

Forces Shaping Food Security: Factors Affecting Imports

For low-income food-insecure countries, financial constraints severely limit their ability to achieve food security through imports. Food aid can effectively reduce food gaps, but less than 60 percent of food aid is targeted at the low-income food-insecure countries.

(Shahla Shapouri and Birgit Meade)

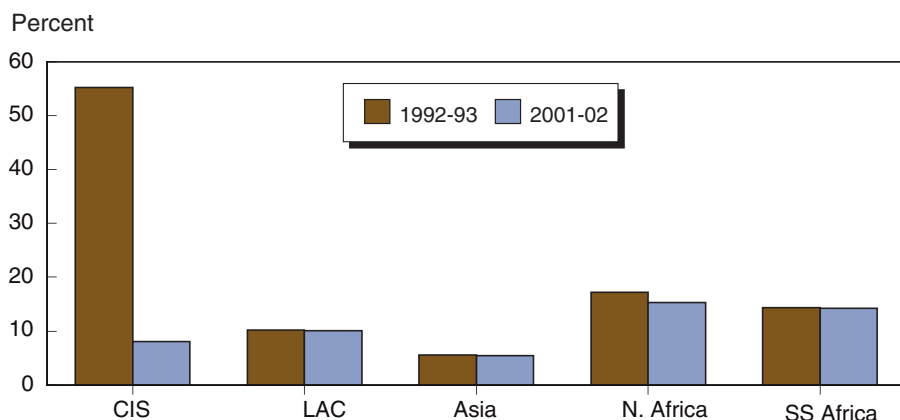
Food Import Dependency is Low in the Most Food-Insecure Countries

Domestic food production is less critical to food security if countries can import required foods. For low-income food-insecure countries, however, financial constraints severely limit their ability to do this. These countries depend on imports not only for food, but for other essential commodities like fertilizers, fuels, medicine, and essential manufacturing inputs and products. These nonfood items can comprise a large share of the total import bill. In Sub-Saharan Africa, for example, fuel imports were about 16 percent of the total value of imports in 2002. Given the current hike in oil prices, these countries must make hard choices in importing commodities. In this section, we review the level of food import dependency of 70 lower income countries, examine their food import composition, evaluate whether food imports and food aid can fill existing food gaps, and review forces that can influence future imports.

Of the regions studied here, North African countries have the highest level of average calorie consumption, and spend the largest share of their import budgets on food, 15 percent in 2001-02 (fig. 3-1). This marks a slight decline from 17 percent a decade prior (1992-93). The Sub-Saharan African (SSA) countries devoted 14 percent of import budgets to food, but remain the most food-insecure region. Latin American and Caribbean (LAC) coun-

Figure 3-1

Food as a share of total merchandise imports remained stable in all regions except CIS



Source: Economic Research Service, USDA.

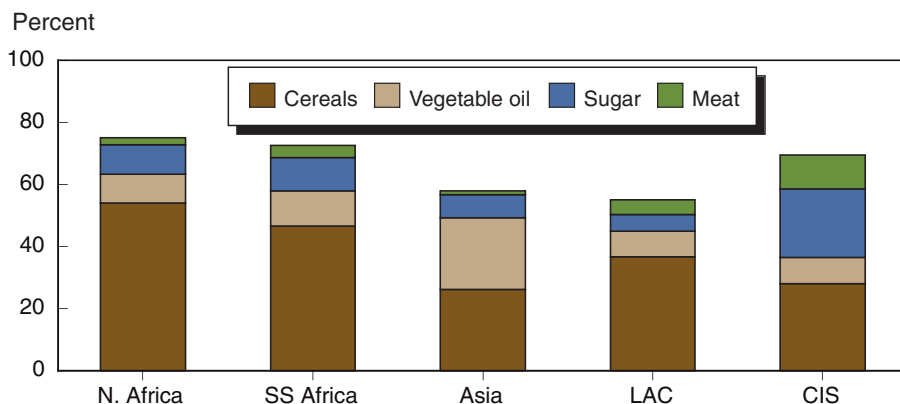
tries spent 10 percent of their import budgets on food in 2001-02, and this pattern has not changed much through time. In the Commonwealth of Independent States (CIS) countries, the share of food in import budgets dropped from 55 percent in 1992-93 to 8 percent in 2001-02. The reason for this significant decline is both a rebound in domestic production and a more than two-fold expansion of import budgets during this period. In Asian countries, food captured just 5 percent of the total import budget for much of 1992-2002.

So except for CIS countries where food markets have undergone a major transition, the food share of total imports has remained stable. This pattern holds despite the differences in import budget growth among regions. For example, the total value of imports (all commodities) in LAC almost doubled from 1992-93 to 2001-02, while the food share of those imports held steady. On average, there is almost a one-to-one relationship between growth in food imports and total import budgets in the regions studied. This means that foreign exchange earnings will largely determine whether imports can support food security in these countries. Food import prices, of course, are critical. Given the constant share of food import value in total imports, any increase in food prices would mean a reduction in the quantity of food imports and, in turn, a reduction in food available for consumption.

Cereals Continue To Dominate Food Import Bills

Cereal imports, the key component of the diets of these countries, continue to dominate the food import list in all regions, followed by vegetable oils and sugar (fig. 3-2). Meat and pulses are important dietary components in several countries, but their import shares remain (except for CIS) below 5 percent. All regions but North Africa saw a decline in the cereal share of food imports between 1992-93 and 2001-02. Vegetable oil imports have grown in Asia and the CIS, while their share has declined in North Africa and LAC. Sugar imports have become very important in the CIS, reaching 22 percent of food imports in 2001-02, versus 10 percent in North Africa and SSA. Meat imports, at 10 percent of food imports, are fairly important in CIS countries.

Figure 3-2
Food imports consisted mostly of cereals, vegetable oil, and sugar in 2001-02



Source: Economic Research Service, USDA.

Pulse imports are of relative importance to low-income Asian countries only, where they comprise about 7 percent of total food imports.

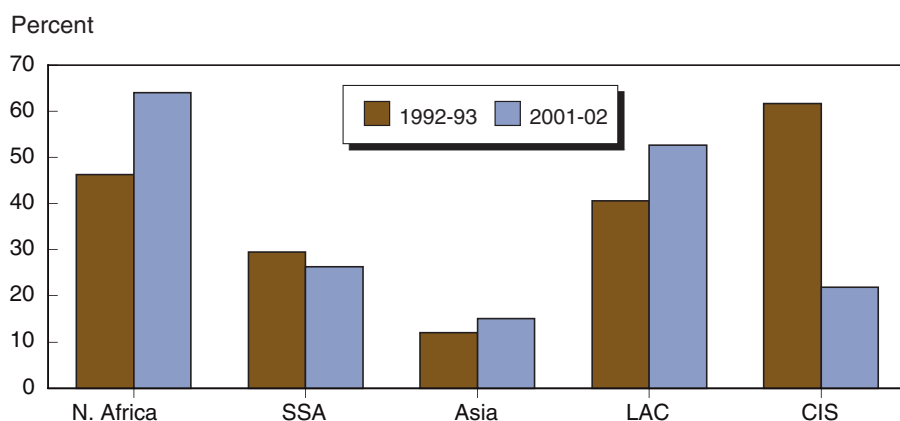
In terms of volume, the average share of cereal imports in total domestic cereal supplies decreased slightly from 36 percent in 1992-93 to 34 percent in 2001-02 for all the study countries. The trends differed widely among regions, with CIS countries dropping from 62 percent in 1992-93 to 22 percent in 2002 (fig. 3-3). In these countries, political instability and changing policies during the post-independence years of the early 1990s led to a decline in economic activity and an increase in imports. Since then, agricultural production has recovered and growth in demand has remained weak, thereby reducing import dependencies.

Of the remaining regions, the low-income Asian countries, despite their doubling of import volumes since 1990, remain the region least dependent on cereal imports, with the share of imports equaling about 15 percent in 2001-02. In contrast, cereal import dependencies in the low-income Latin American countries have grown from 40 percent in 1992-93 to 53 percent in 2001-02, nearing the most import-dependent region of North Africa at 64 percent. There are different reasons for the high import dependencies of the two regions. Latin American countries have purposely invested in export crops such as fruits and vegetables rather than staple crops such as corn. Agricultural exports contribute more than 50 percent of total exports in countries such as the Dominican Republic, Nicaragua, and Guatemala. In contrast, North Africa's import dependency stems from limited agricultural resources, and the agricultural share of total export earnings in this region was less than 10 percent in 2002. In Algeria, the agricultural export share was less than 1 percent of total earnings. North African countries also have longstanding policies that favor consumers. These policies are reflected in their high per capita calorie consumption, 3,162 calories per day in 2002. This compares favorably with higher per capita income countries, such as Sweden and Finland.

Sub-Saharan African cereal import dependencies have grown, but remain low given the general food insecurity. Financial constraints severely limit imports in most SSA countries. Political problems continue to plague

Figure 3-3

Cereals comprise more than half of domestic supply in North Africa and LAC



Source: Economic Research Service, USDA.

economic activity. Countries such as the Democratic Republic of Congo, Somalia, and Sierra Leone have the required resources to expand trade, but years of internal conflict have been prohibitive. Data for these countries are poor or nonexistent, and an assessment of the food situation is therefore weak. Based on available estimates (FAO), the size of cereal imports relative to domestic production ranges from 40 to 90 percent. However, the bulk of those imports consist of food aid.

Not All Food Imports Are Commercial

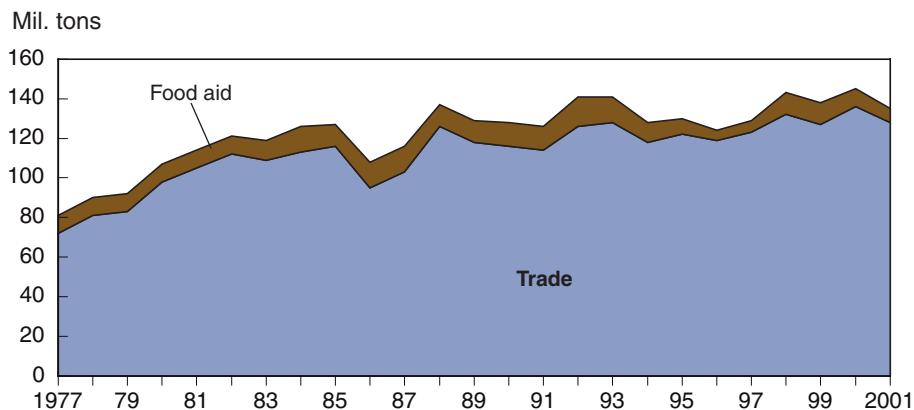
Food aid has been a major means by which the international community improves food access and reduces suffering in low-income countries. The global quantity of food aid has fluctuated during the last two decades, and its share has declined relative to both total exports of food aid suppliers and total food imports of low-income countries. The number of food aid recipients also increased, particularly after the breakup of the Soviet Union and the emergence of new Central Asian countries. The share of food aid in total cereal imports was around 18 to 20 percent in the early 1990s, but has since declined to about 7 percent in 2002 (fig. 3-4).

Sub-Saharan African and Asian countries have been by far the largest recipients of food aid, receiving more than 60 percent of the volume during the last 15 years (fig. 3-5). Severe droughts in the early 1990s resulted in higher food aid shipments to SSA, while political change, financial collapse, and natural disasters in the late 1990s shifted donations to Asia. On a per capita basis, however, SSA's receipts are much higher than Asia's because of the difference in population: SSA countries have less than half the population of lower income Asian countries. North African countries, among the top food aid recipients two decades ago, now receive less than 2 percent of total food aid.

Most food aid is in the form of cereals, but noncereal food aid rose from about 15 percent in 1990 to 20 percent in 2002-03. This trend may be problematic for food security because cereals are the least expensive source of calories, and more expensive noncereal commodities will likely not reach the poorest segments of the population. The distribution of noncereal food aid is not uniform among recipients. In Georgia, for example, noncereals

Figure 3-4

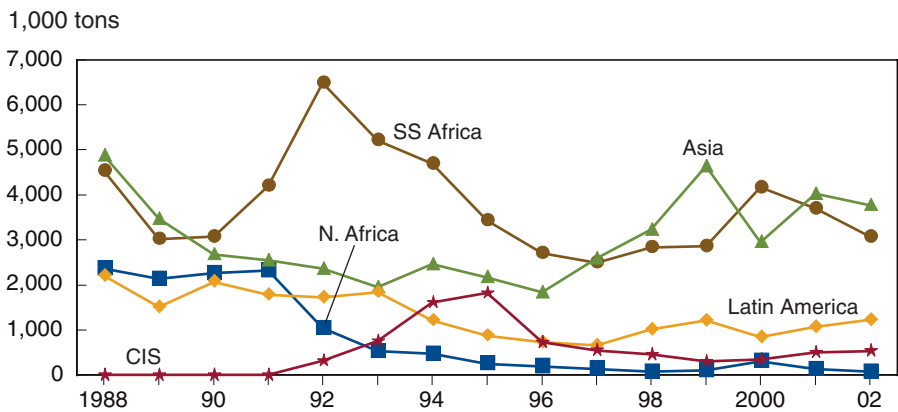
Food aid role in world cereal trade is small



Source: Economic Research Service, USDA.

Figure 3-5

Asia and SSA now compete for the first place in receiving food aid



Source: Economic Research Service, USDA.

accounted for two-thirds of the food aid package (67,739 tons in grain equivalent) in 2000. Commodities in this package included vegetable oil, pasta, dried potatoes, dried fish, pulses, sugar, and fresh vegetables. Regionally, Latin American and CIS countries were by far the largest recipients of noncereal food aid, receiving more than 60 percent of the total (converted to grain equivalent) in 2001-02.

By far, the largest recipient of food aid in 2002 was North Korea, at 1.2 million tons, followed by Ethiopia, Afghanistan, and Pakistan, which all received about half a million tons. Countries receiving the largest per capita amounts were Cape Verde, where 52,000 tons of food aid amounted to 115 kg per capita in 2002; North Korea, at 47 kg; and Afghanistan, 22 kg.

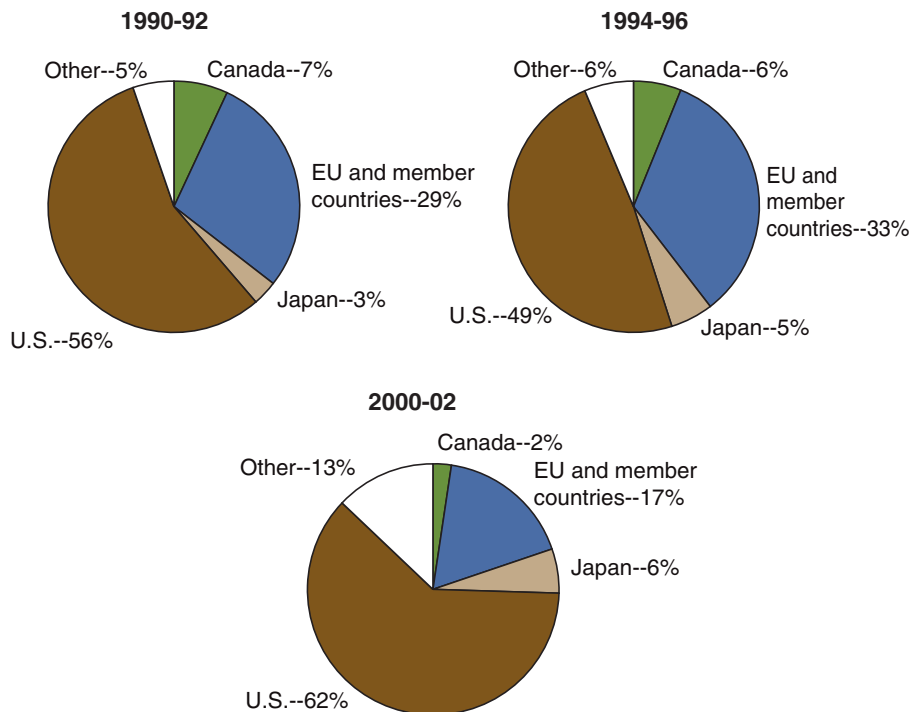
The major food aid donors are the United States, the European Union (EU), Japan, and Canada (fig. 3-6). In the early 1990s, the U.S. provided roughly 7 million tons of food aid per year, or 56 percent of global food aid. The EU share at that time was about 29 percent. U.S. donations fell considerably through the mid-1990s. This decline was partially offset by the EU, whose share rose to a third, and Japan, whose share doubled to 5 percent. U.S. donations rebounded considerably and in 2000-2002, the U.S. share of the world total matched the levels of the early 1990s. Conversely, EU donations have slipped, and its share of the total has averaged 17 percent in recent years. In 2003, U.S. food aid was again less than 50 percent of the total.

Can an Increase in Imports Fill the Food Gaps?

To increase food availability, countries can either increase food production or increase imports. Increases in production are often slow because of the lack of agricultural resources. Imports are often viewed as a quick remedy to fill the consumption gap. So why don't countries increase food imports sufficiently to eliminate or reduce food gaps? In this section, we focus on distribution gaps in relation to imports; this measure captures both the food availability and the food access dimension of food security.

Figure 3-6

U.S. share of global food aid rose after dipping during last decade



Source: Economic Research Service, USDA.

Based on our 2004 estimates, the size of the food gaps (distribution gaps) relative to commercial imports was highest in SSA, about 1.4 times commercial food imports. This is followed by Asian countries, whose food gaps were about half the size of imports. In Latin American countries, the food gap was about 30 percent of imports and in CIS countries it was only 5 percent. These regional averages, however, mask the different situation of each country. For example, in Colombia, the Dominican Republic, and El Salvador, estimated food gaps were less than 20 percent of commercial food imports in 2004. In Bolivia, Ecuador, Guatemala, and Haiti, they were 60 percent or less. In Honduras and Nicaragua, food gaps relative to commercial imports were 90 and 140 percent. Clearly, for many countries in Latin America, a large increase in imports to fill food gaps is unlikely, since they are already highly dependent on food imports. In Asia, countries are less dependent on food imports. In countries such as Indonesia, the Philippines, Sri Lanka, and Vietnam, an increase of less than 5 percent in commercial imports would cover their food gaps. India, with the largest food gap of about 4 million tons, can easily cut back on its exports of about 9 million tons of cereals to cover its food needs.

In Sub-Saharan Africa, the average distribution gap is estimated at 1.4 times commercial imports, with much larger variation by country than in other regions. In 18 of the 37 countries, imports need to grow more than two-fold and in 8 countries more than five-fold to cover food gaps. The countries with estimated gaps of more than 10 times their commercial imports are the Democratic Republic of Congo, Burundi, Ethiopia, and Somalia. Clearly, in

most SSA countries, food gaps cannot be closed by increasing commercial food imports, at least in the short term.

How Effective Is Food Aid in Reducing Food Gaps?

With continued hunger and inadequate safety nets in the low-income countries, food aid remains vital. For this reason, its effectiveness is critical, and this effectiveness hinges on both donors' and recipients' policies. Although the overall level of food aid is decided by donors, country allocations and distributions within countries are often decided jointly by donors, recipients, and multinational organizations such as the World Food Program (WFP) of the United Nations.

Not all food aid donated goes to the lowest income, food-deficit countries, and this concerns many. For example, in 2003, about 8.2 million tons, or 70 percent of total food aid, was given to the countries analyzed in this report (table 3-1). One reason for giving food aid to countries not as visibly needy as others is the "stickiness" of food aid. Institutional requirements for its distribution tend to support its flow even when the need is not as pressing. Poor donor coordination and the lack of uniform, need-related, and timely information that is acceptable to all donors are other reasons. Therefore, in many instances food aid is given to countries that are not critically food-deficient despite donors' intentions otherwise. However, such food aid may still support food security.

To examine the effectiveness of food aid at reducing hunger in the study countries, we used the food security model and actual data from 2003 to calculate the food gaps for 2003 with and without food aid (actual level of food aid received by the countries and actual production and import data in

Table 3-1—Total food aid in grain equivalent, 1988 and 2003

Year	70 recipient countries	All recipients	Food aid share of study countries
	1,000 tons		Percent
1988	13,982	15,529	90.04
1989	10,048	12,196	82.39
1990	10,163	13,755	73.88
1991	10,893	13,156	82.80
1992	12,017	15,972	75.24
1993	10,379	17,969	57.76
1994	10,546	12,991	81.18
1995	8,666	10,209	84.88
1996	6,318	7,400	85.39
1997	6,556	7,475	87.70
1998	7,683	8,660	88.73
1999	8,586	14,569	58.93
2000	8,700	11,193	77.73
2001	9,601	10,931	87.84
2002	8,284	9,823	84.34
2003	8,219	12,080	68.04

Source: World Food Program, ERS calculations.

2003). In 2003, the countries received 8.2 million tons of food aid. Surprisingly, by including 8.2 million tons in the estimated level of availability, the estimated gaps—status quo gap, nutritional gap, and distribution gap—were reduced by only 3-5 million tons. In 2003, food aid was more effective in reducing the status quo gap (or maintaining average per capita food consumption of countries) than providing support for inadequate food access within the countries, i.e., reducing the distribution gap (table 3-2). These results indicate that a considerable share of food aid was given to those countries that, according to ERS’s definitions and estimations, either had no food gaps or received quantities of aid exceeding their needs. In other words, about half of the food aid was given to countries such as Algeria, Egypt, Armenia, and Azerbaijan, which did not need food aid according to our various indicators.

We also examined how the effectiveness of food aid in 2004 would change if food aid received by countries was held constant at the 2003 level. We used preliminary 2004 food production data and estimated 2004 commercial food imports. Without any change in the flow, food aid would be more effective in reducing the distribution gaps in 2004 than in 2003 (table 3-3). This result is due to the fact that several countries without distribution gaps and receiving food aid in 2003 we estimated to suffer production shortfalls in 2004. Therefore, the same allocation of food aid is effective in that it does reduce an estimated distribution gap. However, the reduction in the gap is only about 57 percent of the level of food aid. This exercise illustrates the critical role of these assessments and the need for flexibility in matching distribution of food aid to countries’ needs.¹

Prospects for Foreign Exchange Availability To Finance Imports

Estimated commercial imports of countries are based on an assessment of the countries’ financial condition. The estimation of future food imports in the study countries is highly dependent on projections of foreign exchange availability, defined here as the sum of real export earnings and net real external financial flows. The response of food imports to foreign exchange availability is positive and close to one in most food-insecure countries (the

¹ We did not include the disincentive impacts of food aid, which have long been the subject of debate among analysts. The argument is that food aid increases domestic supply and reduces producer prices in recipient countries, which may reduce production incentives in those countries.

Table 3-2—Changes in food gaps due to food aid received by countries in 2003¹

Region	Change in food gaps due to food aid			Food aid in 2003
	Status quo gap	Average nutrition gap	Nutritional distribution gap	
	<i>1,000 tons</i>			
Asia	1,360	617	250	2,381
Latin America & Caribbean	84	341	241	539
North Africa	0	0	0	47
CIS	0	63	270	275
SSA	3,225	3,503	2,360	5,251
Total	4,669	4,524	3,121	8,219

¹These estimates are based on actual food consumption data.

Source: ERS calculations.

Table 3-3—Changes in nutritional distribution gaps in 2004 if food aid is provided at 2003 level

Region	Food gap with food aid	Food gap without food aid	Difference in gaps	Food aid in 2003
	<i>1,000 tons</i>			
Asia	8,648	10,141	1,493	2,381
Latin America & Caribbean	3,396	3,940	544	539
North Africa	0	0	0	47
CIS	230	309	79	275
SSA	18,900	21,480	2,580	5,251
Total	31,175	35,871	4,696	8,219

Source: ERS calculations.

food import response tends to be higher when its share is small relative to the total import bill). Food import prices and import/government trade policies also play an important role in import levels. Despite the range of food import responsiveness, countries' food imports will increase with an increase in foreign exchange availability. To project food imports, we assume that countries' export earnings mostly follow their historical path (since 1990), while the real net external financial flow (credit and external assistance) is assumed to remain constant at 2001-03 levels. This assumption implies that the performance of exports will be the key determinant of food import capacity.

During 1992-2002, the total value of export earnings (goods and services) expanded in all regions, despite variations by country. Asian export values increased fastest, nearly 8 percent per year, and North African countries slowest at 4 percent. In CIS countries, exports grew 7 percent per year, followed by about 5 percent in Sub-Saharan Africa and Latin America. In Asian and CIS countries, the growth in export earnings led to a decline in their trade deficit. In CIS countries, the trade deficit was about 42 percent of export earnings in 1992, declining to 14 percent in 2002. In Asian countries, the 1-percent trade deficit in 1992 was turned into a 6-percent trade surplus by 2002. North African countries saw improvements in the trade deficit, while in Sub-Saharan Africa and Latin America trade deficits deteriorated over 1992-02. Sub-Saharan Africa had the highest trade deficit-to-exports ratio in 2002, about 20 percent.

The future performance of commodity markets could have a major impact on the projected export earnings of the study countries. Most low-income countries, many in Sub-Saharan Africa, continue to depend on the exports of a few primary commodities—such as coffee, tea, sugar, and tobacco—for most of their export earnings. Prices for these commodities are not expected to grow much in the long term. According to the World Bank, in real terms, nonenergy and agricultural commodity prices are projected to decline, on average, nearly 2 percent per year in 2004-14, metals by 1.8 percent, and beverages by 3.5 percent. Internal market conditions (demand, supply) of these countries generally have no significant influence on world market prices. Without a major effort to diversify exports, growth in export earnings could slow considerably.

The projection of import capacity of these countries during the next decade is based on historical performance and disregards other sources of import financing options. Average net flows of import support to North Africa, Sub-Saharan Africa (excluding Nigeria), Latin America, and CIS countries declined during the last decade, while flows to the Asian countries in this study were positive. Again, there is wide variation among countries. For countries such as Mozambique, Rwanda, and Somalia, as much as 45 percent of imports were supported by external assistance in the last 5 years. In contrast, higher income countries with political problems, such as Algeria and Angola, are faced with a net loss due to capital flight. For a number of countries, the debt burden continues to dampen growth prospects and the risks of setbacks are considerable; therefore, financial conditions remain difficult. According to the World Bank, the ratio of debt to gross national income (GNI) was close to 100 percent in the low- and middle-income countries of Sub-Saharan Africa, Latin America, and South Asia in 2002.

The future financial stability of the low-income countries considered here remains uncertain. Many countries have taken economic and/or political steps that should help secure a more financially stable future. The International Monetary Fund (IMF), the World Bank, and donors have proposed and supported various policy reforms emphasizing demand management, currency devaluation, privatization, and reduction in market distortions. The benefits of such policy reforms have, so far, been remarkable in the developing countries of Asia. But fundamental changes in economic policies have also occurred or are underway in African and Latin American countries. Other significant progress has been made with respect to political liberalization. Since 1990, many countries have held presidential and/or parliamentary elections, some for the first time.

With success come new challenges and risks. In many countries, domestic investment remains very low. Countries with high investment and better management of capital inflow are generally less vulnerable to changes in world financial markets. Improvements in economic policies are recent in most countries and can be derailed by external forces. In the low-income African countries, policy progress is uneven and there are risks and uncertainties linked to political instability. For a number of highly indebted countries such as Nigeria and Côte d'Ivoire, a substantial debt burden continues to dampen growth prospects, and risks of setbacks are considerable while financial conditions remain difficult.

Prospects for Food Imports

Food imports are projected to play a growing role in the food supply and food security of the study countries. Commercial imports of all countries are projected to grow about 3.5 percent per year during the next decade under the strict assumption of constant financial flows (average 2000-02). This assumption may underestimate the import capacity of some countries, particularly some Asian and CIS countries that have enjoyed strong export growth since 1998 (8 percent per year), but it may overestimate the financial capacity of countries in other regions.

Food imports are expected to grow in North African and Latin American countries to more than half of food consumption, so foreign exchange earnings will be critical. These two regions have reduced their trade deficits during the last decade, which could attract external capital.

The projected commercial import growth for Sub-Saharan Africa is about 2 percent, despite the 5-percent average export growth projected in the region. Again, uneven performance characterizes the region. For example, export growth in countries such as Kenya, Tanzania, and Uganda is projected to be well above the regional average. As food production grows in these countries, food imports slow. Another reason for the expected slowdown in food import growth is the growing trade deficits in the region and the growing dependency on external assistance to finance imports. Continued political instability in Angola, Côte d'Ivoire, Liberia, the Democratic Republic of Congo, the Central African Republic, Sudan, Somalia, Rwanda, Burundi, and Zimbabwe dampens the region's prospects for attracting external financial support. Political instability in countries such as Angola and Zimbabwe has also led to capital flight, which leaves less foreign exchange for food imports.

In sum, food imports are expected to grow, but clearly remain at levels below those required to fully meet projected food gaps. Food import dependency in many food-insecure countries, Asian countries in particular, remains very low. Countries such as India continue to export food even when many inhabitants are struggling with hunger and poverty. For these countries, the potential for improving food security is much greater than we have projected. For other countries, particularly SSA countries, vulnerability to food insecurity remains high, and increases in commercial food imports are unlikely to change that. For these countries, external assistance, both direct and indirect, and expanded trade opportunities are essential.

Food aid can play a major role in this area. Allocations of food aid are based on a mix of objectives. In addition to hunger, factors such as political instability and financial difficulties influence donors' decisions. However, because of slow progress in improving global food security and the critical role of food aid, it is vital that donors better target their limited aid to maximize its benefits in terms of alleviating hunger.