Freer Trade in Farm Commodities and Migration: the Case of Africa and Europe

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Summary

The purpose of this paper is to explore how freer trade in farm commodities might affect the migration of workers from Africa and Europe; the paper outlines policy options to deal with linkages between trade and migration. EU Presidency Conclusions (2006) recently stressed the "increasing importance of migration issues" and the need for a strategic partnership with Africa that includes improved "understanding of the root causes of migration."

One root cause of migration is rural poverty, and one solution may be freer trade that enables African farmers to raise their incomes by producing more farm commodities that can be exported to Europe. About 45 percent of the world's 3.2 billion workers, some 1.4 billion persons, are employed in agriculture as self-employed farmers, unpaid family workers and hired workers. The movement of labor out of agriculture is a universal indicator of economic growth and development—the world's 30 high-income countries have less than 5 percent of their workers employed in agriculture, while many of the world's poorer 165 countries have a majority of workers employed in agriculture. For most persons employed in agriculture in developing countries, economic mobility requires geographic and occupational mobility, meaning farmers must move away from their current residence and into nonfarm occupations to achieve higher incomes.

Most rich countries subsidize their relatively few farmers, and poor countries often tax their many farmers. The OECD estimated that farm subsidies totaled $350 billion in 2003, including $122 billion in the EU and $94 billion in the US. The World Bank, noting that agriculture accounts for most of the export earnings of 40 poor countries, concluded that the fastest way to raise the incomes of poor farmers in developing countries is to reduce farm subsidies and free up trade in the farm commodities in which poor countries have a comparative advantage.

This paper asks whether freer trade in farm commodities can improve the incomes of rural Africans in a manner that reduces their need to cross national borders to enjoy higher incomes. About two-thirds of Africans live in rural areas, and most depend on agriculture to produce the food they consume as well as crops that generate cash income. Rural Africans are generally poorer than urban Africans, reflecting low farm productivity, low prices for crops, and difficulty marketing commodities produced.

Most African farm exports are food and raw agricultural products such as cotton, and most enter foreign markets with few tariff barriers, although non-tariff barriers such as phytosanitary standards and traceability requirements can impede farm exports. Wage in Africa are low, fruits and vegetables are labor intensive, and the EU is the world's largest importer of fruits and vegetables, suggesting that more production of fruits and vegetables in Africa for the EU could reduce migration. However, over 70 percent of EU imports of fruits and vegetables are from countries that already benefit from preferential treatment for some or all of the trade, raising a question about whether reducing trade barriers further would increase the production and exports of labor-intensive fruits, vegetables, and horticultural (FVH)

specialties such as flowers in Africa quickly and raise rural incomes and discourage emigration.

The short answer is that freer trade in farm commodities will probably not do much to discourage emigration from Africa, at least in the short term. Freer trade alone does not increase the production of FVH commodities in Africa and create jobs, especially if African government policies tax farm exports and lower prices to farmers and wages to workers, there is inadequate infrastructure for procuring necessary inputs and lack of technical expertise to use these inputs to produce export-quality commodities, and Africa lacks capacity to pack and transport perishable commodities efficiently to Europe. These obstacles to expanded FVH production and exports can be overcome, and have been in several countries, primarily with foreign investment and expertise, yielding important FVH export industries from Morocco to Kenya to South Africa.

Creating new and expanded industries that absorb labor to produce farm commodities for export promises only a modest reduction in economically motivated migration for several reasons. First, the plantations, estates, and "factory farms" that produce many of the new export crops often rely on seasonal workers paid only when they are employed, and seasonal income gaps may still promote emigration. Second, many of the workers employed in the farm export sector are women, another reason for the young men most likely to emigrate to leave.[1] Third, the majority of African farmers are self-employed or are unpaid family workers; it has been very difficult to organize them into coops and other entities and help the self employed to produce and market export-quality crops.[2]

Reducing barriers to trade in farm commodities across the board could hurt African producers, increasing emigration pressures. For example, reducing EU farm subsidies for sugar should reduce excess global production and raise sugar prices, potentially increasing the incomes of African sugar producers. However, Brazil, the number one sugar producer and exporter, may wind up being the primary beneficiary of freer trade in sugar because its farmers can produce sugar and many other commodities more efficiently than African farmers.

Labor-intensive FVH crops aim to help small farmers raise their incomes by remaining farmers. Fruits, vegetables, and flowers are potentially high-profit but high-risk crops, and especially small farmers need technical help to produce significant quantities that meet EU requirements and standards. The cautionary lesson from Latin America is that developing an export-oriented FVH sector may do as much to spur as to reduce emigration pressures, especially in the short term.

African Agriculture and Africa-Europe Migration

Africa is a continent of 900 million people (2005) whose population is growing by 2.3 percent a year; Africa's population is projected to be about 2 billion in 2050. A third of Africa's population is urban, and most of the 600 million people living in rural areas depend on agriculture for subsistence and income (PRB World Population, 2005).[3] According to the World Bank, 75 percent of the world's poor are in rural areas.

Rural poverty is important for migration because one shorthand indicator of a country's development is the share of people in rural areas or workers employed in agriculture. Most high-income countries have less than 5 percent of their workers employed in agriculture, while most low-income countries have more than half of their workers employed in agriculture. In an oft-noted paradox, high-income countries tend to subsidize the small share of richer-than-average farmers, while low-income countries tend to tax the large share of poorer-than-average farmers via input, land or export taxes. For most poor farmers, economic mobility requires geographic

[1] Pigott (2003, 15) reports that Kenya, the second-largest exporter of flowers after the Netherlands in 2000, employed 12,000 workers on flower farms, including 70 percent women.

[2] The Economist, in its January 15, 2004 survey of sub-Saharan Africa, emphasizes another obstacle to the investments needed to produce FVH crops—lack of clear title to land being farmed. Without clear title to the land, farmers find it hard to borrow the money needed to make improvements and change crops. Given the risks of investing in African agriculture, expected rates of return are very high.

[3] South Asia has a slightly higher percentage of rural residents, 70 percent, versus 60 percent in sub-Saharan Africa. (World Bank, 2006, 125).

Table 1. Employment by Industry, African countries, 2000-04 averages

	Males Agriculture	Males Industry	Males Services	Females Agriculture	Females Industry	Females Services
Egypt	28	23	50	28	10	62
South Africa	13	33	54	14	7	79
Uganda	60	11	29	77	5	18

Source: World Bank, WDI, 2006, 54-56

mobility, meaning that to move up the income ladder, a farmer must move to an urban area within the country or to a rural or urban area abroad.

Rural-urban migrants are often ideal entry-level workers for unskilled jobs at home and abroad because their rural frame of reference encourages them to accept jobs involving hard work and relatively low wages. Many migrants are able to move up from their entry-level jobs with experience and network contacts, but their children educated in the host area generally reject the jobs taken by their parents. This leaves a vacuum at the bottom of the labor market that can attract additional migrants, explaining the migrant treadmill or dependence on newly arrived migrants in many labor markets.

Socio-economic Indicators

Africa is often divided into several sub regions. Northern Africa, with 195 million people, is the richest, with a per capita GNI at PPP of $4,000 in 2004, about twice the continent's $2,300 average. West Africa has 265 million people and a per capita GNI of $1,200, East Africa 280 million people and a per capita GNI of $1,000, mid-Africa 110 million people and a per capita GNI of $1,200, and southern Africa 55 million people and a per capita GNI of $10,400 (PRB World Population, 2005).

The World Bank's World Development Indicators report puts northern African nations such as Egypt in its Middle East and North Africa region, and reports that the 300 million people from Algeria to Yemen had a per capita GNI at PPP of $5,700 in 2004, while the 725 million in 48 sub-Saharan African countries had a per capita GNI at PPP of $1,800. [The world's 29 high-income countries, according to the WDI, included 1 billion people whose per capita GNI at PPP was $31,000 in 2004].[4]

The population of sub-Saharan Africa almost tripled from 225 million in 1960 and, with 44 percent of residents under 14, is projected to double to 1.9 billion by 2050, when 20 percent of the world's residents will be in sub-Saharan Africa.[5] Many of children do not complete primary school: primary school completion rates in sub-Saharan Africa are 62 percent, 20 percentage points lower than in South Asia, accordign to the World Bank's World Development Indicators 2006 report.

Sub-Saharan Africa's labor force was estimated to be 300 million in 2004, including 42 percent women; it increased by 2.5 percent a year in the 1990s, versus 0.7 a year percent in the Euro area (WDI, 2006, 52). The WDI includes data on the distribution of workers by industry for only a few African countries (WDI, 2006, 54-56). Data for Uganda for the 2000-04 period are likely to be typical—60 percent of men and 77 percent of women were employed in agriculture.

In African countries for which there are data, a higher percentage of rural than urban residents are poor, e.g. 42 percent of rural and 12 percent of urban residents were poor, according to the Uganda national poverty line in 2002-03

[4] High-income countries included Canada and the US plus Puerto Rico, Western Europe, Japan, Korea, Australia and New Zealand, as well as Kuwait, Saudi Arabia, and the UAE.

[5] Many African children work, and only 62 percent complete primary school, compared to 82 percent in South Asia (WDI, 2006).

(WDI, 2006, 72). The WDI (2006, 73) reports that 44 percent of sub-Saharan residents lived on less than $1 a day in 2002, and 75 percent on less than $2 a day (WDI, 2006, 73). Incomes are unequally distributed, and many of those with jobs are in the informal urban labor market.

Sub-Saharan Africa has the world's highest poverty rate, with 44 percent of residents living on less than $1 a day in 2005. However, the good news in the World Bank's World Development Indicators 2006 report is that 20 of the 48 countries in Sub-Saharan Africa grew by more than 5 percent in 2004. With population growth at 2.5 percent, economic growth must be significantly faster for people to notice an improvement in living standards. However, the WDI 2006 report concludes that Sub-Saharan Africa is a "high-cost, high-risk place to do business, resulting in less investment, less employment, lower incomes, less growth and competitiveness, and higher poverty."

Agriculture, Labor and Trade

The world's GDP was $41 trillion in 2004, including 4 percent or $1.6 trillion from agriculture. About 80 percent of global GDP, and $660 billon or 41 percent of global agricultural output, was in high-income countries (World Bank, 2006, 200). Global exports totaled $9.1 trillion, including $640 billion in food products and $183 billion in agricultural raw materials (World Bank, 2006, 208).

A 2003 ILO survey of workers employed in agriculture concluded that a series of vicious circles are lowering wages and protections for hired farm workers and small farmers and encouraging rural-urban and international migration (Pigott). Globalization, privatization, and FDI, according to the ILO survey, have increased the power of the multinationals who sell chemicals and other farm inputs to farmers as well as the power of the multinationals who market and trade farm commodities.[6]

The fact that fewer and larger firms have come to dominate farm input and output markets may have contributed to rising input costs and declining prices for many commodities produced in developing countries, including bananas, cocoa, coffee and sugar. Declining commodity prices, prompted in part by loss of preferential import arrangements as well as because of subsidies to farmers in industrial countries, put downward pressure on farm wages and incomes in developing countries, increasing poverty and emigration pressures.

Most food is consumed near where it is produced. In 2004, low-income countries (most African countries are in the low-income group) exported goods worth $151 billion to high-income countries, including $62 billion to the EU, $54 billion to the US, and $11 billion to Japan. Food exports from low- to high-income countries were 12 percent of the total, and were 17 percent of exports from low-income countries to the EU, 7 percent to the US, and 19 percent to Japan (World Bank, 2006, 327). There was far more trade between high- and middle-income countries such as Brazil, South Africa and Malaysia.

Half of Africa's exports are food and farm products. Africa, especially sub-Saharan Africa, faces many obstacles to increasing agricultural production, including irregular rainfall and limited irrigation systems, low levels of infrastructure for expanding existing export crops or developing new ones and getting them to market, and poorly educated farmers unable to take advantage of opportunities in new markets without assistance. As a result, World Bank calls that urge African farmers to switch from lower value crops such as cotton to higher value fruits, vegetables, and horticultural specialties (FVH) such as flowers tend to fall on deaf ears because the infrastructure for making such a switch is often lacking.[7]

Most African farm commodities already enter

[6] Pigott (2003, 9) reported that the 10 largest agro-chemical firms accounted for 80 percent of the $32 billion in global sales, that 5 corporations control over 50 percent of global coffee trade, that 3 corporations control 83 percent of global cocoa trade, and that 3 corporations control 85 percent of global tea trade.

[7] The World Bank notes that "Sub-Saharan Africa remains a high-cost, high-risk place to do business, resulting in less investment, less employment, lower incomes, less growth and competitiveness, and higher poverty. Doing business in Africa costs about 20 to 40 percent more than in other regions of the developing world…Only 30 percent of Sub-Saharan Africa's rural population has access to an all-season road—the lowest level in the entire developing world— in contrast with East Asia, which is approaching near universal (94 percent) coverage of rural population's access to all-season roads." WDI 2006 press release, April 22, 2006.

trade channels with few tariff barriers, although non-tariff barriers such as phytosanitary restrictions can limit exports of farm commodities. There is a tendency for tariff and non-tariff barriers to rise as the level of processing rises, as when garment exports face more barriers than exports of raw cotton. In some cases, what is given in trade preferences is taken with barriers. For example, Lecomte (2001) argues that many of the benefits extended to African agricultural commodities under the Yaounde-Lome-Cotonou conventions are negated by phytosanitary standards, as with EU aflatoxin standards that can restrict exports to Europe from Africa of nuts, cereals, and dried fruits because most farmers cannot meet them.

Learning about export opportunities and taking advantage of them by producing the appropriate crops, packing or processing them for export, and shipping them to foreign markets is a major challenge in Africa. Ngaruko (2003, 23) emphasizes that fast-growing Asian economies were able to increase exports via three major channels, viz, access to inputs at world prices, export financing credits, and government assistance to pry open overseas markets. Ngaruko laments the lack of transparent and stable government policies and corruption in Africa, and sees major obstacles to launching similar export-led growth strategies.

Ngaruko (2003, 32-38) contrasts the farm exports of Burundi and Uganda, emphasizing that both export raw farm commodities (95 percent of Burundi's exports in 2000, and 80 percent of Uganda's, were raw commodities). However, Burundi's exports of cotton, coffee, and tea[8] account for over 90 percent of its total farm exports, and especially coffee exports are taxed, which lowers prices to farmers and encourages peasants to grow food crops to consume rather than cash crops to export. Many African governments tax farmers, usually by having a monopoly supplier of seeds or fertilizer charge above world-market prices or having a monopoly exporter of commodities pay below world-market prices to farmers (Bates, 1981).

Uganda also exported coffee, but faced a crisis in the mid-1970s when the Asians who financed and marketed the crop were ousted. When a new government took charge in the 1980s, exports of cotton, coffee, and tea declined as new commodities, including flowers and vegetables, became important export crops. Most of the workers employed on these new export-oriented farms were hired workers, and Pigott (2003, 71-2) reported that the National Union of Plantation and Agricultural Workers of Uganda had 47,000 members among 150,000 waged farm workers, a third of whom were women.

Kenya is often cited as the most successful poor African country to develop an export-oriented FVH sector, with many of its fruits and vegetables going to the UK, and its flowers sent to auction in the Netherlands. Between 1995 and 2004, exports of fruits, vegetables and flowers rose 70 percent, making FVH exports second only to tea as a foreign exchange earner. One article estimated that large commercial farms in Kenya employ about 500,000 workers, and that an additional 2 million people are employed as independent farmers and workers to produce and pack FVH crops for export.[9]

A profile of a Kenyan bean farmer with 2.8 hectares emphasized that EU food traceability requirements raise costs significantly, and that many members of the Fresh Produce Exporters Association of Kenya may not be able to comply, giving more advantages to Homegrown, Kenya's largest fresh produce exporter. Singh (2002, 89) emphasizes that small farmers in Kenya play a small and declining role in producing fresh produce for export—during the 1990s, the small farmer share of fruits and vegetables exported fell from 75 to less than 20 percent, while the share from exporter owned farms and large commercial farms rose to over 80 percent.

[8] China is poised to become the world's largest tea exporter by tonnage, overtaking Sri Lanka in 2005 and Kenya in 2006, largely because tea production is rising while consumption among young Chinese is falling. Tea is mostly produced in countries that border the Indian Ocean, including India, Sri Lanka, Indonesia, Bangladesh, Kenya, Malawi and Zimbabwe, and the rise of Chinese tea may lead to job losses elsewhere.
The Chinese government sees tea production as a way to raise rural incomes, and some municipal and provincial governments offer subsidies to new tea plantations and processing facilities. China specializes in green tea, and has a better infrastructure to package and ship tea than its competitors. Tea is one of the world's most labor-intensive crops, with leaves that need to be harvested weekly for seven to 12 months of the year. Keith Bradsher, "Read the Tea Leaves: China Will Be Top Exporter," New York Times, October 11, 2005.

[9] William Wallis, "African farmers dig deep to comply with EU food rules," Financial Times, April 7, 2004, p. 18.

FVH Commodities, Trade and Migration

Europe is the world's major importer of farm commodities, including fruits, vegetables and horticultural specialties such as flowers (FVH crops); the EU imported fruits and vegetables worth $12 billion in 2002 and 2003, and exported fruits and vegetables worth $4 billion. Europe and Japan are considered a mature or stable markets for FVH crops, with little or no growth in demand, so that expanding production in Africa for Europe means displacing other production, as in Israel or Spain. The US and Canada, by contrast, are growing markets for fresh produce because of population growth and increasing per capita consumption of many fruits and vegetables.

The FAO estimated that there were 52 million hectares of fruit globally, and 51 million hectares of vegetables, and that global production was 497 million metric tons of fruit and 855 million metric tons of vegetables in 2004. The big four fruits accounted for about 56 percent of total production, including bananas and grapes, 15 percent each, and apples and oranges, 13 percent each.

Fresh fruit is more valuable and more likely to be traded than vegetables. The EU-15 imported 9 million tons of fresh fruit in 2005, and exported 3 million tons. The EU-25 imported 1.2 million tons of fresh vegetables in 2005, half onions and tomatoes. World exports of flowers, foliage and plants and bulbs totaled $3.6 billion in 2001, with the Netherlands accounting for $2 billion; followed by Colombia, $560 million; Ecuador, $206 million; and Kenya, $165 million (Kenya accounts for over half of Africa's exports of flower products).

The World Bank recommends that Africa move away from its dependence on lower value farm exports such as cotton and coffee and produce and export more labor-intensive flowers as well as fruits and vegetables (FVH). Africa's primary comparative advantage in supplying farm commodities to Europe and other high-income countries is climate—African farmers can produce commodities not grown in Europe, such as coffee and tea, or produce them during periods of the year when production is low, as in the winter months.[10] Africa also has lower wages.

The process of creating off-season markets for African produce follows the same pattern in most high-income countries, reflecting first affluence and health consciousness that increases the demand for FVH commodities year round and second the rise of supermarket chains and produce buyers willing to "source" or purchase commodities where they are cheapest. However, the fewer and larger retailers who sell most produce prefer to develop long-term relationships with preferred suppliers who can deliver a year-round supply of high-quality and traceable products.

Weatherspoon and Reardon (2003) emphasize that supermarkets are spreading rapidly in Africa as well, making it harder for small farmers to sell generally more profitable fruits and vegetables. With urban populations growing rapidly, supermarkets are also expected to increase their share of food sales, displacing street hawkers, sellers in open-air markets and other distribution channels. Shoprite, based in South Africa, is the largest supermarket chain in Africa (www.shoprite.co.za). Kenya has several supermarket chains, a quarter of the stores were outside Nairobi, and their spread is rapidly changing the way that consumers shop. Weatherspoon and Reardon (2003, 1) conclude that "There is an urgent need for development programs and policies to assist them [small farmers] in adopting the new practices that the supermarkets' procurement systems demand."

Produce marketers are a key link in the effort to increase production of fruits, vegetables, flowers and other horticultural specialties in Africa, since they often finance production, set and enforce quality standards, and handle transportation and marketing. As a result, there may be new industries employing Africans in rural areas, but farm incomes may not rise as much as expected because many of the gains are absorbed by middlemen. However, without the middlemen, there would be no new crops and jobs, since the supermarkets that increasingly dominate food retailing want long-term relationships with preferred suppliers who can deliver a year-round supply of high-quality and traceable products.

[10] For example, in 2005, the EU-25's fruit output was estimated at 35 million tons, including 11 million tons produced in Italy and 10 million tons in Spain. Apples accounted for 10 million tons of fruit output, followed by 5.6 million tons of citrus and 4.2 million tons of peaches (Agra-Europe, April 11, 2006)

There is also a problem of teaching farmers about new crops. Farmers who familiar with the production of low-value commodities who make the switch to export-oriented commodities that use more labor and have higher profit potential as well as higher risk may borrow money and, if their crop fails, wind up more likely to emigrate than before. Avoiding such desperation migration born of increased risk suggests the need for subsidized capital and technical assistance as well as insurance to handle the increased risk. Economic Partnership Agreements (EPA), such as those between ACP countries and the EU, can help to deal with increased risks and rewards.

The experience so far suggests that freer trade in farm commodities can help to reduce migration a little, but the benefits in terms of reduced migration due to lower barriers to trade in labor-intensive commodities are not likely to come quickly or easily. Middlemen can help farmers to make the transition, but just as the supermarkets with whom they deal prefer to deal with only a few suppliers, marketers prefer to deal with a few large supplies, which means that in many cases new farm export commodities are produced on large farms that hire workers for wages, not by small farmers whose income is the difference between the revenues they receive and their cost of production. Governments, NGOs and other institutions could help small farmers to profitably produce labor-intensive commodities by, for example, forming coops to provide inputs and market what is produced.

EU Trade Preferences and Doha

The European Union is the world's major importer of fruits and vegetables, most of which are imported from developing countries that benefit from preferential treatment for some or all of their exports to the EU. The 70 percent of fruits and vegetables are imported with trade preferences that are extended to 42 least-developed countries and 77 former colonies. Since January 2005, all fruit and vegetable products arriving in the EU must be traceable at all stages of production, processing and distribution.

CAP and Trade Preferences

The EU's Common Agricultural Policy regulates farm production and trade in farm commodities via price supports, production quotas, import restrictions and export subsidies. The CAP keeps prices of fruits and vegetables produced within the EU relatively high by controlling the quantity and prices of imports. For example, the CAP can set a minimum price for imports or allow a certain quantity of fruits and vegetables to enter before tariffs escalate, and prices and quota quantities can vary seasonally (Hasha, 2004, 3). Many exporting countries use government agencies to handle exports to assure that price requirements are met, and competition to export to the EU often involves quality rather than price.

The EU extends a Generalized System of Preferences to 142 developing countries, although some developing countries do not get GSP preferences on fresh fruit and vegetable exports to the EU, including Mexico and Thailand (Hasha, 2004, 3). There are more restrictions on fruits and vegetables produced in the EU; these commodities, deemed sensitive, include fruits from apples to strawberries and vegetables from asparagus to sweet peppers.

The EU gives additional preferences to 77 former African, Caribbean, and Pacific (ACP) colonies under the Cotonou Agreement of 2000, successor to the Lome Convention, which operates under a special WTO waiver. Exports from the ACP countries enter the EU with lower tariffs than those offered under GSP, although minimum import price requirements must often be satisfied. Special EU preferences for bananas from ACP countries were challenged before the WTO, and the EU has until 2008 to negotiate new banana importing arrangements (bananas are 14 percent of EU imports of fresh fruits and vegetables).

The EU has since March 2001 had an Everything but Arms (EBA) policy of allowing free access to all primary and processed fruits and vegetables from 42 of the 49 poorest developing countries except bananas. However, imports of sensitive fruits and vegetables to the EU are negligible, and the EU Commission in 2001 concluded that the export potential of the poorest countries is unlikely to affect EU markets. However, EBA allows the poorest countries to export fruits and vegetables to the EU at generally high EU prices and import cheaper produce to replace what was exported; EBA fruit and vegetable exports were about $100 million a year recently. However, both ACP and EBA (some countries are covered by both) exports must satisfy traceability rules (Hasha, 2004, 5).

The EU has negotiated Euro-Mediterranean Agreements (EMAs) with Tunisia (1998), Israel and Morocco (2000), and has agreements pending with Jordan and Egypt. The EMAs are reciprocal, aiming to lead to free trade in nonfarm commodities by within 12 years; most farm trade is governed by quota arrangements. The EU envisions a Euro-Mediterranean free-trade area by 2010.[11]

In 2000, the 42 least-developing countries had the lowest (zero) tariffs, the ACP countries had tariffs that averaged 10 percent for agricultural exports to the EU, while GSP and other tariffs averaged about 15 percent. However, (Hasha, 2004, 8) notes that, because the EU allocates import licenses only to EU companies, some of the benefits of no or low tariffs may not be realized, as exporters compete to obtain EU import contracts. For example, Table 2 shows that, between 1998 and 2000, just one percent of EU fruit and vegetable imports came from the least developed countries whose products enter the EU with no barriers.

The EU's system of trade preferences allows many commodities produced in developing African countries to enter the EU free of tariffs, but a variety of restrictions tends to limit the ability of the least developed countries to supply the EU market, including inadequate surplus production to export, inability to meet EU standards, and the need to forge relationships with EU importers. Furthermore, EU tariffs and trade barriers are often higher for more processed than for raw products, which means that value-added tends to occur within the EU.

Doha Trade Negotiations

The World Trade Organization's Doha negotiations, launched in 2001, aim to reduce farm subsidies in rich countries so that trade liberalization benefits developing nations. Trade negotiators put domestic support for agriculture into three major categories or boxes, including green (subsidies that have few distorting effects on trade in farm goods), blue for direct payments to producers, and amber for the most distortional support, and thus the subject of trade liberalization efforts.

The EU has the most trade-distorting (amber box) domestic support for farmers and accounts for about 90 percent of the world's export subsidies. European leaders agreed to eliminate all export subsidies for farm products by 2013, and the US in October 2005 offered to reduce tariffs on farm commodities by over half within five years if other rich countries did the same.

Table 2. EU Fruit and Vegetable Imports, 1998-2000

	Share (%)
GSP Countries	38
ACP Countries	13
EMA Countries	9
LDC Countries	1
Others	38

Source: Hasha, 2004, 8. From WTO data

The US has high tariffs on commodities such as sugar, dairy products and orange juice, and provides $19 billion a year in subsidies to producers of cotton, corn and other commodities. The US Congressional Budget Office released a report in August 2005 estimating that the US and the EU each account for about a third of global farm subsidies and Japan 15 percent.

Four African countries that export cotton, Benin, Burkina Faso, Mali, and Chad, joined Brazil to challenge US cotton subsidies, which have helped the US to become the world's second-

[11] About 40 percent of North Africans live in rural areas, where many residents are farmers with below-average incomes producing subsistence crops as well as Mediterranean crops for export. North African countries are major importers of cereals and other commodities produced in high-income countries, and countries such as Egypt import large quantities of wheat dumped on global markets by the US and EU. A third of Egypt's 70 million residents are farmers, and many of those who own little or no land are being squeezed by rising costs and unstable prices. In 1997, rents for tenant farmers were freed from government regulation, and they recently increased from the equivalent of about $4 an acre annually to as high as $60 an acre. Violence can flare if landlords attempt to evict tenants who do not pay the rent.

largest cotton producer and largest exporter of cotton.[12] In 2004, World Trade Organization judges upheld a complaint that American subsidies to cotton farmers broke international trade rules by depressing world prices and harming cotton farmers in Brazil and elsewhere, the first successful challenge to a wealthy nation's domestic agricultural subsidies.[13] The US has pledged to end cotton export subsidies in 2006 and eliminate tariffs and quotas restricting developing country cotton exports.

Fair Trade, Codes of Conduct

Fair- and ethical-trade stamps are efforts to label commodities produced under particular conditions so that consumers can choose them. Fair-trade items often command premium prices, but generally represent a small share of total sales.

Most marketers of farm commodities are multinationals, prompting efforts to develop international framework agreements (IFAs) to achieve goals ranging from protecting the environment to avoiding the use of child labor in production. There are also at least 30 IFAs between multinationals and global, regional, and national unions and NGOs. If the provisions of these IFAs are implemented, migration may be reduced as wages and satisfaction with local conditions increase.

The most prominent IFAs involve banana producers, and most were implemented at the behest of European NGOs working with unions in Latin America. Latin America accounts for three-fourths of global banana exports, and most bananas in Latin America are produced by vertically integrated multinationals. Chiquita and Dole each account for about a quarter of banana exports, followed by Del Monte and Ecuador's Noboa, which have 15 and 10 percent market shares.

Overproduction led to falling prices and a shift away from integrated production in the 1990s, with the multinationals outsourcing more production to independent growers in Ecuador and the Pacific coast of Guatemala. Chiquita became the target of Latin American unions and NGOs in Europe after the Cincinnati Enquirer published articles in May 1998 highlighting shortcomings in Chiquita's treatment of workers and environmental degradation. Several European grocery store chains financed independent investigations of the allegations against Chiquita, which prompted Chiquita to negotiate an IFA with the International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations and unions representing banana workers in Ecuador and seven Central American countries (COLSIBA) in 2001.

The Chiquita IFA included provisions that guarantee union representatives the right to go onto Chiquita property to talk to workers. However, compliance with the agreement's terms was found to be uneven (Riisgaard, 2005), better on Chiquita-owned plantations than on independent supplier plantations, even though Chiquita pledged to have independents abide by the agreement's terms. Union representatives did not always communicate the results of meetings with corporate officials to the national or local unions affected, and some local unions distrusted the union representatives meeting with Chiquita. However, the Chiquita agreement, won with the help of European NGOs, resulted in unions collaborating across national borders and gave union representatives unprecedented access to corporate leaders.

There are also other efforts to maintain standards on farms where production occurs. Some British supermarkets have endorsed an ethical trade initiative, meaning that the produce they sell is produced in accordance with local labor laws, and Union Fleurs monitors labor conditions on African farms whose flowers are sold in the Netherlands auction.

[12] China was the world's largest cotton producer in 2003, producing 4.9 million tons, followed by the US at 3.7 million tons; India with 2.3 million tons; Pakistan, 1.7 million tons; and Uzbekistan, 1 billion tons. India, Pakistan and Uzbekistan do not subsidize cotton.

[13] The US was allowed to provide $1.6 billion a year in cotton subsidies, but provided more, and the WTO agreed that the extra subsidies increased US production and depressed global prices. One estimate is that, if the US eliminated cotton subsidies, world cotton prices could rise by 13 percent, generating an additional $72 million in sub-Saharan Africa.

Theory: Trade and Migration

Goods have labor embodied in them, so trade can be a substitute for migration. Expanded exports helped many countries make the migration transition from labor senders to receivers, including Italy and South Korea. Between 1950 and 2000, world GDP increased 4-fold to $30 trillion, while world trade in goods increased 17-fold to $13 trillion, meaning that goods worth 40 percent of the value of global output crossed national borders by 2000.[14]

Increased trade was stimulated by economic growth and reductions in the average tariff on manufactured goods, which fell from 40 percent in 1950 to 4 percent in 2000. Services, which are normally produced and consumed at the same time, as with medical care and tourism, can also be traded, and service exports were worth $1.4 trillion and imports worth $1.4 trillion in 2000. Most trade in goods and services is between high-income countries, over 80 percent in 2000.

Trade in goods means that something is produced in one country, taken over borders, and consumed in another. Economic theory suggests that if countries specialize in producing those goods in which they have a comparative advantage,[15] most residents of countries that trade will be better off. Even if the US can produce both TV sets and corn cheaper than Mexico, but is relatively better at corn production, comparative advantage advises the US to devote limited resources to corn production and buy televisions from Mexico so that Americans have cheaper TVs and Mexicans cheaper tortillas. With trade accelerating economic and job growth in both countries, trade becomes a substitute for migration, and Mexico-US migration would be expected to fall as trade narrows wage differences.

Trade and migration were substitutes across the Atlantic in the 19th and early 20th centuries. When European economic growth rates in the 1950s and 1960s rose above US rates, the gaps in wages and incomes across the Atlantic narrowed, and migration slowed even as the United States reopened opportunities for European immigration. A similar story of narrowing wage and income gaps due to freer trade as well as aid explains why there was very little labor migration from southern European nations such as Italy and Spain to other European Union nations in the 1970s and 1980s after workers in these nations had full freedom of movement rights.

The US Commission for the Study of International Migration and Cooperative Economic Development was charged with finding "mutually beneficial" ways of reducing unwanted migration to the US. After evaluating increased foreign aid and other options, the US Commission concluded that: "expanded trade between the sending countries and the United States is the single most important remedy" for slowing unauthorized migration (1990, p. xv).

However, the Commission emphasized highlighted a short-term versus long-term dilemma that complicates the job of implementing freer trade to reduce migration. When countries that have been protectionist embrace freer trade, the result can be labor-displacing adjustments that temporarily increase out-migration. In the case of Mexico-US trade and the North American Free Trade Agreement (NAFTA), for example, some Mexican farmers who had been protected from imported corn quit growing corn and migrated to the US. This migration hump, a temporary increase in migration, means that "the economic development process itself tends in the short to medium term to stimulate migration." (1990, p. xvi).

The migration hump can be relatively smaller and shorter-lived if foreign direct investment accelerates job creation in emigration countries that globalize, as when foreign investment creates jobs in TV factories for ex-corn farmers. However, in Mexico and many other places where foreign investment created jobs in manufacturing, the jobs were usually far

[14] Average world capita GDP doubled from $2,500 to $5,000 per person per year between 1950 and 2000.

[15] Comparative advantage advises countries to specialize in producing goods in which they have a relative advantage because of their resources, location, or capital-labor costs. Even if one country can produce all goods cheaper than another, both countries are still better off specializing in the production of the goods they can produce most efficiently, exporting some, and importing goods they cannot produce as efficiently. Trade can also lead to economies of scale, which lowers the cost of production as output increases for a larger market.

removed from the areas in which workers were being displaced. Most of the foreign investment in Mexico, for example, is just across the US border, while most of the displaced farmers are in western and central Mexico.

NAFTA and the Mexico-US Migration Hump

Migration was the central feature of Mexico-US relations for most of the 20th century, but the volume of cross border flows rose remarkably in the 1990s—a third of all legal Mexican immigrants admitted in the 20th century and a third of 20th century apprehensions were in the 1990s. High levels of legal and unauthorized migration have continued in the 21st century, despite rising levels of Mexico-US trade.

The roots of Mexico-US labor migration lie in the US-government approved recruitment of about five million Mexican workers between 1917 and 1921 and again between 1942 and 1964, as well as fast labor force and slow and uneven job growth in Mexico, especially since the 1980s. The result of these guest worker programs and emigration pressure was distortion and dependence: some US farmers made investment decisions that assumed there would be a continued influx of Mexican workers, and some Mexicans became dependent on US jobs and earnings.

A combination of increased demand-pull pressures in the US, especially during the job booms of the late 1980s and late 1990s, and increased supply-push pressure in Mexico, especially after economic crises in the mid-1980s and mid-1990s, helped to diffuse the origins and destinations of Mexican migrants—more are coming from southern and urban Mexico, and more are going into farm and nonfarm jobs outside the western states. The 2004 US labor force of 148 million included 19 million Hispanics (13 percent), with perhaps 40 percent born in Mexico. The Hispanic share of net US labor force growth over the past decade, 44 percent, is three times the Hispanic share of the labor force.[16] Mexico-US trade has increased as a result of NAFTA, but the rate of increase in Mexico-US migration has been even faster.

NAFTA began to lower barriers to trade and investment between Canada, Mexico, and the United States on January 1, 1994. This trade agreement was expected to increase trade, employment, and wages in all three countries and political leaders assumed that, if the trade and migration are substitutes in the long-run, they are also substitutes in the short-run. Then-Mexican President Salinas, for example, asserted that that freer trade means "more jobs…[and] higher wages in Mexico, and this in turn will mean fewer migrants to the United States and Canada. We want to export goods, not people." (quoted in Bush letter to Congress, May 1, 1991, p. 17).

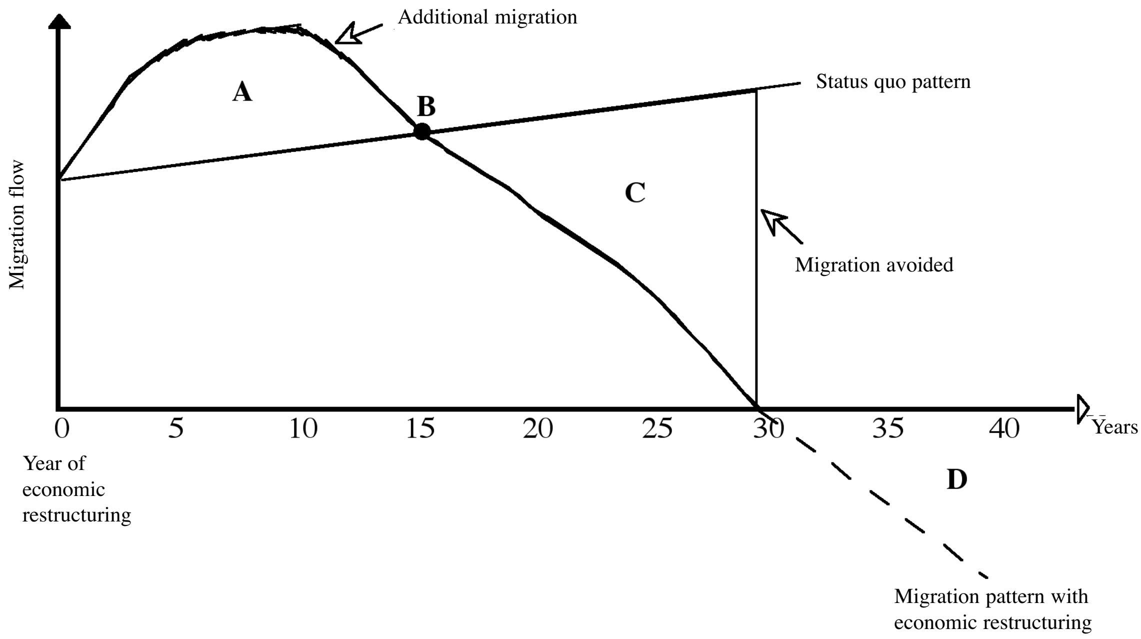
The steadily rising line in the figure below represents the status-quo migration flow, and the hump line depicts the additional migration associated with freer trade and economic integration; the number of migrants is measured on the Y-axis and time on the X-axis. Without economic integration, migration rises in the status-quo scenario because of faster demographic growth and slower economic growth in emigration countries. Economic integration, on the other hand, leads to a temporary increase in migration, represented by **A**, as freer trade displaces Mexicans but foreign investors needed time to create additional factory jobs.

Economic integration should speed up economic and job growth, and the downside of the hump is shown in the movement toward **B**. As economic integration accelerates convergence in wages, area **C** represents the migration avoided by economic integration. Finally area **D** represents the migration transition, which occurs when a net migrant sending country becomes a net receiving country.

The critical policy parameters in the migration hump diagram are A, B, and C— how much does migration increase as a result of economic integration (A), how soon does this hump disappear (B), and how much migration is "avoided" by economic integration (C)? Generally, three factors must be present to create a migration hump: a continued demand-pull for migrants in the destination country, an increased

16 The US labor force rose by an average 1.7 million a year in the past decade, from 131 million to 148 million, and employment by an average 1.6 million a year, from 123 million to 139 million. Hispanic employment rose by 700,000 a year, from 11 million in 1994 to 18 million in 2004.

Figure 1. The Migration Hump



supply-push in the origin country as a result of labor displacement and slow job growth, and migration networks that can move workers across borders.

The Hump and Policy

The usual comparative static economic analysis of economic policy changes involves comparisons of equilibrium points, not the process of adjustment to a new equilibrium. The migration hump is precisely this adjustment process, and was not anticipated nor planned for as NAFTA was implemented.

NAFTA got off to a promising start in Mexico, where employment rose in 1994. However, just before President Zedillo was inaugurated in December 1994, there was an economic crisis, and the peso fell sharply. The US provided emergency funds to stabilize Mexican government finances, but the number of formal sector jobs shrank by over 10 percent during a severe recession. Job growth resumed in 1996, and formal Mexican employment peaked in 2000, as employment in maquiladoras reached 1.3 million, 10 percent of formal sector jobs.

When the US went into recession in 2000-01, maquiladora employment fell, and many of the border assembly factories, especially those producing textiles and apparel, closed and moved to China and other countries with lower wages. Of the 700,000 new maquiladora jobs generated in NAFTA's first seven years, 300,000 were eliminated between 2000 and 2003 and are not likely to re-appear. The consensus is that Mexico must upgrade worker skills and productivity or risk losing even more assembly-type jobs to lower-wage countries.

NAFTA critics charge that NAFTA devastated Mexican agriculture. About 25 percent of Mexicans live in rural areas, and NAFTA increased imports of low-cost US farm commodities such as corn. Corn is planted on 50 percent of Mexican crop land, much of which is not irrigated, and some three million Mexicans depend at least partially on corn production for subsistence and income. The availability of cheaper US corn sent a clear signal throughout rural Mexico that there is no future in small scale corn production in Mexico.[17]

[17] Rural Mexico is dominated by ejidos, the communal farms that include 103 million hectares, or 56 percent of the arable land and 70 percent of the forests. In order to ensure that peasants had land, until the early 1990's,ejido land could not be sold, which limited productivity-increasing investments. The 29,162 ejidos became synonymous with rural poverty, and in 1992 the Mexican constitution was amended to allow the sale or rental of ejido land.

Many of the evaluations of NAFTA's first decade conclude that trade-led growth was not sufficient to bring prosperity to Mexico: real wages in Mexico were lower in 2001 than in 1994 despite higher productivity, income inequality was greater and Mexico-US migration rose. Poverty remains widespread: half of the 104 million Mexicans in 2003 were considered poor, including 42 million who have less than $2 a day (the daily minimum wage is about $4 a day.

Conclusions and Policy Options

Freeing up trade in farm commodities would better re-allocate scarce resources globally. Reducing subsidies to farmers in rich countries would shift more of the world's production of labor-intensive farm commodities that are exported to lower-income developing countries, creating jobs and discouraging emigration.

Africa lies at an extreme position on the trade-in-place-of-migration spectrum. Most African farm commodities already enter Europe with few or no tariffs, and some are favored with above-world market prices, as for sugar and bananas, so simply lowering tariffs will not kick-start African export agriculture. Instead, increasing African farm exports in a manner that reduces emigration pressures will require financial and technical assistance to produce, package, and transport higher-profit and higher-risk FVH crops.

It should be emphasized that reducing EU trade barriers would have uneven impacts in Africa. For example, reducing barriers to imports of Mediterranean crops such as olive oil, citrus, and vegetables could help Northern African countries but not Central African countries that do not grow such crops. Similarly, Africa does not have a significant dairy industry, for example, so that lowering EU dairy subsidies is more likely to lead to increased imports from New Zealand and other countries rather than Africa.

Second, Africa has major advantages and disadvantages in producing some crops for Europe. Its advantages are climate and labor costs, meaning that crops can be produced during the winter months when there is little production in Europe, and with lower labor costs, so that washing, peeling, and packaging can be done in Africa. However, inputs from finance to fertilizers to packaging materials are likely to be more expensive in Africa than in Europe, and the cost of shipping products from Africa to Europe by air is relatively high.

Third, the fact that most fruits and vegetables are sold in supermarkets in Europe, and that these supermarkets want short commodity chains, such as from large farmer to supplier to supermarket. The fact that large farms generally supply most nontraditional export crops means that hired or wage workers rather than small farmers wind up in the export sector. With many of these new farm jobs seasonal, and with many of the workers hired women, the expansion of export-oriented agriculture in Africa may have a limited impact on male-led emigration.

Economic theory predicts that, as a result of freer trade, more labor would be used to produce labor-intensive goods in labor-abundant countries such as those in Africa, and the demand for migrant labor would fall in higher wage countries such as those in Europe. Economists usually conduct comparative static analyses, taking before and after snapshots, and mostly ignoring the process by which freer trade re-allocates resources. A close examination of adjustment processes in migrant-sending areas in Mexico under NAFTA suggests a migration hump, or more migration until the re-allocation of resources occurs. Cooperation to manage migration during the hump may make it easier to deal with the inevitable opposition to freer trade in migrant-receiving areas.

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SUGAR CASE STUDY

World sugar production has been rising, topping 140 million metric tons in 2004/05. The Big 4 produce almost half of the world's sugar: Brazil, 28 million tons; India, 16 million; China, 11 million; and the US, 8 million, but only Brazil is a major exporter— the other major sugar producers consume most of what they produce.

Sugar is one of the most highly protected commodities in Europe and the US. The World Bank says that sugar is the most "policy-distorted" farm commodity, estimating that, if there were free trade in sugar, global GDP would rise by $5 billion, and one million jobs would be created in the developing countries with a comparative advantage in sugar production.

Since 1934, the US has regulated sugar imports to keep the US price at about twice the world price, 20 cents compared to eight to 10 cents a pound in recent years.[18] The US has granted sugar import quotas to 40 countries that allow them to export their sugar duty-free to the US. However, any sugar imported in excess of 1.3 million tons a year is subject to a tariff of 15.34 cents a pound. This means that, even with very low production costs, producers in, for example, Brazil do not find it profitable to export sugar to the US and pay the tariff.

The EU offers also guarantees high prices to sugar producers and uses quotas and tariffs to limit imports in a manner similar to that used in the US, but also provides export subsidies to processors who export EU-grown sugar. The EU began to reduce sugar subsidies in July 2005, cutting the guaranteed price a third, reducing the EU production quota from 17 to 15 million tons a year, and decoupling sugar production and payments.

The EU Commission proposed that the current Sugar Protocol, which permits some sugar imports to the EU from ACP countries at high EU prices, be integrated into the Economic Partnership Agreements (EPAs) that are being negotiated between the EU and ACP countries and scheduled to come into force in January 2008. Oxfam, inter alia, called on the EU to provide E500 million a year to cushion the effects of reduced EU sugar-prices on ACP sugar exporters.

If the EU and the US were to reduce sugar price guarantees and permit freer trade, would Africa to Europe migration be reduced? Perhaps not, largely because sugar production may expand in countries such as Brazil and South Africa while shrinking in countries such as Malawi, Ivory Coast and Madagascar, which get a windfall by being allowed to sell their sugar at high EU prices. The Brazilian government reduced grower subsidies and pushed up wages in the 1990s, and growers responded by mechanizing. Sugar employment in Brazil fell from 1.2 million to 700,000 between 1990 and 2000, as the monthly minimum wage in the southeast rose from $85 to $120.[19]

[18] The US government keeps the price of US sugar above the world price by making loans to US sugar processors of about $0.18 a pound for cane sugar and $0.23 for beet sugar in 2002. If US sugar prices fall below these levels, the processors keep the loan money and forfeit the sugar to the US government. The US government prevents the US price from falling toward the world level of $0.09 a pound by restricting imports of sugar and products made with sugar. About 70 percent of the benefits of the sugar program go to beet growers, who are concentrated in the Midwest.

[19] Simon Romero, "Spoonfuls of Hope, Tons of Pain; In Brazil's Sugar Empire, Workers Struggle With Mechanization," New York Times, May 21, 2000. About 90 percent of cane cutters are covered by limited unemployment insurance and the chance to retire with a small government pension, and many ex-cane cutters are expected to migrate to cities such as Sao Paulo, in the sugar belt, or Recife in the northeast.

Along with tobacco and sugar, cotton is sometimes called the "most influential plant on earth" because of its role in launching the industrial revolution,[20] extending slavery in North America,[21] and leading to environmental destruction in the ex-USSR, especially the shrinkage of the Aral Sea, once the world's fourth-largest expanse of inland water.

China is the world's leading producer of cotton, 5.3 million tons in 2001-02, followed by the US, 4.4 million tons, and India 2.3 million tons—together, these three countries produce 60 percent of the world's cotton, followed by Pakistan, 1.7 million tons; and Uzbekistan, 1 billion tons. The US exports much of its cotton, and Brazil charged that US cotton subsidies increased exports by 41 percent and reduced the world price of cotton by 12 percent.

Brazil won its case at the WTO in 2004, when the WTO agreed that American subsidies to cotton farmers broke international trade rules by depressing world cotton prices, the first successful challenge of a wealthy nation's domestic agricultural subsidies.[22] The US was allowed to provide $1.6 billion a year in cotton subsidies, but provided more, and the WTO agreed that the extra subsidies increased production and depressed global prices, harming producers in Brazil and elsewhere.

Four African nations, Benin, Burkina Faso, Chad and Mali, have taken the lead in arguing that US cotton subsidies hurt African farmers. According to most reports, at least 10 million people in these countries depend on cotton for income, and their incomes have declined with cotton prices. These four governments have demanded reduced cotton subsidies in rich countries or compensation for African farmers whose incomes are depressed by the extra production and exports from the US.

[20] Cotton bolls are picked, ginned to separate the hairs from the seeds (one pound of hair for three pounds of seeds), and then the hairs are cleaned and carded— brushed so the fibers lie parallel— before being spun into thread. In 1770, at the dawn of the industrial revolution, it took at least 12 man-days to produce a pound of cotton, compared to one or two days to produce a pound of wool. Spinning machines invented in the UK in the 1760s reduced labor requirements and led to steam engines, which moved cotton mills from river valleys to cities.

[21] The cotton gin, invented in the US in 1794, mechanized the separation of hairs and seeds. Between 1784 and 1861, there was an eight-fold increase in the number of black slaves in the US to handle the expanded cotton acreage. By 1861, the US was exporting four million bales of cotton a year, much of it to mills in Lancashire, as if two-thirds of the world's cars today were made in China and two-thirds of all their engines were produced in Detroit. On the eve of the US Civil War in 1860, cotton overtook sugar and tobacco as the most traded crop in the world.

[22] Brazil is becoming to farm exports what India is to business outsourcing and China is for manufactured goods— the low-cost global leader. Farm products account for about 10 percent of global merchandise trade, and Brazil runs the largest surplus in farm trade, some $34 billion in 2004. Despite often high import tariffs on its products, Brazil's farm exports in 2004 included $10 billion of soybeans, meal and soy oil; $2.3 billion of sugar; $2.7 billion of beef and chicken; $1.7 billion of coffee; and $1 billion each of tobacco and coffee.