A 2020 Vision for Food, Agriculture, and the Environment

2020 VISION

Shaping Globalization for Poverty Alleviation and Food Security

Introduction

Eugenio Díaz-Bonilla and Sherman Robinson

Focus 8 • Policy Brief 1 of 13 • August 2001

WHAT IS GLOBALIZATION

In its broadest sense, globalization can be seen as an inherent part of human experience. Since prehistoric times humans have been growing in number; interacting with other groups, peacefully or not; building larger economic, social, and political organizations; discovering, using, and sometimes destroying the resources of the planet; and generating new knowledge and technologies. That process has led to the emergence of empires, with the ebb and flow over the centuries of explorers, crusaders, missionaries, merchants, and colonists.

The powerful wave of globalization associated with modern economic growth in the second half of the 1800s and early 1900s brought the level of world integration to a new peak, with convergence in commodity and, to a lesser extent, factor prices. It ended in pain and disintegration with two world wars and a global economic depression between them. The world emerged in the 1950s divided both politically and militarily. But soon, another pervasive wave of economic, political, and social integration was rolling forward. That process has been driven by important changes in the generation, adoption, and diffusion of technology, including major advances in communication and transportation. It has been further promoted and accelerated by economic deregulation and liberalization in many countries and by the end of the Cold War, which eliminated some of the geopolitical barriers to world integration. The dramatic increase in world population is also creating denser economic, social, and environmental linkages.

Here, we take a broad view of globalization to include three general dimensions, each with economic and non-economic components.

First, globalization refers to the multiplication and intensification of economic, political, social, and cultural linkages among people, organizations, and countries at the world level. This notion includes a greater flow of trade and finance; expansion of cross-border communications; greater international interactions among political groups, nongovernmental organizations (NGOs), and other members of civil society; and even increased levels of tourism.

A second dimension is the tendency toward the universal application of economic, institutional, legal, political, and cultural practices. It is related to the first dimension in that increased linkages generate a need for common institutions and rules. Examples in the economic arena include the codification of trade rules under the World Trade Organization (WTO) and its predecessor the General Agreement on Tariffs and Trade (GATT); common approaches to banking supervision, accounting, and corporate governance; the convergence toward economic policies based on similar standards of monetary and fiscal discipline; and reliance on free markets. Recent phenomena such as the spread of democracy, the increase in the number and coverage of environmental treaties, and even the controversial possibility of cultural homogenization in the areas of entertainment, food, and health, are examples of the major non-economic aspects of this second dimension.

Finally, a third dimension is the emergence of significant spillovers from the behavior of individuals and societies to the rest of the world. Environmental issues such as cross-border pollution and global warming are inherently international. National economic crises may lead to financial contagion and ripple effects on the economies of other countries, requiring coordinated international responses. Health issues, such as the spread of HIV/AIDS, require an international approach, as do issues of global crime (for example, drug trafficking and money laundering). And there are also the problems of war and international violence. Again, the dimensions are linked. Spillovers occur because there are more channels of interaction. Then, global norms and institutions are required to provide a framework for coordinating responses.

The economic aspects of globalization usually receive the most attention. Indeed, some observers tend to equate globalization with policies of domestic and international market liberalization, and in the case of developing countries, with internationally coordinated structural adjustment and stabilization programs. Here, we take a broader view of both the drivers and the dimensions of globalization.

DIFFERENT INTERPRETATIONS AND POLICY PERSPECTIVES ON GLOBALIZATION

The analysis of economic integration at the world level has a long history. Adam Smith and David Ricardo argued that freer trade—domestic and international—would bring benefits to individuals and societies. An alternative view, anchored in doctrines of economic mercantilism and power politics, emphasized the need to accumulate power by the State, and to subordinate and manipulate the economy to that end. From a different perspective, the tendency of capitalism to expand worldwide was articulated by Karl Marx, who saw that expansion as an implacable and harsh modernizing force of traditional societies. While Marx shared with classical economists the notion that the expansion of capital generated benefits, V.I. Lenin, echoing some of the themes of mercantilism and power politics, interpreted capitalist expansion as a negative process, leading inevitably to imperialism and war.

After World War II, the debate on expanding trade and financial linkages, from the perspective of developing countries, included different views on the costs and benefits of the process of integration into world markets. Negative evaluations

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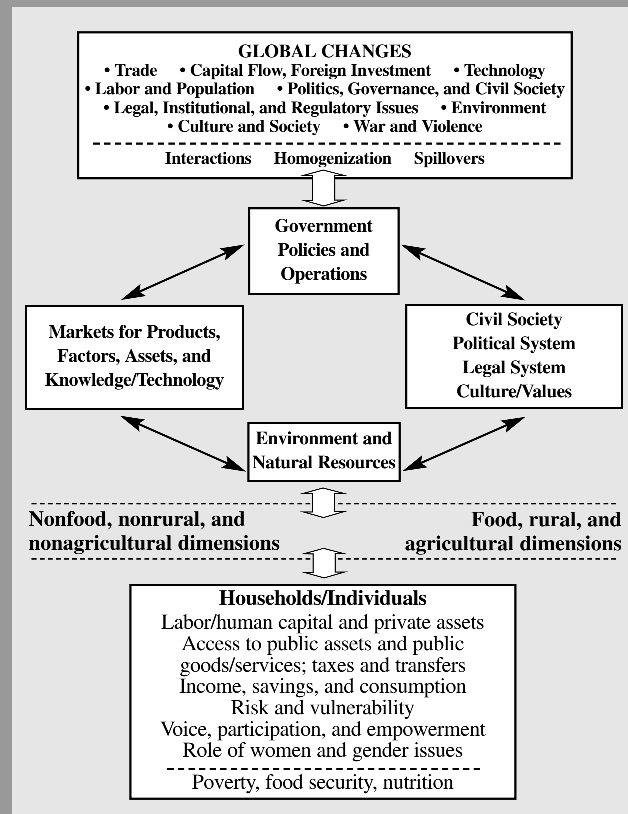
came from the literature on colonialism and neocolonialism, the notion of the secular decline of the terms of trade facing developing countries in world markets, and the theory of dependency. Mainstream development economics emphasized the importance of greater participation in the world economy, particularly through the flow of finance and trade, which would improve welfare in developing countries. An expanding subset of the literature on international economic developments during the 1970s focused on multinational corporations, in both developing and developed countries, with very different views about the welfare implications of the emergence and expansion of large international firms. Most of these arguments are being echoed again in current discussions on globalization.

A broader view of the expansion and intensification of linkages among countries, encompassing more than just economics, came with the idea of interdependence, which highlighted the consequences of this phenomenon for the conduct of foreign policy by the main world powers. Currently, the debate on globalization and its consequences is far-reaching. It considers the implications for foreign and domestic policies of nations, the operation of their social and political institutions, the functioning of civil society, legal and regulatory frameworks, the environment, cultural aspects, and conflict and war.

LINKS BETWEEN GLOBALIZATION, POVERTY, AND FOOD SECURITY

The outline of a framework linking globalization, poverty, and food security is presented in the figure. Different dimensions of globalization are listed at the top (first level) and are shown as affecting the government, civil society, markets, and environment in developing countries (second level). For instance, globalization may influence the autonomy of government policies and the availability of public resources. It may affect cultures and values while allowing new cross-country alliances in civil society. It may change the actors in, and the structure of, markets—domestically and internationally—and may lead to larger environmental spillovers. In turn, these changes have implications for different sectors: agricultural/industrial, rural/urban, food/nonfood (third level). Finally, the different dimensions of globalization affect poverty through their impact on economic and non-economic assets and capabilities, mechanisms for the redistribution of income, and institutional factors (fourth level).

THE LINKS BETWEEN GLOBALIZATION, POVERTY, AND FOOD SECURITY



Globalization may change the use, and relative value, of the economic assets and capabilities of the poor. It may also have an impact on non-economic assets and capabilities, such as social capital (civil contacts, networks, and institutions) and political processes that determine the participation and empowerment of the poor. Important issues in this regard include the protection of life and personal security, the construction of democratic institutions, accountability and honesty in governance, and the rule of law. These dimensions mostly determine what Amartya Sen has called "entitlements and capabilities of the poor."

Food security is a subset of that general framework. Since the World Food Conference of 1974, the focus on food security has moved from a global and national perspective to the household and individual, where the problems of malnutrition and hunger take concrete human expression. It has been recognized that the main problem of food security is lack of access due to poverty rather than any aggregate shortage of supplies. The 1996 World Food Summit summarized current views and stated that "food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life."

Availability and access, however, are only preconditions for adequate utilization of food. They do not unequivocally determine the more substantive issue of "nutritional security" at the level of the individual. In addition to household access to food and within-household income distribution, other determinants must also be considered. The role of women (education, household gender roles, and social status) is central, along with such issues as public health, democracy and good governance, and peace.

This collection of policy briefs considers different aspects of the framework presented above. The briefs focus on defining the aspects of globalization relevant for developing countries and exploring both the major forces at work and how policies can be developed to ensure that the process benefits the poor.

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"A 2020 VISION FOR FOOD, AGRICULTURE, AND THE ENVIRONMENT" IS AN INITIATIVE OF THE INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE (IFPRI) TO FEED THE WORLD, REDUCE POVERTY, AND PROTECT THE ENVIRONMENT.

Time horizon. The "medium term" is the instinctive time horizon that Group A uses when thinking, for example, about the consequences of trade policy. But Group B has concerns that are both shorter and longer term. Those who work with the daily reality of poor people's lives are extremely concerned—like the poor themselves—about the short-term consequences of economic policy, which can drive a family into starvation, force it to sell its assets at fire-sale prices, or pull its children out of school. For the poor, it is no use being told that things will pick up again over a five- to 10-year horizon.

There are also those who have a much longer time horizon than a decade, such as environmental groups, including some with religious perspectives on stewardship of the earth's resources. For them, it is the 50- or 100-year perspective that is important. They do not see how economic growth can be sustained, given the earth's limits, and they see negative consequences of resource depletion in both the immediate and the long term.

Market structure and power. The implicit framework of Group A, in thinking through the consequences of economic policy on distribution and poverty, is that of a competitive market structure. The instinctive picture that Group B has of market structure is one riddled with market power. They see the formulation and implementation of economic policy as influenced by powerful agents, and they see policy consequences filtered through noncompetitive market structures.

Group A's immediate response to the suggestion that openness in trade, for example, might hurt the poor in poor countries is to invoke the basic theorems of trade theory. Opening up an economy to trade will benefit the more abundant factor because this factor will be relatively cheap and opening up will increase demand for this factor overall. Since unskilled labor is the abundant factor in poor countries, opening up will benefit unskilled labor and, hence, the poor. But the theory breaks down if local product and factor markets are segmented, either because of poor infrastructure or because of the local power of middlemen and moneylenders. These situations are highlighted repeatedly in discussions about the possible negative consequences of openness.

Group B believes very strongly that increased mobility of investment capital makes workers in both receiving and sending countries worse off. Such a view is derided by Group A analysts as being irrational: "How can you say that when capital leaves the US, it hurts US workers, and when it gets to Mexico it hurts Mexican workers as well?!"

In a framework with perfectly competitive markets, it is indeed irrational to suggest that increased mobility of investment capital makes workers worse off everywhere. But consider a situation where capital and labor in each country bargain over wages and employment in markets that are not perfectly competitive. Increasing capital mobility is akin to increasing the bargaining power of capital relative to labor, so empirically, workers could end up being worse off in both countries, relative to capital. This is Group B's implicit framework, with added emphasis on the political power of big multinational corporations to influence domestic economic policy.

A seeming disagreement: The "growth" red herring. The word "growth" also appears controversial, with Group A accusing Group B of being "anti-growth," and Group B countering that Group A believes that "growth is everything." For all the rhetoric, there is more agreement here than meets the eye. The problem is that the word "growth" is used both in its technical sense of "an increase in real national per capita income" as well as in connoting a particular policy package. This package of "growth-oriented policies," as seen by Group A, is perceived as "economic policies that hurt the poor" by Group B. If viewed in the technical sense, one would probably find less disagreement on whether growth helps reduce poverty, although some in Group B would still argue that this is not the answer over a 50- or 100-year time horizon. The real differences, as argued, concentrate instead on economic policies and issues of aggregation, time horizon, and market structure. The current growth-poverty debate, certainly as presented by some elements of Group A, misses the point.

CONCLUSION

The argument presented here is that there are key differences in perspective underlying the seemingly intractable disagreements on aggregation, time horizon, and market structure. Simply recognizing and understanding this would be one step toward bridging the gap.

Although more is needed from both sides, the focus here is on Group A. The message for those at the more academic end of the Group A spectrum is that explicitly taking these complications into account is more likely to shift the intellectual frontier than falling back yet again on conventional analysis. For those at the more operational and policy end of the spectrum, the message is that instead of being closed and inflexible, recognizing and trying to understand legitimate alternative views on economic policy is not only good analytics, it is good politics. ■

For further reading see R. Kanbur, "Income Distribution and Development," in A. Atkinson and F. Bourguignon, eds., *Handbook of Income Distribution, Volume 1* (North Holland, 2000), R. Kanbur, T. Sandler, and K. Morrison, *The Future of Development Assistance* (Washington, DC: Overseas Development Council, 1999), R. Kanbur, "Poverty Reduction Strategies: Five Perennial Questions," in R. Culpeper and C. McAskie, eds., *Towards Autonomous Development in Africa* (Ottawa: The North-South Institute, 1998).

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SHAPING GLOBALIZATION FOR POVERTY ALLEVIATION AND FOOD SECURITY

THE NATURE OF DISAGREEMENTS

RAVI KANBUR

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If the early 1990s raised hopes of a broad-based consensus on economic policy for growth, equity, and poverty reduction, the late 1990s dashed them. The East Asian crisis and the Seattle debacle saw to that. In the year 2000, the governors of the World Bank, whose mission it is to eradicate poverty, could meet only under police protection, besieged by those who believed instead that the institution and the policies it espouses cause poverty.

How can these two groups, the policymakers and the protesters, who seemingly share the same ends, disagree so much about the means? And how can they interpret the same objective reality so differently?

The response so far is for the two groups to question each other's motives, commitment, and analytical capacity. But in this brief, it is argued that at least some of the disagreement can be understood in terms of differences in perspective on three key features of economic policy—aggregation, time horizon, and market structure—an interpretation more conducive to dialogue than confrontation.

DISAGREEMENTS BETWEEN *WHOM* AND OVER *WHAT*

Disagreements between whom?

- Group A, labeled "Finance Ministry," includes some who work in finance ministries in the North and in the South, many economic analysts, economic policy managers, and operational managers in international financial institutions (IFIs) and regional multilateral banks. It includes the financial press and some academic economists trained in the Anglo-Saxon tradition.
- Group B, labeled "Civil Society," includes analysts and advocates in the full range of nongovernmental organizations (NGOs), as well as people who work in some of the specialized United Nations agencies, in aid ministries in the North, and in social-sector ministries in the South. Among academics, non-economists would tend to fall into this group.

Groups A and B are better thought of in terms of *tendencies* rather than specific individuals.

Disagreements over what? While there are several areas of agreement between those two groups (such as the importance of investments in education and health and of international public goods for the well-being of the poor), major disagreements center on a specific set of economic policy instruments. Group A tends to believe that the cause of poverty reduction is best served by reduction of fiscal imbalances, rapid adjustment to lower inflation and external deficits, liberalization of the financial sector, deregulation of capital controls, privatization of state-owned enterprises, and perhaps the strongest unifying factor in this group, rapid and major opening up of an economy to direct foreign investment and trade. Group B tends to lean in the opposite direction on all of these issues, but perhaps the most divisive areas are trade and openness, and there the rhetoric is fierce.

THE NATURE OF DISAGREEMENTS

Aggregation. Different people instinctively operate at different levels of aggregation when they talk about the consequences of different economic policies.

For example, many in Group A work with poverty measures that calculate the proportion of people in a country who fall below a critical level of income/expenditure—the most commonly used threshold is the famous poverty line of $1 per person per day.

When Group A analysts showed that the incidence of poverty in Ghana fell between 1987 and 1991, very few people believed it. Group A analysts reacted to this disbelief as expected—by saying that people did not really understand the detailed statistical analysis, that those who criticized represented special interest groups, and so on.

However, there are at least three reasons that the claim that poverty decreased in Ghana could be questioned:

- First, the indicators used by Group A to measure poverty do not adequately capture the value of public services, which may worsen without the effect showing up in measures of poverty. The claim that poverty has gone down will ring hollow to those involved in ground-level operations, as well as to the poor whose lives are made worse by the decline in public services.
- Second, a national fall in the incidence of poverty often misses large regional movements in the opposite direction. For example, in Ghana, between 1987 and 1991, the fall in national poverty was based on a decline in rural areas and an increase in urban areas. For an NGO working with street children in Accra, where poverty had increased, it was cold comfort to be told that national poverty had gone down.
- Last, while the basic concept of Group A is the incidence of poverty (a percentage measure), people in Group B instinctively think of absolute numbers of poor as the criterion. In Ghana, for example, while the incidence of poverty was falling at around one percentage point per year, the total population was growing at almost twice that rate, with the result that the absolute number of poor people grew sizably between 1987 and 1991.

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Shaping Globalization for Poverty Alleviation and Food Security

Growth and Poverty

Manohar Sharma, Sam Morley, and Eugenio Díaz-Bonilla

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Policymakers, development organizations, and advocacy groups often express concern about the impact of globalization on poverty. Their concern is understandable, given globalization's wide-ranging effects. Globalization may spur higher income growth due to increased specialization, more efficient capital and labor flows, and wider diffusion of technology. But globalization's impact on poverty hinges on the extent to which the poor participate in the income-growth process, something that cannot be guaranteed.

The post-World War II period has coincided with unparalleled increases in global standards of living. In most developing countries, incomes grew faster in the second half of the 20th century than at any previous time. But living standards around the world have changed in ways attributable not just to income growth. Strides in health and longevity, for example, have resulted from transfers of medical and public-health technologies, quite independent of growth in incomes. The human development indices (HDI) of the United Nations Development Program (UNDP) encapsulate achievements in education, health, and income that are now higher in most developing countries than they were in the now-developed countries when they had similar income levels in the 19th century.

Although historical trends in the correlation between globalization and overall standards of living provide reason for optimism, recent co-movements in globalization, income growth, and poverty have been more confounding, fueling policymakers' concern. This brief discusses the interplay of some of the key factors that link globalization to poverty alleviation. It suggests that effects on poverty, especially in the short term, are determined by the quality of domestic policy, the state of the international economy, and the adjustment pains that are inevitable when trade, investment, and financial barriers are dismantled.

TRENDS IN GLOBALIZATION

The last 50 years have seen a significant reduction in trade barriers, although the proliferation of non-tariff barriers complicates measurement. Restrictions on capital flows have been lifted as well. The world ratio of trade to non-service gross domestic product (GDP) jumped from 24 percent in the 1960s to 58 percent in the 1990s, with the biggest increase in East Asia (from 9 to 50 percent). Developed countries and Sub-Saharan Africa have the largest trade/GDP ratios, but all developing regions showed increases.

International capital flows are less uniform, however, and are concentrated in developed countries and a few, mostly middle-income, developing nations. Net capital flows as a share of GDP were higher in the 1970s than in the 1990s in Africa (4.8 percent compared to 2.0 percent) and Latin America (3.2 percent as compared to 2.5 percent). For Asia, the percentage was higher in the 1990s until the 1997 Asian financial crisis, with the final average for the decade (1.4 percent) similar to that in the 1970s (1.3 percent). In all regions, net flows fell during the debt crisis of the 1980s. Foreign direct investment emerged in the 1990s as the largest component of external financing for many developing countries.

Despite persistent barriers, international labor migration has grown. From 1965 to 1990, the proportion of the world labor force that worked outside of their country of birth increased by half.

In general, post-World War II globalization has been most pronounced in industrialized countries, and developing regions have shown a clear variation in the degree and chronology of their integration into the global economy.

TRENDS IN GROWTH, INEQUALITY, AND POVERTY

Income growth rates. Average annual incomes in Africa, Latin America, and the more populous countries in Asia (China, India, Indonesia) grew faster in the last five decades than at any time in the past. Between 1950 and 1996 real GDP per capita in Africa rose from US$830 to $1,309 (in purchasing-power-adjusted 1990 prices). In the same period, in East Asia GDP per capita jumped from $765 to $5,587 and in Latin America from $2,487 to $5,155. Yet performance within this period was mixed. Between the 1960s and 1990s, income growth rates fell in Latin America and the Caribbean (from 5.3 percent to 3.2 percent) and in Sub-Saharan Africa (from 4.9 percent to 1.9 percent), while they increased in East Asia (from 4.6 to 7.3 percent) and South Asia (4.2 to 5.4 percent). Growth rates also became more volatile.

Inequality**.** World income distribution has become more unequal in the last 150 years. This divergence continues to expand, fueled almost entirely by increases in between-country inequality: rich countries, which by most measures are more globalized than the rest of the world, maintained or increased their lead over poor countries. While trends in within-country inequality are more ambiguous, some evidence shows income inequality, especially in transition countries and some large developing countries, to have worsened since the 1980s. UNDP's HDI, on the other hand, shows global convergence in standards of living, with the gap between the richest and poorest countries narrowing since 1950. However, life expectancy, an important component of the index, has shortened since the 1980s in Sub-Saharan Africa and in some former republics of the USSR.

Poverty. The number and percentage of people living in poverty in developing countries declined considerably during the 1960s and 1970s. Data since the mid 1980s show further, but slower, reductions. While the share of population living on less than one US dollar a day fell from 28 percent in 1987 to 23 percent in 1998, the absolute number of poor diminished only slightly (by 9 million persons). If China is excluded, however, poverty actually increased by about 80 million people in developing countries. The percentage of underweight children under five in developing countries, another indicator of absolute poverty, also declined between 1980 and 2000, from 37.4 percent to 26.7 percent, as did the absolute number. Yet, the number of underweight children increased in Sub-Saharan Africa, while the incidence of undernutrition is still very high there and in South Asia.

GLOBALIZATION AND POVERTY: LINKING THE PIECES

The surge in globalization in the latter half of the 20th century went hand-in-hand with significant increases in standards of living. While it is difficult to separate the effects of globalization on poverty from the effects of technological progress or domestic policies, the causal link appears to be positive. Closed economies, which rely on small domestic markets and import substitution, tend to foster low-employment, capital-intensive growth patterns. They suffer from recurrent balance-of-payments crises and appear biased against agriculture, in which most poor people work. Further, protectionism may nurture monopolies, shelter rent-seeking and corruption, and weaken the rule of law.

But why are the links between globalization and poverty in the short term, especially since the mid 1970s, less clear, at least at the broad regional levels? Possible explanations are the following:

- Changes in product and factor prices triggered by opening up an economy inevitably produce *both* winners and losers in the short term. The timing, scale, and sequencing of policy reforms, as well as pre-existing domestic conditions, have a bearing on where and how these gains and losses occur. Further, the relationship between globalization, growth, income distribution, and poverty is likely to evolve as an economy changes in structure. Hence, short-term data, aggregated at the regional level, are likely to be muddled by the wide diversity in country-specific situations and experiences.
- A country's performance in terms of growth and poverty alleviation is tied to the overall functioning of the international economy at a given time. For example, during the 1960s and 1970s, high growth, negative real interest rates, and high inflation reduced poverty in the relatively resource-abundant, primary exporters of Africa and Latin America, which also received much of the international capital flows. But then, the collapse in world commodity prices after the 1980s, mostly due to changed economic policies in industrialized countries, negatively affected their growth rates and poverty levels.
- Structural shifts in international markets matter. The recent entry of China in world markets with its vast reservoir of low-skilled workers has changed the configuration of comparative advantage among developing nations. Further, high-skill-biased technological change, in part spurred by globalization itself, has affected developing countries' economic performance and income distribution. Finally, world economic volatility may have increased, mostly linked to gyrations in world capital markets. If the probability of crises increases with openness, the poor may face additional risks.

Ultimately, globalization's effects on poverty depend on the extent to which the poor are able to participate in the expanding sectors. Where the poor live in rural or other areas that lack infrastructure and are detached from the global economy, uneven progress across sectors or geographical regions may result (as China's policy-induced segregation between urban-rural and coast-hinterland suggests). Further, a vast majority of the poor will simply be unable to take advantage of globalization while trade barriers remain on products in which the poor have comparative advantage.

CONCLUSION

The last wave of globalization has raised incomes and standards of living in the developing world to levels not seen before. However, the advances have been uneven and some developing countries, in regions like Sub-Saharan Africa, are experiencing painful declines in human welfare. Also, inequality appears to be increasing, giving rise to domestic and international tensions.

Increasing the pace of poverty alleviation requires that policies that further integrate developing countries into the global economy be complemented by domestic pro-poor policies and institutional development that cushion adjustment shocks and enable the poor to take advantage of the new opportunities offered by globalization. Developed countries must do their part by rectifying policies such as agricultural and textile protectionism. Strengthening international institutions to ensure transparency and fair play and to reduce potential economic instability remains crucial, not only to speed up poverty alleviation, but to induce developing countries to embrace global partnership in the first place. ■

For further reading see N. Crafts, *Globalization and Growth in the Twentieth Century,* IMF Working Paper WP/00/44 (International Monetary Fund, 2000); R. Kohl and K. O'Rourke, "What's New About Globalisation: Implications for Income Inequality in Developing Countries," paper for Organisation for Economic Co-operation and Development Conference on "Poverty and Income Inequality in Developing Countries," Paris, 2000.

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A 2020 Vision for Food, Agriculture, and the Environment
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Shaping Globalization for Poverty Alleviation and Food Security

Trade and Food Security

Eugenio Díaz-Bonilla and Marcelle Thomas

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Trade expansion, fueled in part by trade liberalization, is seen by many as a central, if not the main, component of globalization. While this collection takes a broader view of globalization (see Brief 1), the controversial links between trade liberalization and food security, an important dimension of the globalization debate, are discussed here.

Food security has improved over the past four decades. Total food availability in developing countries, measured in daily calories and grams of proteins per capita, was 27 percent higher at the end of the 1990s than in the 1960s, even though the world population almost doubled during that time. The number of malnourished children under five (a better indicator of food problems than average food availability) declined between the 1970s and the mid-1990s by about 37 million, and the incidence of malnutrition dropped from 47 percent to 31 percent.

Other points to be noted are:

- Food availability in developing countries comes mostly from domestic production: imports were about 15 percent of total food production in the 1990s (up from 10 percent in the 1960s and 1970s).
- Food trade, along with stocks, helped reduce the variability of food consumption in developing countries to 1/3 to 1/5 of that of food production.
- The burden of the total food bill (measured by food imports as a percentage of total exports) declined on average for all developing countries from almost 20 percent in the 1960s to about 6 percent currently. This decrease resulted from the expansion of total trade, which has grown faster than food imports, and a decline in real food prices.
- Volatility of agricultural prices in world markets in the last half of the 1990s—since the implementation of the World Trade Organization (WTO) agricultural agreements—does not seem to be higher than for the whole period since the 1960s. It is less clear what has happened to the volatility of agricultural prices within developing countries, because domestic policies come into play.

Although food security has improved in general over the last few decades, there are regions and countries at risk, and some have become more food insecure:

- Average food availability is still low for regions such as Sub-Saharan Africa. And for more than one-fourth of all developing countries, per capita indicators have decreased since the 1960s. In most cases those declines appear to be associated with war.
- The number of malnourished children under the age of five has actually increased in Sub-Saharan Africa, and the incidence of malnutrition is still very high there and in South Asia.
- For the 49 least-developed countries, the total food bill has remained high at 20 percent, and several developing countries with large external debts face additional constraints in financing their food imports.

TRADE LIBERALIZATION AND WTO NEGOTIATIONS

Industrialized countries. The combination of domestic support, market protection, and export subsidies in industrialized countries has displaced agricultural production and exports from developing countries. This is an especially important issue for the poorer countries, where two-thirds of the population live in rural areas, agriculture generates over one-third of the gross domestic product, and a substantial percentage of exports depend on agriculture. A key concern for developing countries, therefore, is the elimination of subsidies and protectionism in industrialized countries. Against this general proposition, three concerns have been raised.

- First, will the food bill of net importing countries be increased by the liberalization of agricultural policies in industrialized countries?
- Second, for those developing countries that have preferential access to the protected markets of rich countries, will the liberalization of trade in those markets lead to the erosion of trade preferences?
- Finally, will export expansion have harmful effects on poverty and food security?

In the first two cases, a welfare-enhancing approach would be to proceed with the liberalization of markets in rich countries, along with cash grants or other financial schemes to compensate poor countries for higher prices and lost preferences.

The third question is linked to earlier criticisms of the Green Revolution, later extended to commercialization and international trade: first, it is argued, the limited resources of small farmers could prevent them from participating in expanding markets and lead to worsening income distribution. Second, and more worrisome, if relative prices shift against the poor or if the power of already dominant actors (large landowners, big commercial enterprises) is reinforced to allow them to extract income from the poor or to appropriate their assets, the poor could become worse off in absolute terms. It has also been argued that food security could decrease if cash or export production displaces staple crops, and if these changes result in women having less decisionmaking power and fewer resources.

Yet, several studies have shown that the Green Revolution—and domestic and international commercialization—can yield benefits for the poor because of its effect on production, employment, and food prices, although any uniform attainment of benefits is by no means guaranteed. Trade expansion that creates income opportunities for women may also give them greater control over expenditures, with positive impact on child nutrition and development, as well as greater incentives to invest in girls. But there may be a trade-off between income-generating activities and the time allocated for childcare—an issue currently being analyzed at IFPRI. Generally, complementary policies are needed to increase the physical and human capital owned by the poor and by women, to build general infrastructures and services, to ensure that markets operate competitively, and to eliminate institutional, political, and social biases that discriminate against vulnerable groups.

Developing countries. During the current WTO agricultural negotiations (which began in March 2000), several developing countries indicated concerns that further trade liberalization could create problems for their large agricultural populations, among which poverty is concentrated. Poor countries have argued for a slower pace in reducing their tariffs (or maintaining current levels) on the premise that industrialized countries should first eliminate their higher levels of protection and subsidization. Another concern is how to avoid any sudden negative impact on poor producers, whose vulnerable livelihoods may be irreparably damaged by drastic shocks (for instance, by forcing poor families to sell productive assets or to take children from school).

This policy debate reflects a permanent tension between maintaining high prices for producers versus assuring low prices for consumers. While industrialized countries have used transfers from consumers and taxpayers to maintain high prices for producers, developing countries have enforced low agricultural prices to further the process of industrialization. Several studies have shown that poverty alleviation in developing countries was impaired by policies that protected capital-intensive industrialization and discriminated against agriculture. Post-1980s policy reforms in developing countries appear to have reduced general policy biases against agriculture, but in some cases, they may have contributed to the decline of the infrastructure and institutions needed for agricultural production and commercialization. Although further improvements in the general policy framework may still be needed in some countries, now the emphasis should be on investments in the rural economy, focusing on the poor.

Out of concern for small farmers, some have argued that developing countries should move even further towards protection of the agricultural sector. However, considering that poor households may spend as much as 50 percent of their income on food, these recommendations could have a negative impact on the poverty and food security of poor urban households, landless rural workers, and even poor small farmers, who tend to be net buyers of food. Trade protection for food products is equivalent to a regressive implicit tax on food consumption, mostly captured by large agricultural producers, with a greater impact on poor consumers. Also, trade protection for any sector usually implies negative employment and production effects in other sectors, and widespread trade protection leads to a reduction in exports.

The best approach for developing countries is to eliminate biases against the agricultural sector in the general policy framework, and to increase investments in human capital, property rights, management of land and water, technology, infrastructure, nonagricultural rural enterprises, organizations of small farmers, and other forms of expansion of social capital and political participation for the poor and vulnerable. At the same time, developing countries may legitimately insist that industrialized countries reduce first their higher levels of subsidization and protection, and ask for policy instruments to protect the livelihoods of the rural poor from import shocks that could cause irreparable damage.

These issues are currently being discussed in WTO agricultural negotiations. The WTO Agreement on Agriculture (AoA) does not constrain good policies that genuinely address issues of poverty and food security (such as stocks for food security and domestic food aid for populations in need). Under the AoA, countries must make serious efforts to structure well-defined programs for poverty (Article 6.2). Poor producers can also be helped by the disciplines on subsidized exports. Yet, some clarification of the language of the AoA may be required, along with a better definition of country groupings based on objective indicators of food insecurity.

CONCLUSION

Overall, changes in food security have been positive but uneven, and populations in some developing countries and regions remain seriously at risk. To increase food security requires both reductions of agricultural subsidies in developed countries and funding to support rural development, food security, and rural poverty-alleviation programs in developing countries. Rather than legal constraints to their own policies under the WTO, the main problem facing developing countries in ensuring food security is the lack of financial, human, and institutional resources. This could be addressed by linking agricultural trade negotiations to increased funding by international and bilateral organizations for rural development and poverty alleviation. ■

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A 2020 Vision for Food, Agriculture, and the Environment
2020 VISION

Shaping Globalization for Poverty Alleviation and Food Security

Nutrition

Julie Babinard and Per Pinstrup-Andersen

Focus 8 • Policy Brief 5 of 13 • August 2001

Of the world's 6 billion people, about 800 million do not have enough to eat. Globally, nutrition has improved in recent decades, but malnutrition—including deficiencies in micronutrients—is still widespread. Hunger, combined with low intake of important micronutrients such as vitamin A, zinc, iron, and iodine, contributes to low birth weight, infections, and increased risk of death. In developing countries, close to 24 percent of all newborns have impaired growth due to poor nutrition during fetal development. About 33 percent of all children under the age of five are stunted. Because of iron deficiencies, about 2 billion people worldwide suffer from anemia, and 9 out of 10 of them live in developing countries.

Improving nutrition will continue to be a challenge, and the current move toward accelerated globalization can play either a positive or a negative role in reducing malnutrition and hunger. Policies that reduce the negative and enhance the positive effects of globalization on nutrition and groups most at risk will be needed, at both the international and national levels.

THE POSITIVE IMPACT OF GLOBALIZATION ON NUTRITION

Global expansion of agricultural trade and finance can prevent fluctuations in food supply, thereby enabling developing countries to import food at adequate and stable prices. Three-fourths of the world's poor live in rural areas and depend—directly and indirectly—on agriculture. In about 25 percent of developing countries more than two-thirds of total exports are agricultural commodities. Improved market access for these countries can increase agricultural exports, thereby increasing foreign exchange earnings and imports of food (and capital goods). Raising the level of income and employment among low-income rural families also increases the amount of food poor people can afford and protects them from higher food prices in the event of shortages in domestic markets.

The globalization of advances in technology and transport can improve traditional methods of agricultural production and marketing, contributing to the achievement of food security and providing access to better nutrition in the long run. Poor populations often lack access to markets, information, and communication technologies, putting them at a competitive disadvantage in world markets. However, recently developed technologies could be adapted to the constraints faced by developing countries and the poor. For example, wireless phones require a lower capital investment to set up and are particularly suited to remote locations.

Improved access to information and data via the Internet can allow researchers and policymakers to learn about new nutrition initiatives, share information, obtain best practices, and map food production and undernutrition by country and by regions within countries. Information networks can provide a forum for debate on nutrition-related issues, increasing global awareness.

The integration of labor markets gives the poor and malnourished a greater variety of employment possibilities and opportunities to acquire and diversify their income. The growth in relatively labor-intensive, long-distance services—data processing, software programming, clerical and professional services—could increase the commercial service exports of developing countries. These opportunities indirectly offer potential improvements in nutrition, but there is also the risk that malnourished and unhealthy individuals may not be able to capture these jobs.

NUTRITIONAL RISKS AND EMERGING (DIETARY) CHALLENGES

Despite its potential for improving nutrition, several aspects of the globalization process may worsen human nutrition in developing countries. Increasing trade could create a major shift in the structure of diets, resulting in a growing epidemic of the so-called "diseases of affluence." Traditional, low-cost diets, rich in fiber and grain, are likely to be replaced by high-cost diets that include greater proportions of sugars, oils, and animal fats, giving rise to higher food costs and an increase in weight gain, obesity, and associated chronic diseases that affect children and adults alike. Aggressive promotion of such goods by producers and distributors can further accelerate adverse changes in diet. In China, for example, the number of overweight adults jumped by more than half—from 9 to 15 percent—between 1989 and 1992. These problems are no longer limited to the well-off. A recent IFPRI study found that a large share of poor Asian households have at least one obese member.

In addition to potentially harmful dietary changes, huge cross-border capital flows leave developing countries particularly vulnerable to international economic fluctuations. For example, recent evidence from Indonesia, whose economy was badly hit during the East Asian financial crisis of 1997 and 1998, shows an increase in poverty and nutritional deficiencies for that period.

The impact of globalization on nutrition also depends on the domestic policies of industrialized countries. While efforts have been made over the years to improve market access, developed countries are still reluctant to open up their domestic markets. Distorting policies and high tariffs, sometimes 100 percent or higher, set for meat, dairy, and other products in the

U.S., Europe, and Japan, restrict trade in products of particular importance to poor farmers in developing countries—a situation that denies them the benefits of trade liberalization and increasing globalization.

As globalization proceeds, food safety standards are becoming more uniform across countries. For groups already at risk nutritionally, elevating these standards could mean a tradeoff between food safety and food security. The safety concerns of developed countries may further restrict market access for food products from developing countries. Farmers in developing countries may not be able to meet the standards because they lack the adequate institutions and infrastructure. In addition, imposing these standards on developing countries could result in higher food prices for poor consumers.

SHAPING GLOBALIZATION TO IMPROVE NUTRITION

An urgent task for the international community is to help developing countries become better integrated into the world economy. This can be done by helping them build up needed supporting institutions and policies, by helping them adjust to and comply with international agreements and terms of trade, and by enhancing their access to world markets,.

Reducing the high, trade-distorting barriers that are in place in most industrialized countries would facilitate developing countries' market access and create a favorable environment for agricultural development in these countries. Progress has been made in reducing tariff barriers on unprocessed tropical products like coffee, tea, and cocoa. Many more developing countries would benefit if similar improvements in market access were granted for other agricultural products, such as temperate-zone horticultural products, sugar, cereals, and meat, as well as for processed agricultural products. Multilateral liberalization would also substantially increase world prices for these commodities, thus benefiting producers.

The nutrition and health communities must respond to problems of unhealthy diets and overnutrition. While the stigma against obesity is absent in most developing countries, people affected by these trends will be hurt in the long run if measures to address them are not taken. Through cost-effective nutrition interventions, education programs, and dissemination strategies, an infrastructure must be set up to help foster a balanced and low-cost diet that will limit the risks of obesity and coronary disease. New policies should encourage the production and marketing of vegetables, fruits, legumes, and a variety of other foods of plant origin, along with decreasing support for the production of fat, sugar, and fatty, sugary foods and drinks.

Modern science and new technologies in information, biology, and communications can provide the poor and malnourished with a voice in policymaking and the tools to become more effective at facing the competitive forces and risks brought about by globalization. For such opportunities to materialize, innovations must be specifically targeted to solving the nutritional and agricultural problems of these groups. For example, while science based on molecular biology is moving at great speed, its application to small-scale agriculture in developing countries has thus far been limited to cotton in China. If focused on reducing hunger and malnutrition, biotechnology could help combat widespread nutritional problems such as iron and vitamin A deficiencies.

Improvements in health care and access to drugs must also be facilitated. The World Health Organization estimates that only eight percent of the $50 to $60 billion in health research worldwide goes to diseases that afflict people in developing counties. Given the synergy between nutrition and health, targeted research and health interventions can contribute significantly to the promotion of nutritional well-being. A health infrastructure capable of delivering comprehensive care and adequate follow-up can help identify and rehabilitate people who are malnourished. At the same time, the access of poor people to essential medications at affordable prices must be protected.

In countries exposed to globalization, the role of the public sector in many areas of food security and nutrition appears to be shrinking, while the involvement of civil society and the private sector is increasing. Such a shift may be appropriate, but globalization should not substitute for appropriate national policies. Recent research and experience shows how important an effective public sector is in areas related to nutrition and food security. Access to land, primary education, primary health care, and other pro-poor policies become even more important as the at-risk groups are exposed to the competitive forces, risks, and opportunities brought by globalization. Governments should assess how globalization will affect at-risk populations, determine whether they can limit the negative impact, and design and implement compensatory schemes and safety nets where needed.

Good governance is needed to guide the transformation of the agricultural sector in a direction beneficial to the poor. Inadequate domestic policies and lack of access to resources and markets are presently making it difficult for the poor to gain from globalization. Governments should ensure that markets remain competitive. They need to implement the appropriate policies and make the necessary changes that will reduce marketing costs and price distortions and allow the agricultural sector to benefit from new technological opportunities. ■

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A 2020 Vision for Food, Agriculture, and the Environment

2020 VISION

Shaping Globalization for Poverty Alleviation and Food Security

High-Value Agriculture

Christopher Delgado, Nicholas Minot, and Nikolas Wada

Focus 8 • Policy Brief 6 of 13 • August 2001

Over the past quarter century, the production and consumption of high-value food products (HVFPs) in developing countries have soared. At the same time, wholesale and retail marketing of these items has changed rapidly. In both industrialized and developing countries, the HVFP sector is becoming global in scope and growing increasingly concentrated at the levels of production and marketing.

This dynamic situation poses special obstacles for small-scale farmers, who constitute the majority of the population in many poor developing countries. They will have difficulty improving their livelihoods if they are not involved in this rapidly evolving sector. The key challenge is to find non-distorting, equitable policy and technology options that support the participation of small-scale producers in HVFP markets. At the same time, the creation or preservation of artificial advantages for large enterprises that drive small-scale producers out of those markets must be avoided. Trade barriers such as agricultural tariffs, implemented in the name of protecting smallholder agriculture, often, in fact, serve the interests of large domestic operations that compete with small farmers.

THE RAPID RISE IN PRODUCTION AND TRADE OF HVFPS IN DEVELOPING COUNTRIES

The growth in HVFP production has been particularly rapid in the area of animal products such as poultry, pork, and fish (where production has grown between 5 percent and 8 percent per year). Consumption of HVFPs has also grown rapidly in developing countries. From the early 1980s to the mid-1990s, the average yearly increase in consumption was 5.4 percent for meat and 3.1 percent for milk; both are projected to grow at 2.9 percent per year between the late 1990s and 2020. Consumption of vegetables and fruits is also expanding quickly in developing countries for the same reasons: population growth, urbanization, and an increase in income (with the latter two factors contributing to changes in diet away from starchy staples toward HVFPs).

In addition to the domestic demand in developing countries, net exports of HVFPs to developed countries have also increased. In the case of fish and poultry, expansion for trade has rapidly outpaced the high growth rate of production for domestic markets. Also, reversing a previous pattern, fish has become a major net export to industrialized countries in recent years. The aggregate value of net fisheries exports from developing to developed countries now often exceeds the combined value of net exports of coffee, tea, cocoa, bananas, and sugar.

THE RAPID CONCENTRATION OF GLOBAL MARKETING CHAINS FOR HVFPS

Global markets for high-value agricultural produce have become increasingly concentrated in recent years, with greater vertical integration between producers and consumers. This consolidation has occurred in response to forces associated with globalization, such as shifts in demographics and consumer demand, improved communication, and increased international capital flow.

With mergers of multinational companies reducing the number of actors in global markets, the coordination of procurement, processing, and distribution of products within the same multinational firms has increased. This has changed the environment within which exporters from developing countries operate. Both traditional multinational processing firms and the increasingly active multinational supermarket chains procure produce directly from developing countries. Unlike an earlier era when national corporations traded raw commodities across national borders, multinational companies increasingly procure, process, package, and distribute food commodities across many borders, with more direct activity in the developing countries themselves.

Similar trends of concentration and vertical integration can be observed among larger companies in developing countries. Charoen Pokphand is a Thai company founded in 1921 that specialized in domestic seed supply through the 1960s. It is now the major force in feed milling, chicken and shrimp production and export, and restaurants in Southeast Asia. In 1995, Charoen Pokphand had $4 billion in sales, controlled 80 percent of shrimp feed in India, owned 75 feed mills in China, owned over 800 food outlets in Thailand, and was a major global producer of shrimp and chicken.

Export transactions involving HVFPs from developing countries increasingly take place under forward contracts and are subject to stringent specifications regarding food safety, quality, quantity, and timeliness of delivery. In the late 1960s, [RTF annotation: Not all readers will connect "Northern" to industrialized countries. If we want to avoid using "countries" twice, better "food processors from the North began…"]food processors from industrialized countries began to invest directly in collection and processing plants in developing countries (for example, Birdseye's export of frozen vegetables from Mexico). More recently, supermarket chains from industrialized countries have begun to contract directly with suppliers in developing countries, sometimes in competition with independent processors, but often in collaboration with them.

Effective participation by developing-country producers in these growing global markets requires access to specialized information, technology, professional knowledge, assets, institutions, infrastructure, and liquidity. Furthermore, the same pressures that operate in international markets also affect the growing high-value end of domestic markets. Predictability of safety, quality, and ontime deliveries of known quantities is critical.

Small-scale and traditional producers have trouble participating under these conditions. For such producers to remain engaged in growing HVFP markets, they must be able to contract forward with the main outlets for their produce, and must be organized in ways that reduce the risks that either party will be unable to complete the terms of their contract.

KEEPING SMALL-SCALE FARMERS INVOLVED IN GROWING HFVP MARKETS

Two key strategies for keeping smallholder farmers involved in demanding markets for HVFPs are producer marketing cooperatives and contract farming schemes. The histories of both are mixed and have been extensively documented. The central issues are (1) whether wholesale and retail outlets have options for securing products other than by dealing with smallholder farmers (such options would include investments in plantations), (2) whether governments are playing a role in providing a facilitating environment for smallholder production, and (3) to what degree smallholder farmers are participating in the management of smallholder schemes.

Horticulture in the central highlands of Kenya provides a good example of a capital- and skill-intensive activity that has steadily shifted to smaller-scale contract farms. Strong political backing by the government has been central to its success, including a favorable regulatory environment and good infrastructure, such as extension to growers along with market information, quality inspection services, and cold storage at the airport. In Guatemala and Honduras, where population densities in the vegetable-growing areas are higher and the political pressure of small farmers is keenly felt, foreign distributors have tended to contract with large numbers of small farmers. In Mexico, on the other hand, contracting by US-owned processors and distributors has tended to involve large Mexican farms and industrial operations.

Small-scale participation in the livestock and fisheries sectors tends to be more difficult for structural reasons. Smallholder technologies for controlling pollution and animal disease become overburdened (and often are not used) when population densities are high. Compliance is hard to monitor, and even harder to enforce. Large-scale poultry, hog, and shrimp operations can often manage to adopt available technologies to control pollution: where high-value export markets are at stake, large operations make the necessary investments. Furthermore, disease-free certification (or expedited border clearance in terminal markets) is required for export. The investments necessary for pollution abatement and disease control are often beyond the means of small-scale farmers operating independently. Without proactive development and policies to keep smallholders involved, the industry in developing countries splits: industrial livestock and fish sectors occupy expanding export markets, and a static smallholder sector competes for the low end of the domestic market. Worse, since export certification cannot be easily obtained in areas where small-scale sectors do not follow controls, the interests of large- and small-scale producers begin to diverge.

An interesting example of a successful contract farming initiative is the Soro-Soro Ibaba cooperative in Southern Luzon, Philippines. The Soro-Soro scheme associates a large number of nonagricultural investors with regionally defined groups of small-scale farmers. The cooperative mills its feed and provides fattener hogs, vaccines, regular veterinary support, and marketing services. Farmers provide space, buildings, a waste lagoon, water, labor, and management of the fattening phase. The fatteners are sold by the cooperative and the farmer is paid a fixed fee per animal. Provided that the farmer follows the rules, the risk of animal loss is borne by the investor. The cooperative provides overall services for management and supervision, and functions as an investment company, paying dividends to shareholders.

CONCLUSION

There are successful models for keeping small-scale operators involved in HVFP. Crucial to this strategy are (1) market reform policies that encourage smallholder investment and avoid differential subsidies to large-scale operations, (2) institutional development to help small-scale operators meet global standards regarding quality, food safety, and timeliness, and (3) provision of public goods such as research, extension, and infrastructure. Such an approach requires both political commitment from government and ways to share the risks and rewards of vertical coordination fairly, so that small-scale producers can participate in growing high-return sectors. ■

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sary to capture all of the potential returns to improved quality and safety. This may include establishing a legal and regulatory framework recognized by the importing countries, along with monitoring and evaluating risks in order to demonstrate equivalence of risk outcomes to importers. Public investments—such as sanitation and water supplies that support better hygiene throughout the food chain and a marketing infrastructure that improves the performance of the system in terms of timeliness, freshness, cleanliness, and quality—can also improve food safety and quality in both domestic and export markets.

Two examples of nontraditional exports from LDCs illustrate how a combination of public and private efforts can overcome trade barriers based on concerns about safety and quality. Raspberry exports from Guatemala were implicated in an outbreak of food-borne illness in the US in 1996, and imports were suspended. A coalition of industry and government organizations worked with growers to establish and certify good agricultural practices that reduce the risk of food-borne pathogens. The export market was re-established in 1999. A second example is the seafood export industry in Bangladesh, which faced a ban on exports to the European Union in 1997 because of poor hygiene in processing plants. Both industry and government made investments in more modern plants and laboratories, and trained personnel in hazard prevention and control. As a result, the EU lifted the ban in late 1997.

RESOLVING DIFFERENCES IN STANDARDS

The Sanitary and Phytosanitary (SPS) Agreement of the World Trade Organization provides a framework for resolving disputes about measures that protect human, animal, and plant health. There is evidence that this agreement has reduced some SPS barriers to trade and has facilitated trade for LDCs. For example, developing countries have used the notification system to raise concerns about changes in developed-country standards. When the EU proposed lowering the maximum residue level for aflatoxin in many food stuffs in 1998, several countries protested, including Gambia, India, Brazil, and the Philippines. These countries argued that the EU's new standard would raise exporter costs without improving food safety. The EU later revised its proposed aflatoxin level for peanuts and announced that it would reconsider other commodities.

Although the SPS agreement has improved discussion of these issues, LDCs are concerned that internationally recognized standards established under the Codex Alimentarius do not adequately represent their conditions and constraints. Furthermore, controversies over the role of science and consumer protection in setting standards remain to be resolved.

DOMESTIC PUBLIC HEALTH

One important question is whether improvements in the quality and safety of exports benefit domestic consumers in LDCs. The relative importance of food-safety risks differs with climate, food habits, levels of income, and public infrastructure. In developing countries, poor sanitation and inadequate supplies of safe drinking water pose a much greater hazard to health than in developed ones. For example, according to the World Health Organization, diarrheal disease is the greatest cause of illness and death in children under age five, and contaminated food contributes to 70 percent of these deaths. Mycotoxins are more prevalent in the subtropics and tropics, and pose greater risks where diets are concentrated in foods with higher mycotoxin levels. Parasites and intestinal worms are also more common in LDCs. These differences in the source and incidence of food-borne illness mean that public interventions to address health issues in LDCs can be expected to differ from those that address export barriers.

When a product is consumed domestically and investments to meet export market standards for that product affect a large portion of production, those investments will have positive spillovers for domestic consumers. However, some products may be produced almost entirely for export, in which case, investments to meet high standards for quality and safety in exports will have little or no direct spillovers for domestic food safety. Indirectly, new export markets can improve people's health and well-being by increasing the income of rural households.

CONCLUSIONS

Globalization brings new opportunities for food producers, along with new challenges to meet growing demands for quality and food safety. Capturing new opportunities to export high-value food products will require LDC exporters to manage safety from farm to table and to meet increasingly stringent food-safety standards in import markets. Successful performance in export markets has the potential for substantial gains from trade, as well as generating income in the rural sector in LDCs, but at the same time, it requires new and different kinds of market coordination. The public sector can play a role in improving food safety and quality to meet export-market standards, addressing domestic issues of public health at the same time.

The challenges that arise are not for the LDCs alone—developed countries have a responsibility to consider the implications of their standards for food safety and quality and their requirements for enforcing those standards. They also have a responsibility to provide technical assistance to their LDC trading partners. ■

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Shaping Globalization for Poverty Alleviation and Food Security

Food Safety and Food Quality

Laurian J. Unnevehr

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Increased trade in food products has many benefits. It provides greater dietary diversity, year-round availability, and, often, lower prices to consumers in many countries. Growing incomes around the world are leading to increased consumption and trade of animal and seafood products. Consumers in many countries find unfamiliar or nontraditional foods becoming increasingly available. In addition to these potential benefits to consumers, producers in less-developed countries (LDCs) benefit from expanded food exports, which earn foreign exchange and increase rural incomes.

However, these changes also carry certain risks. New foods, particularly fresh foods, may carry new or unfamiliar hazards. There are changes in the way food is handled and marketed. New pathogens or antibiotic resistance in pathogens may emerge. And the increased availability of processed or prepared foods reduces consumer control over preparation. The benefits to consumers and to low-income producers will not be realized if food exports from LDCs do not meet food-safety and quality standards in high-income markets or if LDCs cannot improve food safety for their own consumers.

A new understanding and awareness of the importance of food-borne disease has developed, with the result that food safety and food quality are becoming more important issues for the world's consumers, who increasingly demand greater safety assurances from food producers and regulators.. This increased awareness coincides with the identification of new pathogens and their potential long-term consequences, coupled with better surveillance and trace-back techniques.

During the 1990s, many industrialized countries introduced new, more stringent food-safety standards, such as mandatory process controls to reduce risks throughout the production process. Meeting these standards for higher food safety and quality poses a challenge to LDCs as they seek to expand agricultural exports. While such exports can provide an important source of income for the rural poor, meeting higher standards can require additional management, capital investments, purchased inputs, monitoring, and certification. Whether small producers can successfully meet these requirements remains to be seen.

How these standards will be met and whether meeting them will have benefits for poor consumers and producers in LDCs are issues explored in this brief.

FARM-TO-TABLE MANAGEMENT

There is growing recognition that both quality and safety must often be managed from farm to table through process controls, such as the use of good agricultural practices or good manufacturing practices in food production and processing. Because many hazards may enter food products at several points in the production process—and are expensive to test for—prevention and control through documented production practices is often the only way to verify food safety. The public sector has also embraced the concept of process control and hazard prevention, which is now mandated in several industrialized countries for portions of the food system.

This movement toward farm-to-table process control has important implications for LDC exporters of fresh food products:

- First, there are market incentives for LDC exporters to adapt these management practices and to coordinate safety and quality management more closely with importers.
- Second, such costs may influence the distribution of benefits from trade. Studies in the United States and Europe have demonstrated that there are economies of scale in food-safety management. It is possible that safety standards favor large-scale producers in export industries.
- Third, LDC exporters must demonstrate that foods produced with different production practices are just as safe as those produced within importing countries. To do so, the public sector in LDCs will need to demonstrate equivalent regulatory capacity in order to meet importers' food-safety standards.

Increasingly specialized product specifications and the demands of niche markets require specialized quality management. Sometimes characterized as total quality management, such approaches provide assurances that products will meet these complex specifications. Internationally recognized certification, often through the International Standards Organization (ISO), is increasingly applied to food production and processing. The ISO provides a "standard for standards" by applying a framework to verify the quality-assurance elements of a firm's production process. This type of quality and safety management is increasingly in demand in high-income markets, and new institutions are evolving to certify production practices for meats and horticultural products.

PUBLIC AND PRIVATE ACTIONS TO MEET FOOD-SAFETY STANDARDS

To meet differing food-safety standards, the private sector must coordinate the process from the import market back to export production. For example, production in an LDC could be owned and controlled by a multinational firm for export to a high-income market, or local growers might be coordinated through an exporting firm that provides guidance on quality standards and assurances to importers.

However, private coordination alone may not be enough to meet export standards; public involvement may be neces-

Shaping Globalization for Poverty Alleviation and Food Security

Technological Change

Peter B.R. Hazell

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Modern agricultural technologies have transformed the global food situation from one of widespread shortages and famine in the 1960s to one in which food would be plentiful if it were more equitably shared. Yet despite this achievement, some 1.2 billion people remain in abject poverty and do not get enough to eat. Many more live on nutritionally inadequate diets.

About 90 percent of the developing world's poor live in Asia and Sub-Saharan Africa. Some three-quarters of those live in rural areas where they depend on agriculture for their daily existence. Agricultural growth is therefore crucial to raise them out of poverty. The globalization of agricultural markets brought about by trade liberalization and worldwide changes in markets and marketing channels poses special challenges for small-scale farmers and resource-poor areas in all developing countries. This brief focuses on Asia and Sub-Saharan Africa. Each of these regions faces a unique set of challenges and opportunities as it seeks to compete in global markets. Given their structural conditions, each of these regions needs its own approach to investments in technology and infrastructure in order to enable it to participate fully in global agricultural markets while benefiting the rural poor.

ASIA

Asia's remarkable transition from daunting food deficits in the 1960s to national food surpluses today has been accompanied by an equally dramatic reduction in poverty. Half of all Asians lived in poverty in 1970, compared to one-quarter today. But Asia's current food situation is nonetheless paradoxical. On the one hand, many increasingly affluent Asians are diversifying and enriching their diets. This has led to a veritable explosion in demand for livestock products, fruits, vegetables, and vegetable oils, which in turn has led to rapid growth in demand for feed grains. On the other hand, despite the increasing affluence of many, some 800 million Asians still live in poverty and 20 million preschool children remain malnourished. They do not have the means to buy the food they need, in spite of its ready availability. They desperately need better livelihood opportunities.

The changing food consumption patterns of the more affluent offer Asia favorable opportunities for agricultural growth through diversification of production. Markets for horticultural and livestock products and feed grains are growing. While globalization and trade liberalization will enable more farmers to participate in supplying international markets, they will also increase competitive pressures in domestic markets. Farmers will prosper most in those regions that are best equipped to compete in the market. That is, where investments have been made in rural infrastructure and technology (roads, transport, electricity, improved crop varieties, disease control) and where improvements have been made in marketing and distribution systems for higher value, perishable foods (refrigeration, communications, food processing and storage, food safety regulations).

Agricultural growth of this type can contribute to incomes and reduce poverty in rural Asia. But if left to market forces alone, many poorer regions and poor people are likely to be left behind. They will become victims of globalization, not beneficiaries, and be faced with worsening poverty and environmental degradation. To avoid this, two types of public interventions are needed.

- First are interventions to help small-scale farmers capture part of the currently expanding markets, even within regions that have good infrastructure. Agricultural research must give adequate attention to the problems of smallholder farming, and small-scale farmers must be better organized for efficient marketing and input supply.
- Second are interventions to spread the benefits of new markets to the less-favored areas where many of the rural poor live. Investments in the long-term economic growth of these regions are needed. Policymakers have been reluctant to do this in the past, preferring to rely on "trickle down" benefits from investments in high-potential areas (such as increased employment, migration opportunities, and cheaper food). Yet this has proven insufficient. Population densities and the number of people living in poverty in many less-favored areas are set to increase in the future. Without adequate investments in basic infrastructure, technology, and human development, less-favored areas will become even poorer and more degraded. But the right policies and investments could enable these areas to do quite well. Livestock and agroforestry, unlike crops, can often thrive in zones with poor soils and climate, but farmers there must have access to markets. Economic growth in Asia is also creating new opportunities for nonfarm activities in less-favored areas.

SUB-SAHARAN AFRICA

Sub-Saharan Africa now faces a situation similar to that which faced Asia in the early 1960s, with widespread poverty and malnutrition, large national food deficits, and high and increasing dependence on food imports and concessionary aid. Also, like pre-Green Revolution Asia, African crop yields are extremely low and there is tremendous potential for increasing yields with the right technologies.

Rural Africa, however, has a much lower density of infrastructure and weaker institutions to support agriculture than much of South Asia had in the 1950s. Market access and transport costs, too, are obstacles to Africa's development. Input-intensive technologies are not economic when farmers must pay three to five times the world market price for their fertilizer and receive only 30 to 60 percent of the market value for their products. Nor are they economic when extra production simply cannot be transported and sold. Many Green Revolution projects have failed in Africa because they were not profitable for farmers after project subsidies and transport support systems were withdrawn.

Some irrigated and high-potential rainfed areas in Africa do have good access to markets and inputs. In these tracts, input-intensive technologies can be profitable and make important contributions to agricultural growth and national food security. These areas, which often lie along key road and rail transport corridors, will benefit from new market opportunities presented by trade liberalization. But for most African farmers, globalization of agricultural markets will make no significant difference to their livelihood opportunities until considerable improvements are made in infrastructure and marketing institutions.

Modern, input-intensive farming is unlikely to be economic in much of rainfed Africa for at least another two to three decades, until rural infrastructure, markets, and agricultural input supply systems have caught up. In the meantime, most of rural Africa, particularly small-scale farmers in rainfed areas, will need to look to lower cost alternatives such as low external input (LEI) farming technologies. Examples of these are mixed farming systems with integrated crops, livestock, and farm trees; intercropping, green manures, and crop rotations; improved fallows and cover crops; and judicious use of supplementary inputs like phosphate and lime.

While farmers have been using these methods for generations, there are still many opportunities to improve on indigenous farming practices and to transfer successes in one area to another. A growing body of evidence suggests that LEI techniques can make significant yield gains possible.

- The International Center for Research in Agroforestry (ICRAF) is working to combine the occasional use of phosphate (say every five years) with fallows improved by planting leguminous trees. Results from onfarm trials show promising increases in maize yields, from 1 to 3 metric tons per hectare applying modest amounts of phosphate and from 3 to 6 metric tons per hectare when combined with fallows planted to leguminous trees. (Results may further improve by substituting leguminous plants for the trees.)
- Numerous nongovernmental organizations are promoting LEI methods in Africa and have reported high yield increases and favorable impacts. Yet because the evidence is anecdotal and there are differences in measurement methods, more research is needed to validate the findings.
- As part of its research on less-favored lands in Africa, IFPRI's field surveys have found considerable variation across communities and farms in their resource management practices and yields. This suggests opportunities for transferring knowledge from more successful communities and farms to those less successful based on in-depth understanding of the reasons and the enabling conditions needed for improved results.

While LEI technologies could lead to significant productivity increases on many rainfed farms in Africa, there are some important constraints to consider:

- Generating nitrogen and organic matter on the farm requires additional land and labor. Smallholder farmers have the labor but not the land. They cannot fallow or plant cover crops on land they need to plant with food crops each season. Nor are many farmers prepared to use their available organic matter for soil improvement, because they need it for household fuel. Farmers with larger holdings may have the needed land, but face binding labor constraints. More research is needed to develop LEI technologies that not only increase yields, but also improve the productivity of labor and land. This might well be possible, especially as advances in biology enable plant characteristics to be improved to generate more organic matter and nitrogen and to heighten drought and pest resistance.
- Even where LEI technologies are successful, more is needed to sustain agricultural productivity growth. Longer-term growth requires improved germplasm that thrives on the more fertile and moist soils that LEI can help to create, as well as on supplementary inputs, especially nitrogen. LEI technologies are a viable means of buying time in rainfed areas. This time should be used to build the infrastructure and support systems needed for a transition to higher input systems over the longer haul.

CONCLUSION

Globalization can offer significant growth opportunities for many farmers in Asia, particularly in the context of rapidly growing demand within the region for better foods. But if the resulting growth is left to market forces alone, many of the rural poor (especially smallholders and farmers in less-favored regions) are likely to be left behind. The problem is even greater in Africa where most farmers have limited access to modern inputs and expanding markets and where growth in national markets remains more stagnant.

Governments have a key role to play in ensuring that globalization benefits the rural poor. This role includes public investments in agricultural research, developing rural infrastructure, and investing in human development, especially in less-favored areas. Finally, marketing institutions need to be created to support smallholder farmers. ■

For further reading see Peter Hazell, "Policies For Achieving Food Security Without Degrading The Environment," *SCN News* No. 21, December 2000.

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Shaping Globalization for Poverty Alleviation and Food Security

Intellectual Property Rights and Agricultural R&D

Philip G. Pardey and Brian D. Wright

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BACKGROUND

Technological development has historically been a powerful driver of globalization, especially over the past two centuries. In agriculture, in particular, technical change underpinned the industrial revolution, improvements in nutrition, and a surge in world population. Interactions between population increases and technical changes in agriculture and industry, mostly since the nineteenth century, converged to expand trade and flows of finance and labor. These have been the essence of globalization. The integration of the world economy would have been impossible without the technological developments in agriculture that proved wrong predictions of the inevitability of world famine. Technology further supported significant improvements in world food production and food security. Although substantial numbers of people are still food insecure, this is due not to lack of overall production but is related to the location of production, income levels, and access to food by countries, households, and individuals living on the edge of subsistence.

Since the 1960s, growth in world food supplies outpaced even the unprecedented increases in food demand caused by jumps in incomes and the doubling and redoubling of population. Moreover, additional production came from virtually the same cropland base: 1.4 billion hectares of land was planted to crops in 1961 compared with the 1.5 billion hectares that in 1998 yielded twice the amount of grain and oilseeds. At 1960 crop yields, current levels of supply would likely have required at least an additional 300 million hectares of land, an area equal to the entire landmass of Western Europe.

Food prices too have declined to their lowest levels in history. Consumers are able to eat better while spending less and less of their budgets on food, diversifying demand for other goods and services. Changes in demand have spurred countries' specialization in production, fueling world trade and investment flows.

The currently favorable dynamic balance between overall food supply and demand was not inevitable, however. Nor should it be taken for granted that the balance will persist without public intervention. Progress in the past century resulted from successful interaction between farmers, input suppliers, and a publicly supported research and extension system that furnished innovations and knowledge to the world for free. Little land now remains on which to expand agricultural production, so crop and livestock yields must continue to increase for the next several decades. Production must be sustained, at these much higher levels, for the foreseeable future in the face of environmental, biological, and other factors that may undermine past gains.

Continued strong performance in research and innovation is thus essential to maintain favorable food balances over the next half century. But the likelihood of achieving that must be assessed against significant global changes in the amount and sources of support for research, in public- and private-sector roles, and in the balance between locally provided and internationally traded R&D goods and services (often discussed under the rubric of the "globalization" of agricultural R&D). To confront the challenges of the next decades and the need for long-term investment in R&D, one crucial issue (and the center of one of the most heated controversies in the globalization debate) is the positive and negative dynamics generated by the changing intellectual property rights regimes associated with the new international framework defined in the World Trade Organization (WTO) agreements.

INTELLECTUAL PROPERTY RIGHTS ISSUES

National stocks of knowledge represent the accumulation of findings from local research. But not all useful knowledge is homegrown. In fact, the history of agriculture is a study in the spillover effects of innovations. R&D spills across firms, sectors of the economy, and countries. Though nations have sometimes monopolized key genetic resources, until recently agricultural technologies (including new plant varieties and the processes and parent material required to develop them) have otherwise been unencumbered by proprietary claims and freely available to all.

Beginning in the 1980s, a revolution occurred in the effective protection of proprietary claims, particularly in agricultural biotechnology. This has boosted incentives for private-sector investment. However, effective protection comes from patents, which are a mixed blessing. Given the cumulative nature of agricultural research, proliferation of patents makes it difficult for public institutions and private start-ups to be active participants in biotechnology research. Moreover, the needs of industry and agricultural progress are yet to be properly reconciled with the rights of indigenous peoples and poor farmers who maintained many of the landraces on which today's improved varieties depend.

The private sector tends to be most interested in widely transferable or profitable near-market technologies. But much research with high social value is not privately profitable (largely because the benefits are not easily appropriable by the innovator). Such research requires collective action by governments to help fund and even conduct it. Examples are basic and pre-technology innovations and research that focuses on the ecology-specific needs of poor farmers, on the environmental and food-safety consequences of agriculture, and on the long-term sustainability of agricultural systems.

In agricultural biotechnology, the most visible and controversial field of agricultural research, the portion of the key technology protected as intellectual property is now highly concentrated in the hands of a small number of large, multinational corporations based in North America and Western Europe. Now, the very intellectual property rights that were associated with the surge of private research in biotechnology may block access to new developments by public-sector and nonprofit researchers.

As patenting becomes more prevalent, the number of separate rights needed to produce a new innovation proliferates. If ownership of these rights is diffuse and uncertain, the multilateral bargaining problem can become difficult to resolve. Instead of overexploitation of a common property with low entry costs, there is underexploitation of a pool of intellectual property due to the high costs of access—a manifestation of the so-called "tragedy of the anti-commons" problem that plagues not just agriculture but also health sciences research.

Recent work at IFPRI has addressed the question, "Does the international proliferation of intellectual property rights and regimes impede agricultural research conducted in, or of consequence for, developing countries?" Answering this question requires an understanding of the jurisdictional extent of intellectual property, the geographic pattern of production, and the extent and nature of South-North trade flows. Rights to intellectual property are confined to the jurisdictions where they are granted. There is no such thing as an international patent. Gaining patent rights in the United States confers no intellectual property rights in China; a patent in China must also be sought and awarded to confer rights in that jurisdiction.

The extent of freedom to operate (the ability to practice or use an innovation) in less-developed countries is not well understood. For example, the recent vitamin-A rice innovation reportedly required permission to practice over 70 patent rights. The well-publicized donations made by major corporations of their relevant technologies left a strong impression that enforcement of large numbers of crucial patents was being relinquished in favor of the poor in developing countries. In fact, in some major rice-consuming countries there are no valid relevant patents. At most there are very few in the countries where the majority of poor, malnourished consumers reside.

Freedom to operate depends on specific circumstances. IFPRI's investigation of the intellectual property rights assigned to the key enabling technologies used to transform crops revealed that these rights are mainly held in, and therefore are primarily relevant to, rich-country jurisdictions. Thus, for most of the staple crops that matter for food security in poor countries, researchers' freedom to operate in such nations is currently not the main issue. Yet a problem could arise for developing-country research on export-oriented cash crops such as horticultural products, tropical beverages like coffee or cocoa, and dessert bananas. Most certainly, a problem lies ahead for research on some staple food crops as poorer developing countries move into compliance with their intellectual property commitments to the WTO by the year 2005 and as patent applications are increasingly lodged in developing countries.

CONCLUSION

The challenge of increasing the world's food supply capacity has been met thus far. But it has not been permanently resolved. Complacency about food supply capacity may be dangerous. New crop varieties draw directly on breeding lines that were developed decades, if not centuries or more, ago. This fact underscores two key insights. First, progress in the agricultural sciences is cumulative and sequential in nature. Second, the distinction between the stocks of scientific knowledge and the flows of research spending is important and underscores the need for a long-term perspective on R&D spending and its impacts on productivity and economic growth. Also, because agricultural technologies must be adapted to agroecological conditions, they are more location-specific than other technologies (for example, medical and information technologies). So long-term planning cannot be left in the care of a few wealthy nations following their own narrow self-interest.

The debate surrounding intellectual property rights and globalization must be placed in that longer-term framework. The role of the private sector in agricultural R&D is increasing. But even more than in biomedical research, private investment in agricultural R&D covers only a small subset of the needs and is mostly a complement, not a substitute, for continued public and other nonprofit research. For many developing countries, the performance of the latter is now hampered more by lack of funding than by intellectual property rights issues. Continued strong performance of the public and nonprofit research system is needed if world food requirements are to be satisfied over the next several decades while sustaining and protecting the resource base. Foresight is called for, because the lag between investment and output is long. ■

For further reading see E. Binenbaum, C. Nottenburg, P.G. Pardey, B.D. Wright, and P. Zambrano, "South-North Trade, Intellectual Property Jurisdictions, and Freedom to Operate in Agricultural Research on Staple Crops," EPTD Discussion Paper No. 71 (Washington, D.C.: IFPRI, 2000), and C. Nottenburg, P.G. Pardey, and B.D. Wright, "Accessing Other People's Technologies: Do Non-Profit Agencies Need It? How to Obtain It," EPTD Discussion Paper (Washington, D.C.: IFPRI, forthcoming 2001).

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movements of hazardous waste (the Basel Convention), biodiversity loss (Convention on Biological Diversity), trade in endangered species (Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES]), ozone layer depletion (the Montreal Protocol), desertification (United Nations Convention to Combat Desertification), and loss of wetlands (the Ramsar Convention on Wetlands). While it is not clear that globalization per se has been a dominant factor in creating the problems these initiatives address, some do relate to trade and some are likely exacerbated by trade liberalization. There is thus a growing sentiment that formal linkages should be strengthened between the World Trade Organization (WTO) process and global environmental regulation. But obstacles remain, such as resentment toward rich countries seeking to impose standards that are at odds with economic conditions and social preferences in poor countries. Moves to strengthen environmental regulation as a pre-condition for trade are perceived largely as a guise by which rich countries legitimize nontariff trade barriers.

Climate change is one of the most controversial global issues. Although there are many uncertainties, studies suggest that much of the world will be impacted increasingly by climate change linked to human-induced emission of greenhouse gases. Not only are mean temperatures likely to rise, but also the incidence and severity of extreme events such as heat spells, droughts, and floods are expected to increase. Projected climate change will not affect all countries equally however. Global agricultural production appears to be sustainable in the aggregate, but impacts on crop and livestock productivity will vary considerably across regions. Successive studies suggest that temperate areas (largely richer countries) stand to increase their agricultural potential while that of many tropical and subtropical areas will decline. The poorest countries in Sub-Saharan Africa (already a hot region with large tracts of arid or semiarid land) appear to be the most vulnerable to temperature increases and changing rainfall patterns. Countries in South and Southeast Asia could be affected by increasing irregularity and intensity of tropical storms. The Pacific Island nations could suffer losses of coastal land due to rising sea level, saltwater intrusion into water supplies, and increased damage from tropical storms. The anticipated disproportionate impact of climate change on the poorest countries means the number of people at risk of hunger is also projected to rise, compared to a baseline without climate change.

FORCES FOR CHANGE

Asymmetries exist not only in the likely environmental impacts of globalization on developed versus developing countries, but also in the capacity of countries to mitigate or adapt to change or to seek compensation. Most developing countries have only limited mechanisms by which communities can seek redress when confronted with environmental externalities like water pollution and increased flooding caused by activities upstream, or the loss of food and fuelwood due to forest conversion. But externalities may also have consequences far beyond the location of production. When externalities "spill" across borders, such as greenhouse gas emissions, ozone layer depletion, and biodiversity loss—particularly extinction of species—the full force of international environmental advocacy is often mobilized. Global grassroots activism now has a significant influence on international trade dialogues, including their environmental aspects.

Recent developments in information and communication technology are also shaping the debate on globalization and the environment. The Internet and email are powerful tools for sharing information among global communities, including scientists, the private sector, policy analysts, community leaders, and environmental activists. Information on best practices, technology, institutional innovations, and specific environmental incidents can be relayed rapidly the world over in photos, text, web links, and sound bites. The enhanced flow of information is proving particularly valuable to environmental advocacy and action groups in developing countries. Access to information hitherto unavailable nationally strengthens the capability of such organizations, often nongovernmental organizations (NGOs), to raise awareness and promote national debate on the plight of the environment and the people whose livelihoods depend on it.

Mobilization of informal collective action in developing countries is also proving effective. While studies of firm behavior in developed countries cite regulatory pressure as the most potent driver of environmentally preferred technical change, similar studies in developing countries find community pressure to be the predominant force. Increasingly too, the policies and practices of multinational enterprises in developing countries are shaped by (fear of) adverse media campaigns mounted by international NGOs aimed at developed-country consumers and investors.

CONCLUSION

Global environmental issues, ranging from depletion of natural resources and biodiversity to climate change, are complex. Analyses of future trends are cloaked in uncertainties, given our limited understanding of earth systems and their interactions with changing economic and social conditions. Population growth, shifting consumption patterns, and institutional innovation will undoubtedly continue to affect the environment, as will the pace and nature of technical change. There is reason to believe that these changes will hasten the deterioration of environmental conditions faced by already vulnerable populations in developing countries. Such deterioration would likely reinforce vicious cycles of humanitarian crises, conflict over resources, and lack of development. To confront these pressing environmental challenges, a concerted global effort is needed with rich countries taking the lead and prepared to adopt a truly global vision. ■

For further reading see T. Panayotou, *Globalization and Environment*, Working Paper No. 53, Center for International Development (Cambridge, Mass., USA: Harvard University, 2000) http://ideas.uqam.ca/ideas/data/Papers/wopcidhav53.html; O. Solbrig, R. Paarlberg, and F. di Castri, eds., *Globalization and the Rural Environment* (Harvard University Press, 2001); and S. Retallack, "Economic Globalization and the Environment," *Transnational Associations 4* (2000) (http://www.uia.org/uiata/retallack004.htm).

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A 2020 Vision for Food, Agriculture, and the Environment

2020 VISION

Shaping Globalization for Poverty Alleviation and Food Security

Environment

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Globalization affects the environment in several ways. It changes the structure and pace of economic growth and, hence, the scale and nature of resource consumption and waste emission. It also fosters the creation of regulatory frameworks and institutions for promoting trade, the flow of capital, and the diffusion of technology, in ways that can exacerbate or mitigate environmental impacts. Environmental impacts may be felt locally, affecting those who earn their livelihood by exploiting resources such as land, water, and biodiversity. Or they may be felt further afield, through broader effects on natural ecosystems, the freshwater cycle, the ozone layer, nutrient flows, the climate, and so on. There are thus sound economic as well as humanitarian and ethical reasons to map the impacts of globalization on the environment.

Evidence supports the notion that open and transparent economies are more likely to be prosperous. Yet measures of prosperity rarely account for environmental costs of production. Some argue that depletion of natural resources, pollution of air, water, and soil, loss of biodiversity, and global warming significantly reduce and in some circumstances outweigh the growth-related benefits of globalization. Furthermore, economic and environmental costs and benefits may not be equitably distributed if the lion's share of economic benefits from globalization accrues to developed countries, while the developing world shoulders the environmental burdens.

ENVIRONMENT, GROWTH, AND COMPETITIVENESS

Trade generates economic benefits because, given free and efficient markets, it encourages trading partners to specialize in goods or services they have some comparative advantage in. Since developing countries often have abundant natural resources and cheap, plentiful labor, trade liberalization has fostered shifts toward labor- and resource-intensive sectors such as mining, logging, garment manufacturing, and export crop production. Most of these sectors, however, generate significant environmental "externalities." These are environmental costs not reflected in the production costs of individual enterprises, be they farm households or multinational companies. The results of ignoring the true social costs of production are excessive production, resource consumption, and waste emission.

Proponents of globalization argue that many environmental problems can be countered by stimulating economic growth. A portion of the overall economic gain can be transferred to individuals and communities affected by environmental degradation. Investments can be made to strengthen environmental institutions, and cleaner, more resource-efficient technologies can be developed and adopted. Based on studies of developed countries, proponents also point to the so-called "inverted-U" phenomenon. That is, although natural resource consumption and degradation increase as economies grow, an income threshold is attained above which demand for a better environment stimulates investment in environmental protection and rehabilitation. Degradation is thus reduced. Many developing countries, however, are so poor, population growth so high, and natural resources already so stressed, that catastrophic, perhaps irreversible, environmental damage may well occur long before any such threshold is reached.

Although environmental damage can be a by-product of globalization and trade liberalization, incentives for addressing its underlying causes are mixed. While developing countries suffer the greatest damage, they are also under the greatest pressure to accelerate economic growth to increase incomes and combat poverty. And since environmental policies and institutions are likely to be weak in developing countries, producers there (be they domestic or foreign) have little incentive to care about the environmental externalities of their actions. Rampant logging of the world's biodiversity- and carbon-rich tropical forests, for example, testifies to this. This raises concerns that globalization might create "pollution havens" in developing countries, where foreign investors operate to escape stricter environmental laws and enforcement in their own countries. There are also fears that governments might progressively push environmental standards lower as they compete to attract scarce foreign investment (the "race to the bottom" hypothesis). Available evidence suggests that such fears might be overstated. Foreign investors are generally much more concerned with factors such as wage rates, available infrastructure, and the repatriation of earnings.

Some governments' adoption of lenient environmental standards raises concerns that these countries are, in effect, subsidizing exports and reducing the competitiveness of producers in countries with stricter standards. Attempts to raise environmental standards bring protests from domestic producers who are concerned about potentially higher production costs and loss of international competitiveness. Politicians express concern too about increasing domestic prices in the face of widespread poverty. Furthermore, developing countries maintain that differences in resource endowment, pollution assimilation capacities, and social preferences with regard to environmental standards are legitimate sources of their comparative advantage. Attempting to reconcile such conflicting interests poses enormous challenges to environmental policymakers.

GLOBAL ENVIRONMENTAL CONCERNS

Despite the political and technical difficulties involved, the international community has proven willing to take collective action to address environmental issues of global concern. International initiatives have been mounted on climate change (United Nations Framework Convention on Climate Change),

A 2020 Vision for Food, Agriculture, and the Environment
2020 VISION

SHAPING GLOBALIZATION FOR POVERTY ALLEVIATION AND FOOD SECURITY

DEMOCRACY AND CIVIL SOCIETY

MARZIA FONTANA AND YUKITSUGU YANOMA

FOCUS 8 • POLICY BRIEF 11 OF 13 • AUGUST 2001

Globalization is generally perceived as a fundamental change in human interactions, but precisely what has changed and how it has changed are matters of contention. Some maintain that the changes are mainly related to the emergence of transnational economic and political organizations, while others emphasize the role of dramatic improvements in communications—with the Internet, mobile phones, and satellite networks shrinking space and time. Although some argue that globalization is economically driven, its political, cultural, and technological processes are equally important. Globalization is a complex, contradictory process that simultaneously involves increased diversity and homogenization, fragmentation and integration, and localism/regionalism and internationalism. This brief illustrates some of these contradictions as they have emerged in the areas of democracy, social capital, and social movements in developing countries, emphasizing their relationship with poverty and food security.

DEMOCRACY AND GLOBALIZATION

Democracy is important for food security in a number of ways—it helps ensure a government's commitment to famine prevention, for example. India's success in conquering its vulnerability to famines has been attributed to two key elements: a vigilant press (to disseminate information about impending food crises) and free elections (to ensure the government's accountability to its electorate). Recent research has also documented the positive impact of democracy on declines in child malnutrition.

Democracy has made remarkable progress during the past 30 years, especially in the developing world—a change that has been strongly influenced by the evolution of global communications. Authoritarian regimes, based on control of information, have no future in a framework of open communication: access to information helps citizens gain greater awareness and enables increased participation.

But not all information is equally helpful, nor do all actors have equal access to information resources. Consequently, different groups of people have different opportunities to mobilize and to make their voices heard. Information technologies mainly are designed for developed countries, making it hard for poor people in developing countries to benefit from them because they lack the necessary literacy and live mostly in rural areas, where telecommunication facilities are far less available than in urban areas. Poor women benefit even less than poor men. Such exclusion means that the poor are at risk of being cut off from the global conversation.

There is also increasing concern that the new wave of democracy might face reversals, as indicated by the recent rise of populism in some countries in Latin America and Asia, and the persistence of single political parties in parts of Africa.

SOCIAL CAPITAL AND GLOBALIZATION

Social capital is a type of social organization based on networks with common norms and mutual trust that pursue common goals. Studies in different developing countries show that societies with strong social capital tend to do well economically and can reduce their poverty levels. In addition, several studies on rural development have shown that indigenous or locally created associations can be essential for growth as well as food security. Globalization affects social capital in multiple ways, and the question is whether societies gain or lose from increased exposure to external forces and ideas. Some societies may lose traditional values, norms, and networks without making further progress. In other societies, new practices brought by globalization may transform "dysfunctional" traditional groups into more productive ones.

A study of an industrial sector in Kerala, India, illustrates the successful establishment of new social capital influenced by global ideologies such as democracy at both the macro and micro levels. At the macro level, the state government transformed the traditional vertical political structure into a more horizontal network and encouraged social mobilization by creating strong and effective legal systems. With this governmental support, the power of the lower class at the micro level was strengthened through labor unions and class mobilization. This contributed significantly to transforming traditional relationships with the local elite and improving the welfare of the poor.

Another example of an effective social network is the Self Employed Women's Association (SEWA), which operates in Gujarat, India. SEWA began by organizing textile workers, then applied and modified the lessons learned to mobilize women in the informal sector, helping them achieve some power over their work situation. Its efforts bring together three movements: the labor movement, the cooperative movement, and the women's movement. SEWA's philosophy vis-à-vis globalization is pragmatic, supporting trade liberalization in some cases and opposing it in others, depending on whether the effects are beneficial or damaging to the poor.

In the case of SEWA and similar initiatives, the availability of the Internet and other new communication technologies has played a crucial role in promoting effective participation of the poor. These experiences show that there are ways of putting the new technologies to work for the poor.

Grameen Telecom, a branch of the Grameen Bank in Bangladesh, provides another good example. Founded in 1996, Grameen Telecom has sought to make telephone service available throughout Bangladesh. It does this by loaning money for the purchase of cellular phones to women recruited from among the Grameen Bank's borrowers. After the women purchase a phone on credit, they make telephone service available to an entire village, charging villagers for phone use. The project helps the rural poor of Bangladesh not only by providing better access to information, but also by offering low-income women good opportunities for income generation.

GLOBAL CIVIL SOCIETY AND TRANSNATIONAL SOCIAL MOVEMENTS

Environmental changes, fluctuations in the global economy, and developments in global technologies do not respect the boundaries of nations. Nations remain powerful, but because of global forces there are large gaps opening up between their governments and citizens. This makes sovereignty a fuzzy concept.

Much of the current debate on globalization and social movements focuses on the concept of a global civil society—a society in which networks and movements provide a voice for individuals in the global arena. Referring mainly to independent nongovernmental organizations (NGOs) and to social movements that operate across national boundaries, the concept and the forms it embodies are viewed by some as the necessary response to a more globalized world.

The term civil society is often associated with the ability to control the circumstances in which individuals live and the substantive empowerment of citizens. But do these new global forms of organizing allow the poorest countries—and, more importantly, the most marginalized and vulnerable groups in a country—to have equal participation in civil society? Globalization offers conflicting opportunities to social movements. On the one hand, it provides them with significant new possibilities and resources for influencing both state and nonstate actors. On the other hand, to the extent that globalization appears to reduce the ability of states to act within their own territories, it means that social movements must direct resources toward international linkages and partnerships that may diminish their autonomy or their effectiveness in their home country. Some would argue, for example, that small NGOs supporting poor communities in developing countries need to work on very specific local issues—that they have neither the time nor the resources to engage in more global concerns.

The difficulty of shaping a common agenda that respects the needs and interests of all participants in transnational movements is also an important issue. In the women's movement, for example, there have been notable difficulties in developing a shared global perspective on economic change. Tensions result from the fact that the economic interests of women in developing countries can conflict directly with those of women in developed countries. Acknowledging the complicity of women in the North in the suffering of women in the South has been a challenge: the preservation of women's consumption standards and employment in the North, for example, results in environmental damage or loss of women's labor rights in the South. Similarly, during the protests in Seattle, the wide range of civil-society organizations that were represented—trade unions, environmental activists, farmers' associations, women's groups, campaigners for social justice—often had very diverse views and aims. Moreover, the NGOs present came predominantly from the North, while civil society from the South was underrepresented.

More inclusive methods of mobilization are needed to ensure greater participation by developing countries—an outcome that might result in a different way of tackling social and environmental conditions. The use of a common label ("civil society") should not obscure the heterogeneity of interests and objectives across groups and countries, and the need to deal in a democratic way with those differences.

Globalization can provide the poor with opportunities for mobilization, for strengthening democratic institutions, and for making their voices heard. But it does not come without risks, perhaps the greatest of which is the potential for marginalizing the poorest and most vulnerable segments of society. The outcome will depend, to a great extent, on developments in civil society and the ways that can be found to promote greater accountability and global responsiveness to the needs of the poor in developing countries. ■

For further reading see L.J. Camp and B. Anderson, "Grameen Phone: Empowering the Poor through Connectivity," IMP: *The Magazine on Information Impacts* (December 1999) (http://www.cisp.org/imp); J. Dreze and A. Sen, Hunger and Public Action (Oxford University Press, 1991); F. Fukuyama, "Social Capital and Civil Society" (http://www.imf.org/external/pubs/ft/seminar/1999/reforms/fukuyama.htm [1999]); A. Goetz, "Lobbying for Economic Justice: Women's Movements and the World Bank" (Institute of Development Studies, Sussex, UK, 1999); P. Heller, "Social Capital as a Product of Class Mobilization and State Intervention: Industrial Workers in Kerala, India," *World Development* 24 (1996); M. Kaldor, "'Civilizing' Globalization? The Implications of the 'Battle in Seattle'"(http://www.lse.ac.uk/Depts/global [2000]); and Self Employed Women's Association website (http://www.sewa.org).

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market, which makes it easier for Sierra Leone, the Democratic Republic of the Congo, and Sudan to sell petroleum, minerals, or gum Arabic to finance weapon purchases and intensify civil wars. The toll in the Congo alone includes three million deaths in three years, 6.5 million people in need of humanitarian assistance, and over a million displaced people. In 1995–99, legal arms suppliers sold Africa $2.5 billion worth of weapons, with the five permanent members of the U.N. Security Council – China, France, Russia, the United Kingdom, and the United States – providing 60 percent. In Colombia, Myanmar, and Afghanistan, narcotics production for the world market, armed violence, and food insecurity are tightly linked.

Information and communication technologies work in both Mexico's Zapatista Liberation Front garnered worldwide attention and aid for the plight of the country's indigenous people via the Internet, while Sierra Leone's Revolutionary United Front coordinates military operations, diamond sales, and arms purchases via satellite phone from bases in the country's hinterland.

NO CONSENSUS AMONG ANALYSTS

Consensus continues to elude scholars and policy analysts as to whether economic ties foster peace. One school of thought asserts that as a web of economic relationships entangles nations, the costs of going to war become prohibitive. Some empirical studies support this proposition. Also, there are well-known cases where weak economic ties prevail between countries experiencing hostilities. India and Pakistan, for example, share one of the world's tensest borders but engage in very little trade with one another.

Other analysts insist that the peace-through-trade notion must be seriously qualified. They argue that trade reduces conflict incentives only when partners enjoy relatively symmetric economic and military relations. For example, although Taiwan and China have extensive trade links, and Taiwan has invested tens of billions of dollars in China, the threat of cross-Strait violence remains considerable. The economic relationship is unmistakably dominated by Taiwan, whereas China is pressing to establish military superiority.

Research to date has focused on globalization's effects in mitigating interstate conflict. Few studies examine the relationship between globalization and civil war, which is much more salient for today's policymakers. One well-known study, funded by the U.S. Central Intelligence Agency, found a strong relationship between openness to the global economy and reduced risk of civil war. This report concluded that trade promotion policies could help prevent conflicts.

Other research qualifies this conclusion, pointing out that trade's effects in reducing the likelihood of civil war depend on internal distribution, as well as the nature of the relationship between trade and investment partner nations. High levels of inequality associated with conflict. And trade may exacerbate existing inequalitydepending on how it is carried out. A World Bank study found that low per capita income, negative economic growth, and high dependence on primary commodity exports are a recipe for civil war.

Analyses of the causes of the 1994 Rwandan genocide provide evidence on this point. The country relied heavily on coffee exports for hard currency and government revenues. The collapse of world prices in the early 1990s led to high unemployment, reduced farm incomes, reduced social spending, and a citizenry receptive to government incitement of ethnic and political violence.

RECONNOITERING PEACE AND FOOD SECURITY

Violence in developing countries stems from a constellation of factors. Ethnic rivalries and environmental scarcities are among them, as are structural factors in which globalization may be implicated. Groups may compete, for example, over resources such as development aid and commodities in demand on world markets. Often pressed into service by national leaders seeking control over natural and human resources, individual combatants still fight to maintain human dignity and a decent standard of living. Policies aimed at reducing conflict should encourage cooperation among rival groups and reduce real and perceived scarcities. The ways aid is delivered in conflict-prone areas are also crucial. Development assistance, including agricultural investment, can deter conflict where it is integrated in the construction of social contexts that promote equity.

Global investors, whether private or public (aid donors), need to emphasize conflict prevention as part of the development agenda if they are to expect positive returns. Developing countries need peace to achieve more food-secure outlooks and to reap potential benefits of globalization.

A number of recent developments may advance globalization's peaceful potential:

- debt relief, which will free resources for investment in human security,
- efforts through the U.N. system to improve data collection on food insecurity among vulnerable groups, in order to facilitate improved international response to famine and chronic undernutrition, and
- emergence of broad civil society coalitions that seek, inter alia, to refocus globalizattion in ways that promote peace and equity.

Further, donors must allocate humanitarian aid where it is needed most, which may mean more aid to Africa and less to the former Yugoslavia. Global trade and investment agreements must take into account their potential to fuel conflict. Improved codes of conduct and control regimes governing trade in conventional weapons are essential, as are equitable international frameworks to reduce the flows of diamonds, drugs, and fossil fuels that generate resources for war.

More research is needed to bolster policies that foster peace. In particular, work should focus on the relationship between food insecurity and conflict and on the circumstances under which globalization contributes to peace.

Future connections among globalization, food insecurity, and conflict are likely to play out at multiple social and political. Foresight and planning, based in part on hindsight and lessons from history, can help to make the world more peaceful and secure. Careful monitoring is needed of the likely and actual local food security impacts of international trade and aid, both within and beyond the food economy. ■

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A 2020 Vision for Food, Agriculture, and the Environment

2020 VISION

Shaping Globalization for Poverty Alleviation and Food Security

Conflict and Food Insecurity

Ellen Messer and Marc J. Cohen

Focus 8 • Policy Brief 12 of 13 • August 2001

For more than two centuries, proponents and critics of an open global economy have debated whether free flows of goods, services, and capital make the world more or less peaceful. One view is that as nations increase their commercial, financial, communication, and cultural ties, they are less likely to go to war. The opposing view holds that world economic liberalization worsens inequality within and between nations, with strife and violence the inevitable result.

Globalization has replaced the Cold War as the central organizing principle of international relations. Whether it is likely to make the world more or less peaceful, therefore, has enormous implications for food security. Globalization is not just the intensified integration of global markets and information exchange, but also the expansion of international norms and institutions that can dampen or heighten conflict-hunger dynamics.

CONFLICT IN THE ERA OF GLOBALIZATION

In late 2000, armed conflicts worldwide left 24 million people in 28 developing and transition countries and territories in need of food and other humanitarian assistance (see box). Nearly 80 percent of these people were in Sub-Saharan Africa. Moreover, globally, women and children make up 70–80 percent of the refugees and internally displaced people uprooted by violence.

War's impact on food security is profound. According to the Food and Agriculture Organization of the United Nations, in 1990–97, conflict-induced losses of agricultural output in Africa totaled US $22 billion, a sum equivalent to a third of the aid received by the conflict countries and far in excess of foreign direct investment flows (see our *Food from Peace,* 2020 Discussion Paper No. 24 and Brief No. 50 for more detail on the losses to food production attributable to conflict). Compounding the effects, in almost all the affected countries, the majority of the workforce depends on agriculture for its livelihood.

Analysts pointing to the pacifying effects of globalization note that both the number and intensity of conflicts between nation-states declined after the Cold War. But internal conflicts proliferated in the early 1990s, with the total number of conflicts in 1999 (37) well above the figure for 1965–70. The distinction between internal and interstate warfare has also blurred. Twenty-two years of civil war in Afghanistan have featured significant U.S., Pakistani, Soviet, Tajik, and Uzbek intervention. Internal conflict in the Democratic Republic of the Congo (formerly Zaire) is "Africa's World War," with the intervention of Angola, Namibia, Rwanda, Uganda, and Zimbabwe.

Conflict and Food Insecurity, 2000

According to U.N. data and the U.S. Committee for Refugees, in November 2000, 23.5 million people were in need of humanitarian assistance due to conflict:

18.5 in Angola, Burundi, Congo (Brazzaville), Congo (Kinshasa), Guinea, and Côte d'Ivoire (refugees and internally displaced people), Eritrea, Ethiopia, Kenya (refugees), Liberia, Rwanda, Sierra Leone, Somalia, Sudan, Tanzania (refugees), Uganda and Zambia (refugees)

3.2 million in the Afghanistan region (Afghanistan, Iran, and Pakistan), Armenia, Azerbaijan, Georgia, Indonesia, Russia (Chechnya region), Tajikistan, and the Palestinian territories territories; and

1.8 million in Colombia

GLOBALIZATION: INSTITUTIONS FOR PEACE OR COMMODITIES FOR ARMS?

Clearly the integration of global markets, combined with developments in information and communication technologies and transportation, could potentially deter conflict. At a minimum, the capacity to monitor the early warning signs of famine and to move humanitarian aid quickly has greatly improved. Yet this development alone cannot ensure peace without the political will to prevent and resolve conflicts. Furthermore, globalization is not just about markets or flows of labor and capital. Global institutions that uphold consensual humanitarian norms, such as the convention banning land mines, the new International Criminal Court, and the U.N. Commission on Human Rights framework on the right to food play an active but as yet insufficient role in reducing the destructive forces that produce food insecurity.

Since 1991, military-humanitarian interventions authorized by the United Nations in Iraqi Kurdistan, Somalia, and the former Yugoslavia have demonstrated the international community's willingness to intervene to uphold the right to food and emergency aid, even over the objections of a sovereign government when that government is implicated in creating the crisis. However, such intervention remains ad hoc. The international community has stood aside in other food wars in Rwanda, the Congo, and East Timor.

Some aspects of globalization clearly facilitate conflict. The integration of global markets includes a $40 billion arms essential. Rich nations must also ensure that their firms abide by anti-bribery codes and that there are no safe havens for money laundering, while strongly supporting anticorruption efforts in developing countries.

Environment. Global environmental concerns, from climate change to stressed ecosystems, are complex and addressing them will involve tangible costs. But costs and uncertainties should not obscure their important implications for the food security, health, and nutrition of the world's poor. Deteriorating environmental conditions may reinforce vicious cycles of conflict over resources and humanitarian crises, and the poor will pay the higher price. Complaints in industrialized countries about developing countries enjoying unfair trade advantages from presumed lax environmental regulations (which, if true, would have only local effects) appear inconsequential when compared to the larger responsibilities of rich countries in shaping global environmental conditions that may adversely affect some of the poorest of the planet.

Technology and public goods. Expansion of adaptive research on agricultural technology—biotechnology in particular—that focuses on the needs of poor farmers and consumers in developing countries can contribute to enhanced food security, nutrition, and health. Yet, during the 1990s, growth in investment in agricultural research in and for developing countries stalled, and for some regions even decreased. Industrialized countries can help by fostering a serious debate over environmental, health, ethical, and equity concerns with respect to both agricultural biotechnology and agricultural research in general. Most importantly, they can provide scientific and financial support for technology development in poor countries and facilitate creative public-private partnerships. Similar arguments apply to research on health issues that overwhelmingly affect the world's poor. Finally, the proper balance between public- and private-sector concerns about intellectual property rights continues to be debated, indicating the need to explore that relationship further.

POLITICAL AND INSTITUTIONAL CONSIDERATIONS

Establishing viable political coalitions, domestic and international, to sustain the needed institutional and financial commitments is just as important as defining adequate policies. The notion of supporting globalization with appropriate complementary policies (as suggested in this brief) is not universally accepted. Some have argued that globalization erodes the fiscal resources of the state, undermining the implementation of necessary policies just when funds are needed to help people affected by their integration into the international economy.

More fundamentally, several critics of globalization consider participation in the international economy as the root of all problems. Some see the world as monolithically controlled by powerful governments and corporations, with poverty resulting from a chain of international exploitation that leads from the very poor to the very rich. In a different but politically more powerful tradition, protectionists and isolationists join forces, based on narrow views of economic and national self-interest, to oppose the process of global integration and the establishment of better institutions of global governance.

The current discussion echoes arguments after World War II. Having experienced the horror of two global wars and the Great Depression, the world needed an international architecture to prevent similar tragedies. Economic nationalists, however, wanted to reduce foreign ties through protectionism. The left, in the Leninist tradition, believed that the expansion of capitalism worldwide could only lead to more crises and war among the imperialist powers. Political nationalists advocated isolationism and unilateralism in foreign affairs, always fretting about possible losses of sovereignty. Outside the United States, there were also voices that criticized an international system that was perceived as an instrument of political and economic domination by the economic superpower emerging from the wreckage of World War II. Similar arguments appear in today's debate on globalization. But, now as then, global problems require global approaches and institutions. Protectionism, isolationism, and unilateralism will not solve them.

The optimistic view of globalization begins by recognizing that the process of world economic integration has generated levels of wealth never seen before, potentially providing the resources with which to confront global poverty and hunger. Another encouraging trend is the worldwide advance of democracy since the 1980s, in part influenced by the globalization of information. New communication technologies have eroded the information monopoly of nondemocratic political systems, and abuses of power and corruption that went unnoticed before are being exposed. Better communications have also linked societies more closely, with international alliances being formed to confront global concerns. The notion of monolithic corporate control is contradicted by obvious differences in interests and behavior among corporations, opening the way for different coalitions, as shown on a variety of issues, from climate change to affordable drugs.

Just as the expansion of markets and democracy in the developed countries over the past 50 years increased welfare and helped reconcile conflicting social interests, the world can now move in the same direction, beginning with a concerted effort to combat hunger and poverty. In addition to the obvious and compelling humanitarian arguments, enlightened self-interest also dictates the need to do so. Poor developing countries continue to spawn health, environmental, military, and humanitarian crises, while poverty and hunger deprive the world of the creative potential and economic contribution of billions of human beings.

CONCLUSION

The latest wave of globalization has lifted human welfare to levels never experienced before. It has helped create enormous wealth. The persistence of poverty and hunger amidst affluence is an avoidable moral tragedy and a drag on the world economy. Poverty and hunger are problems that can be addressed, if humanity, particularly those better off, can summon the political will to do so. ■

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A 2020 Vision for Food, Agriculture, and the Environment
2020 VISION

Shaping Globalization for Poverty Alleviation and Food Security

Governments and Public Policy

Eugenio Díaz-Bonilla and Sherman Robinson

Focus 8 • Policy Brief 13 of 13 • August 2001

The wave of globalization that began in the 19th century was driven by technological changes in transport and communications, population growth, and migration. It ended in global war and economic collapse. The current wave of globalization, driven in part by similar forces, appears to be more enduring and to be associated with trends toward participatory government and economic development. The briefs in this collection have described the welfare-enhancing aspects of globalization today, but they have also sketched scenarios in which vulnerable groups may be hurt. The authors have emphasized the need for complementary domestic and international policies to ensure that those vulnerable groups, particularly the food-insecure and the poor, benefit from a more integrated world. This brief concludes by looking at governance and public policy issues to achieve the objective of substantially alleviating, or eliminating, hunger and poverty in a globalized world.

POLICY RESPONSE TO POVERTY AND HUNGER

Developing countries

Effective domestic policies in developing countries are key for growth, poverty alleviation, and food security. These policies include maintaining a stable macroeconomic framework; promoting open and competitive markets; ensuring good governance, transparency, and the rule of law; implementing programs and investments that expand opportunities for all, with special consideration for vulnerable groups; and providing adequate safety nets.

Because three-quarters of the world's poor depend directly or indirectly on agriculture, rural development has to be given special attention. Some have argued that increased agricultural trade protection in developing countries would ease poverty and promote food security. But this would be equivalent to a regressive tax on food consumption, which would harm poor consumers and mostly benefit large agricultural producers. A better approach for developing countries is to eliminate policy biases against agriculture; increase investments in health, education, and human capital in general; improve management of land and water resources; facilitate land ownership by small producers and landless workers; promote improved agricultural technology, rural infrastructure, and nonagricultural rural enterprises; and encourage organizations to expand the social capital and political participation for small producers and the poor. Food security in developing countries also requires equitable economic growth and appropriate food use, which depend on empowerment of women, health and education investments, and better governance. Developing countries may also need policy instruments to protect the livelihoods of the rural poor from import surges, and, in the current World Trade Organization (WTO) agricultural negotiations, they may legitimately insist that industrialized countries first reduce their higher levels of subsidization and protection of agriculture.

Industrialized countries

Industrialized nations set the global economic, political, and environmental agenda and context. They therefore cannot evade their responsibility to make this world a better place, especially for the poor. A number of broad policy issues require attention.

Trade liberalization in products of interest to developing countries. Low-income countries have historically faced high trade barriers in industrialized countries in products such as agriculture and textiles that best reflect the developing world's human and natural resource endowments. The Uruguay Round began to address some of the imbalances that developing countries suffer in international trade, but it did not rectify them. Efforts to rectify those imbalances should continue. In particular, current negotiations must eliminate the combination of agricultural protectionism and high subsidies in industrialized countries that has limited agricultural growth in the developing world and weakened food security in vulnerable countries by putting their domestic production at a disadvantage.

International capital and aid flows. The last 20 years have witnessed serious international financial crises, several of which arose from policy changes in industrialized countries that affected exchange rates, interest rates, and capital flows, with destabilizing effects on weaker countries. Although developing countries must reduce their vulnerability through better macroeconomic and financial policies, these may not be enough if at the same time the main industrialized countries do not foster world financial stability with adequate macroeconomic policies. Moreover, the poorest countries, lacking access to international capital markets, need resources through aid flows. They would benefit from the acceleration and expansion of the Heavily Indebted Poor Country Initiative (HIPC) and the implementation, and future increase, of aid targets by donor countries. Finally, international financial institutions should increase funding for rural and agricultural development, poverty alleviation, and health and nutrition interventions.

Peace, democracy, and good governance. Continued international diplomatic and political engagement and financial support is crucial to bring peace and reconciliation to countries affected by conflict and to sustain fragile transitions toward democracy. Otherwise, regional security problems and humanitarian crises will keep recurring. Improved codes of conduct and regimes governing trade in conventional weapons appear