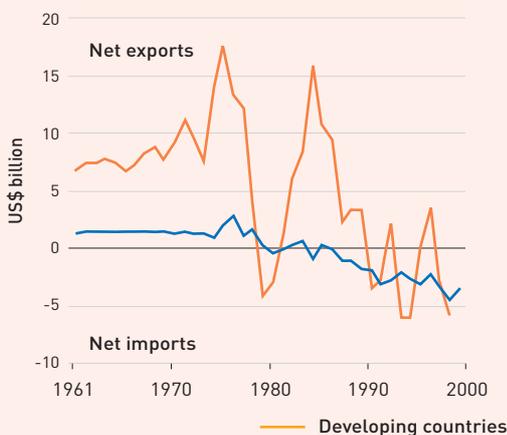
Both policy and market factors are driving these changes. On the policy side, barriers to trade and support for domestic production in the developed (mainly the OECD) countries have held back the growth of agricultural exports

Ambitious goals, modest achievements

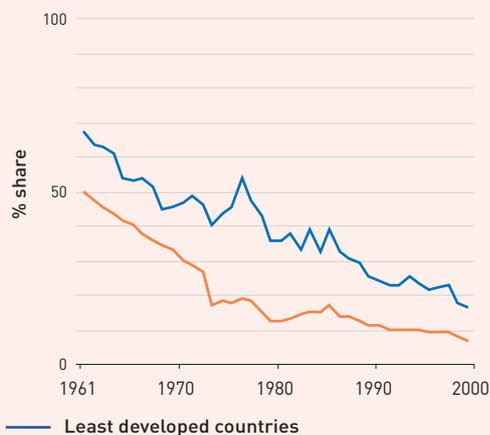
The benefits of trade reform experienced by many outward-oriented economies have created the momentum to continue reducing the barriers to trade. Many developing countries had already liberalized aspects of their agricultural trade since the 1980s under structural adjustment reforms. These reforms, and the full range of policies that affect agricultural trade, were subjected to systematic multilateral

Agricultural trade balance and share of agricultural exports in merchandise trade, 1960 to 2000

The surplus of developing countries has been shrinking...



...as also has the share of agricultural exports in total merchandise trade



Source: FAO data



controls for the first time by the Uruguay Round's 1994 Agreement on Agriculture (AoA).

The Agreement was hailed as a watershed, yet so far the results have been modest and often disappointing. FAO studies have found that, for most agricultural commodities, the AoA's impact on prices and levels of trade has been negligible, as has its impact on many developing economies. Producer support of all types remains high in developed countries: in 2000 it totalled US\$245 billion in the OECD countries. This figure rises to US\$327 billion if more general transfers to agriculture are included.

Tariffs continue to curb trade. Under the AoA, non-tariff barriers such as quotas were to be replaced by equivalent tariffs. In addition, developed countries agreed to reduce all their tariffs by an average of 36 percent, over a period of six years, with a minimum of 15 percent for any one trade item. Developing countries agreed to reduce tariffs by 24 percent over a ten-year period. The least developed countries were not required to make any reductions.

The reductions made since 1994 have complied with these goals, but it is not clear that market access has improved significantly. Developed country tariffs have been cut by an average 37 percent, but the deepest cuts have been mainly for unprocessed tropical crops that already had low tariffs. Commodities also produced in developed countries, and processed products, benefited much less. For example, maximum allowable tariffs agreed by the European Union (EU) under the AoA were 86 percent on beef and 215 percent on frozen beef, whereas they are only 6 percent on pineapples but 25 percent on processed pineapples.

Domestic support remains high. Government support for agriculture can also distort trade, by allowing domestic producers to sell at lower prices than would otherwise be economically viable.

The AoA also covered domestic support. Several types of support, such as research, infrastructure and environmental programmes, were exempted. Developing countries could also

exclude measures of a developmental nature, such as agricultural and rural development programmes.

The AoA required developed countries to make a 20 percent reduction in their support for agriculture, developing countries a 13.3 percent cut and least developed countries none. These cuts were to be made with reference to a 1986-88 base, over a period of six years for developed countries and ten years for developing countries.

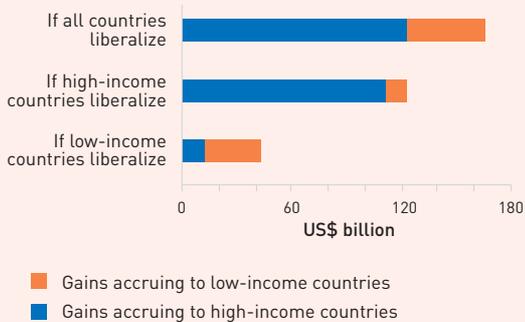
In reality many countries have faced much less pressure to reduce support for, and protection of, their agricultural sector. This is mainly due to the fact that the commitments to liberalize were based on historically high levels of support and protection. These so-called "bound" levels remained high enough to maintain much of the protection previously enjoyed, even after the cuts had been implemented. Indeed, total support to agriculture in the rich OECD countries was actually higher in 1998-2000 than before the AoA.

Export subsidies are still substantial. The AoA brought direct subsidies for agricultural exports into an international trade agreement for the first time. Indirect subsidies, such as export credit guarantees and food aid, were also covered. Developed countries agreed to reduce their expenditure on subsidies by 36 percent and developing countries by 24 percent. Reductions in the volume of subsidized exports were also negotiated, with reductions for each commodity of 21 percent required for developed and 14 percent for developing countries. Least developed countries undertook no commitments to reduce their subsidies. The EU accounts for the bulk of direct export subsidies: in 1998 it spent US\$5.8 billion, more than 90 percent of all such subsidies covered by the AoA.

More liberalization would mainly benefit developed countries

According to most studies, complete liberalization of agricultural trade could produce valuable overall welfare gains, but some groups would win while others would

Potential annual welfare gains from agricultural trade liberalization



Source: Anderson *et al.* (2000)

lose. The benefits would go mainly to consumers and taxpayers in industrial countries, where agriculture is most protected, and to developing country agricultural exporters. In contrast, urban and landless rural consumers in developing countries might end up paying higher prices for some foodstuffs, especially cereals, milk, meat and sugar. Specific measures would be needed to help such loser groups.

The results of studies on the impact of agricultural trade liberalization vary according to the assumptions they make. For example, a recent study found that complete liberalization would boost global incomes by US\$165 billion a year. The largest benefits would arise from reforms in developed countries, but the lion's share of these, amounting to some US\$121 billion, would also remain in these countries. Developing countries stand to gain significantly (by US\$31 billion) only if they also liberalize their own trade.

The current FAO study also looked at the impacts of gradually removing price supports and other subsidies over the 30 years to 2030. The analysis focused on the expected price effects for consumers and producers, in both developed and developing countries. It found that international prices could rise moderately, while prices would fall substantially in countries with high levels of protection. Producers trading at international prices would gain, while those

producing at inflated protected prices would lose. Like the study described above, the FAO study found that the benefits for consumers in hitherto protected OECD markets could be high, but it also stressed that high processing and distribution costs in these countries could mean that lower prices for raw products would not translate into substantially lower prices for the final consumer. Consumers in developing countries, where processing and distribution margins are much smaller, stood to lose more significantly. Trade liberalization would not change the main conclusion of this study, that developing countries will increasingly become net importers of agricultural products — but it would slow the process somewhat.

Why do developing countries stand to gain so much less from trade liberalization than developed countries? One reason is that many developing countries have become net importers of agricultural products, and modest increases in world prices are unlikely to turn them into net exporters. In the importing developing countries, consumers stand to lose more from freer trade than domestic producers are likely to gain.

The finding that gains for producers in developing countries would often be small reflects a number of factors:

- Many studies show that a cut in OECD subsidies would merely bring about an exchange of market shares between OECD countries. This is because OECD trade distortions are concentrated on temperate-zone commodities — products for which, in the majority of developing countries, the production potential is limited more by agro-ecological conditions than by policy distortions abroad.

Eliminating all agricultural policy distortions could produce global annual welfare gains of up to US\$165 billion, of which three-quarters would go to developed countries.

- Where developing countries have a comparative advantage — in such commodities as coffee, cocoa, tea, spices and tropical fruits — developed countries' import tariffs have already been reduced and the effects of further liberalization are likely to be small.
- Higher and more stable international prices are not always transmitted to farmers in developing countries. Inadequate infrastructure and inefficient marketing systems insulate many of them from world markets.
- Farmers in developing countries may not gain as long as domestic policies largely offset the price incentives from international markets. Most developing countries heavily taxed their agriculture throughout the 1970s and 1980s; many, including India, China and Pakistan, continued to do so during the 1990s.

How can trade liberalization benefit developing countries?

What measures and strategies would ensure that the poorest and most vulnerable countries and population groups receive an equitable share of the benefits of trade liberalization?

The aim should be to:

- Eliminate direct and indirect export subsidies.
- Rationalize and simplify access to OECD markets. Specifically, rationalize and simplify trade preferences, assist countries whose preferences have been eroded through multilateral liberalization, and deepen existing preferences for very poor countries.
- Reduce OECD tariffs and consumer taxes on processed agricultural products, with special preferences for products from developing countries.
- Eliminate tariff escalation for tropical commodities, in the developing as well as the developed countries. Tariffs are rising even faster in the former than in the latter group. The purchasing power of China's or India's rapidly growing middle class could turn these countries into major importers of some tropical agricultural products over the next 30 years.
- Create or expand safety nets and food distribution schemes, to ensure that low-income consumers are not penalized by rises in the prices of food imports.

If developing countries are to benefit from freer trade, their farmers will need to become more responsive to the rising and more stable international prices that should result from such trade. A massive mobilization of resources is needed to improve agricultural productivity at home and thus competitiveness abroad. The most important measures are increased credits for rural areas, and more investment in all aspects of support for agricultural production and processing, including rural infrastructure (irrigation, transportation, storage and marketing), research, education and training, and standard setting and quality control.

Substantial gains would also result from other policy reforms. In developing countries, removing taxes on agricultural exports and tariffs on non-agricultural imports (machinery, fertilizers and pesticides) would improve the terms of agricultural trade and help farmers compete on international markets. In developed countries, removing trade barriers in labour-intensive manufacturing could bring benefits for farmers in developing countries. For example, a rapidly growing textile industry would create new income opportunities for cotton farmers in the tropics.

Non-agricultural exports now account for more than 90 percent of the total exports from developing countries, and more than 80 percent in the case of least developed countries. Deeper and broader preferential access to the markets for manufactured goods in some developed countries could make an important contribution to food security in the least developed countries, providing them with the means to finance their huge and rapidly increasing food import needs in the future.

Does globalization disadvantage the poorest countries?

Globalization is a modern word for a process that has been going on for centuries. New technologies in the fields of transport and communications, from advances in sailing and navigation to the steamship and the telegraph, have often reduced the cost of shifting goods around the world in the past, leading to increased economic integration. Recently,



such technologies have included roll-on roll-off container systems and the Internet, while lower trade barriers have further eased the movement of goods and capital.

Globalization has brought lower prices to consumers, and investment and employment to newly industrializing countries. But it has also raised widespread public concern over the fate of the poorer developing countries, which are alleged to have been left further and further behind as the rest of the world advances.

There is strong evidence that countries can be disadvantaged in the global marketplace by their geographical endowments. Lack of infrastructure can make it hard to get perishable products to markets, increasing marketing costs and so deterring investment. As new investment heads for better-endowed

areas, those countries and regions with physical and infrastructural handicaps may be bypassed, falling further and further behind and finding themselves trapped in a vicious circle of disadvantage.

Most poor countries are located in the tropics, where the higher incidence of crop and livestock diseases and pests and excessive or inadequate rainfall are further factors compromising their ability to participate in global agricultural markets. Distance from the sea and a lack of navigable waterways can constitute additional disadvantages. Outside Europe, average incomes in landlocked countries are only a third of those in countries with a seaboard.

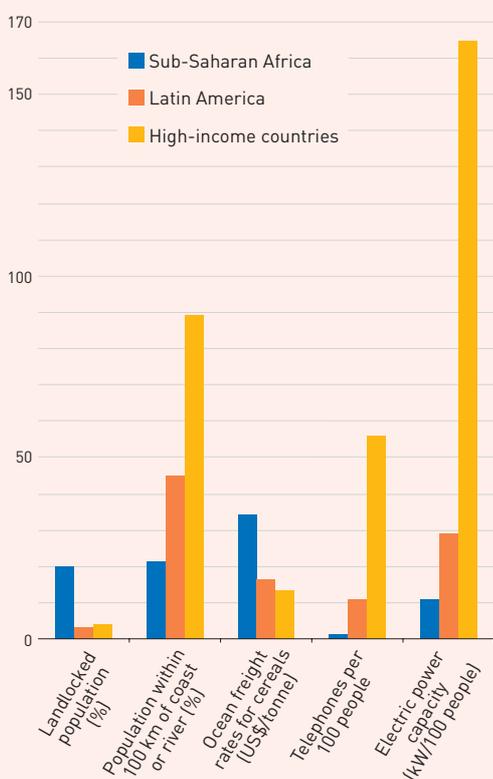
Sub-Saharan Africa, located mainly in the tropics and with a high proportion of problematic soils, suffers multiple handicaps in the global marketplace. Only 21 percent of this region's population live within 100 km of the coast or of a navigable river, against 89 percent in high-income countries. The proportion of the population that is landlocked is seven times higher than in rich countries. Landlocked countries in Africa have average freight costs almost three times higher than in high-income countries.

In contrast, regions of the United States, Western Europe and temperate-zone East Asia within 100 km of a coastline account for a mere 3 percent of the world's inhabited land area. Yet they house 13 percent of the world's population and produce at least 32 percent of the world's GDP.

Combining data on population and income levels provides a revealing picture of the distribution or density of incomes over different countries and regions. It underscores the importance of infrastructure and/or geographical location, showing that:

- Nearly all landlocked countries in the world are poor, except for a few in Western and Central Europe which are deeply integrated into the regional European market and connected by multiple low-cost trade routes.
- Coastal regions, and regions linked to coasts by navigable waterways, are strongly favoured relative to the hinterlands.

The conditions for market integration differ vastly across regions



Sources: World Bank data and Gallup *et al.* (1999)

- Sub-Saharan Africa stands out as the region that is most disadvantaged in terms of unfavourable agro-ecological conditions as well as inadequate transport and communications infrastructure.

Does globalization concentrate too much power in the hands of multinationals?

Globalization is often charged with shifting power away from national governments to multinational enterprises (MNEs). MNEs have been accused of abusing market power, exploiting farmers and labourers around the world, and exerting pressure on governments to reduce environmental and labour standards.

Today MNEs in food and agriculture operate across many country borders. They are more and more vertically integrated, covering the whole sequence of operations from producing and marketing seeds, through purchasing the crop, to food processing and distribution.

When they control large parts of the supply chain, these large corporations can exert monopoly selling or buying power, thereby putting pressure on farmers and retailers. Through production contracts or joint ownership in land or livestock operations, they can tie farmers into buying the company's inputs and selling their produce only to the company. Farmers may also lose entrepreneurial capacity and become more or less dependent workers on their own farms. It is also true that MNEs can and do move operations from country to country

in search of lower costs, including wage rates, and of lower labour and environmental standards.

Benefits of globalization

However, if the often heard demands for global parity in wages and environmental standards were met, this would remove a major competitive advantage of poorer countries and could halt the flow of investment towards them, seriously prejudicing their further development.

Countries that excluded MNEs would be excluding the best available channels for getting their products to the global marketplace. MNEs usually upgrade local skills, methods, standards and technologies as they expand in a country. For example, in the late 1980s, in China's Heilongjiang province, the multinational Nestlé built rural roads, organized milk collection points and trained dairy farmers in basic animal health and hygiene.

MNEs also force local firms to upgrade in order to remain competitive. Recent research shows that the greater the degree of openness of a national industry to foreign competitors, the greater its productivity. Indeed, the presence of foreign firms may be the single greatest stimulus to improving productivity available in many developing country settings.

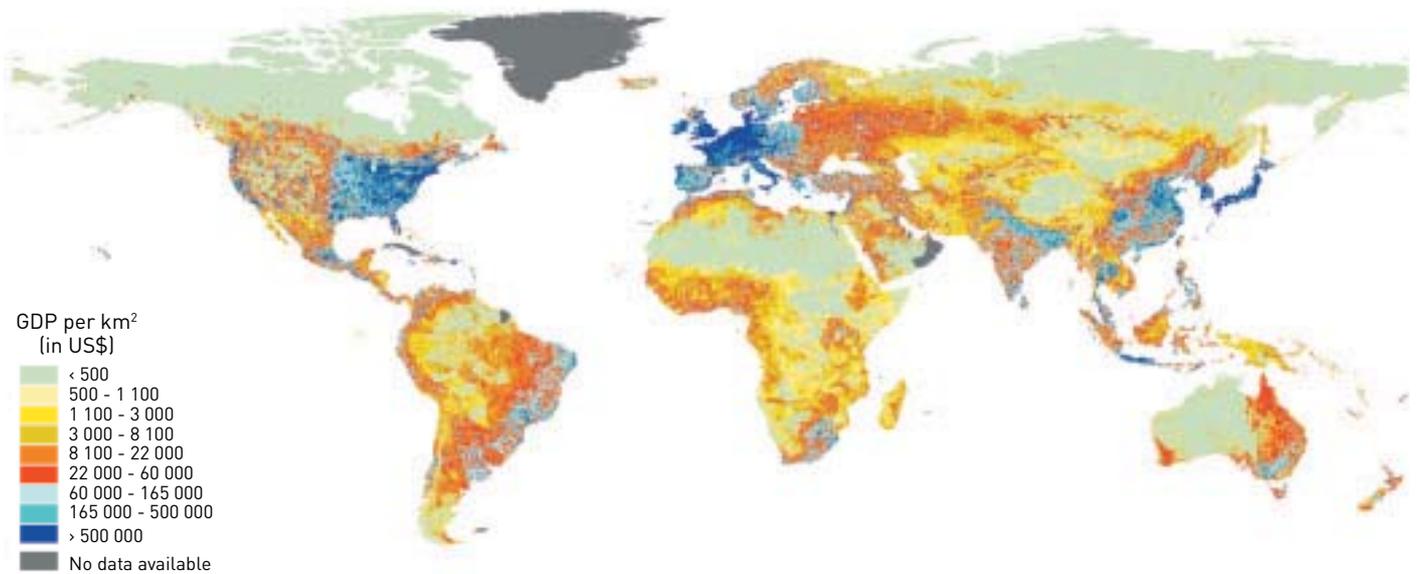
The claim is often made that globalization makes the world's poor poorer, but there is no evidence for this. Countries may, however, become poorer in a relative sense as they fail to

Sprawling giants

Growing industry concentration has led to a situation where just a few companies control large shares of the agricultural production and processing chain. On the production side, only four companies control 50 percent of the US broiler market and 46 of the US pork market. On the processing side, four companies control over 80 percent of US beef packaging and 60 percent of the pork packing market. Concentration also extends into the agricultural upstream sectors, resulting in a combination of

horizontal concentration and vertical integration throughout the entire agro-food chain. Cargill, for instance is not only amongst the top four beef and pork packers but also number one in terms of domestic grain handling, as well as grain and soybean exports but also the second largest compound feed producer and the number three turkey producer. On the upstream side, Monsanto and Syngenta account together for 35 percent of the global market for crop protection and 19 percent of the one for seeds.

Income density in the world



Sources: GDP: World Bank (2001a) and FAO data;
Population density: Oak Ridge National Laboratory (2000)

benefit from globalization. Recent research conducted for the World Bank suggests that openness to international trade boosts economic growth. Developing countries with policies that favour openness increased their rate of GDP growth from 1 percent in the 1960s to 3 percent in the 1970s, 4 percent in the 1980s and 5 percent in the 1990s. In contrast, much of the rest of the developing world, containing about 2 billion people, is becoming increasingly marginalized. The aggregate growth rate of these countries was actually negative in the 1990s.

Overall, the benefits of continuing globalization are likely to outweigh the risks and costs. Negative impacts can be mitigated by appropriate policies. A combination of measures

Multinational enterprises often upgrade local skills, methods, standards and technologies as they expand in a country. In so doing, they force local firms to upgrade in order to remain competitive.

including openness, investments in infrastructure, the promotion of economic integration and limits on market concentration and control, could make globalization work for the benefit for the poor.