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A look at the big emerging markets
and U.S. trade

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"No nation was ever ruined by trade."

—Benjamin Franklin

The preceding quote by Benjamin Franklin is as true today as it was 200 years ago. United States history is steeped in trade and trade debate, from the pivotal role of the Boston Tea Party in shaping the United States as a nation, to the recent debate over the merits of U.S. ratification of the present round of the General Agreement on Tariffs and Trade (GATT) negotiations.

The U.S. Department of Commerce is actively involved in promoting exports. In 1993, President Clinton announced a National Export Strategy for the United States, described as "a comprehensive plan [that] upgrades and coordinates the government's export promotion and export finance programs to help American firms compete in the global marketplace."¹ In particular, the National Export Strategy identifies past problems with U.S. trade promotion efforts and recommends improvements to current ones. This includes enhancing existing trade finance programs such as the Exim Bank and the Overseas Private Investment Corporation and creating a Tied Aid Fund to help U.S. firms compete on a level playing field. As an outcrop of this initiative, Commerce identified ten foreign nations as the big emerging markets (BEMs) of the upcoming century, markets where the potential for trade growth is the greatest.

It has long been recognized that exports play an important role in the U.S. economy because they support jobs and they represent a significant component of gross domestic product (GDP). Over the last few years, U.S. exports have contributed significantly to overall GDP growth. But targeting emerging markets is a new concept for the U.S. In the past, the nation could expect trade to expand steadily with its traditional trading partners—mainly Europe and Canada and, more recently, Japan. As the National Export Strategy was being developed, however, it became clear that the U.S. could not rely on these partners as a source of continued growth. In fact, trade with our traditional trading partners has been, and is projected to continue to be, flat.² The next

logical step was to determine where growth was likely to occur. Thus was born the BEM initiative.

In addition to growth potential, the ten BEMs have other traits in common. They are all physically large with large populations, have recently undergone some program of economic reform, are politically important to their region of the world, and are likely to spur growth within their regions.³ Where are these markets? Geographically they represent several parts of the world. In Asia they are China, Indonesia, India, and South Korea; in Latin America they are Mexico, Argentina, and Brazil; in Central and Southern Europe they are Poland and Turkey; in Africa it is South Africa.

Commerce estimates that the BEMs and other less developed countries will be the fastest growing import markets through the year 2010. By then, the BEMs are expected to account for 27 percent of total world imports, three times their 1992 share.⁴ U.S. firms will want to capture as much of that market as possible. With accurate knowledge and support from all levels of government, they can realize that goal; to some extent, they are already ahead of the curve. In 1987, U.S. commodity exports to the BEMs accounted for nearly 15 percent of all U.S. exports. By 1994, the BEM market had grown to 20 percent of all U.S. exports—an increase of \$65 billion. Total exports to the BEMs increased 177 percent.

State governments also actively promote exports and overseas business opportunities for firms located in their state. In the Seventh Federal Reserve District, which includes all of Iowa and parts of Illinois, Indiana, Michigan, and Wisconsin, efforts by state governments may have helped exports to the BEMs grow from 10 percent of all District exports in 1987 to 13 percent in 1994, an increase of \$5.6 billion in goods.⁵ Total District exports to the BEMs grew 152 percent over the period, with those to Indonesia, Argentina, and Brazil experiencing the largest growth (425 percent, 334 percent, and 249 percent, respectively).

This article will begin by examining the import profiles of the BEMs as a group over the 1988-92 period. We then present U.S. and Seventh District exports to these markets for roughly the same time period. Next we examine agricultural exports separately because of the important role played by Seventh District states in U.S. agricultural output and trade. We then provide additional detail on U.S. trade with the individual BEMs followed by an examination of current U.S. and District export promotion initiatives. Finally, we sum up and conclude with an assessment of how well U.S. exports are meeting the needs of the BEMs.

The data in this article represent the full range of goods that can be bought and sold in the marketplace, including agricultural goods, minerals, clothing, chemicals, metals, machinery, scrap and waste, secondhand goods, and antiques. They do *not* include services. We used several data sources. The import profiles of the BEMs came from United Nations data and cover the 1988-92 period. We chose 1988 as the base year for import data since it was the start of the data series used and we didn't feel we needed to go back any further in time since U.S. trade with the BEMs has only recently started to expand. We chose 1987 as the base year for export data solely because that was the start year of one of the data series we used. Census data on U.S. exports are more current and are available through 1993, but to avoid confusion we used those data only when discussing U.S. exports in total or when discussing aspects of the BEMs unrelated to the United Nations data. State export data, based on Census data, came from the Massachusetts Institute for Social and Economic Research (MISER). These data were available through 1994, but we used them only for aspects unrelated to United Nations import data.

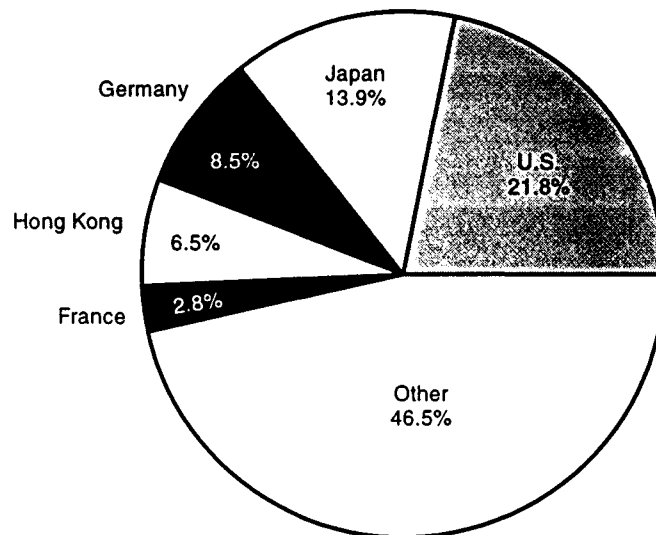
One other note on the data. In reporting imports for the BEMs, the United Nations uses the Standard International Trade Classification (SITC) system, a system originally developed in 1950 by the United Nations so that all countries reporting trade statistics would use comparable categories. However, for most purposes, U.S. trade is reported on the basis of the Standard Industrial Classification (SIC) system that was originally developed for analyses of domestic commerce. These two systems (as well as several other reporting systems) are not generally comparable. Although the commodity or industry descriptions may sound similar, the actual components that comprise them are generally not the same.

The growing BEM market

The BEMs' share of world imports grew from 7.7 percent in 1988 to 9.3 percent in 1992. In the latter year, the BEMs imported \$357 billion in commodities. The U.S. captured the largest share with nearly 22 percent, up from 20 percent in 1988. Japan held second place with approximately 14 percent, down from 17 percent in 1988. Germany captured nearly 9 percent, as it did throughout the period (see figure 1). Korea and China are by far the largest of the BEMs in terms of total imports. In 1992, each of those two

countries imported around \$81 billion in goods. Mexico was the next largest with nearly \$48 billion.

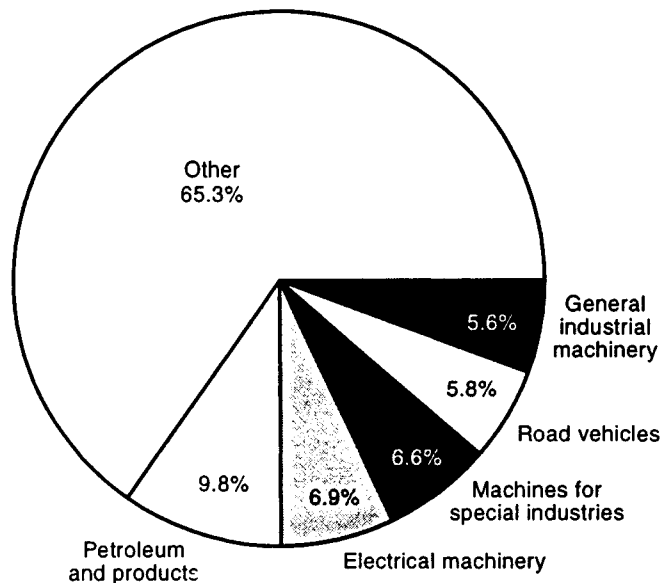
Figure 1
Sources of imports of all BEMs combined, 1992



Source: United Nations (1993).

Two things stand out about the types of goods that the BEMs imported in 1992. First, the single largest import commodity was petroleum and petroleum products (crude petroleum and fuel). Second, the next four largest import commodities were all in machinery and transportation equipment—electrical machinery (such as household appliances and switchgears), machines for special industries (such as textile and leather machinery), general industrial machinery (such as heating and cooling equipment), and road vehicles. Combined, these five commodity categories accounted for \$124 billion, or about 35 percent of total BEM imports (see figure 2).

Figure 2
Top commodities imported by all BEMS combined, 1992



Note: SITC commodities imported from all countries, measured by U.S. dollar value.
 Source: United Nations (1993).

This collective import profile of the BEMs shows an emphasis on production rather than consumer goods, reflecting a desire to develop the capacity to produce their own goods for consumption or export. Given this desire, the BEMs need machinery imports to build an industrial structure or upgrade an existing one. Thus several of the Asian BEMs' machinery imports are in the textile and apparel industries. Road vehicles, telecommunications, and electronics and electrical machinery are in demand in the Latin American BEMs, and machinery for special purpose industries is in demand in several others, for example, industrial food processing machinery in Poland. To fuel these industries (literally), petroleum and petroleum products are needed—for the factories, equipment, workers' homes, workers' transportation, and so on.

Individually, some of the BEMs had quite different import profiles than the group as a whole (see table 1). For example, China's second-largest import commodity is textile yarns, which in turn support two of their major export industries—clothing and accessories, and textile yarn and fabrics. Combined, these two industries accounted for 30 percent of China's exports in 1992. India's only commonality with the BEMs' collective import profile is that its top import commodity is petroleum and petroleum products. Its second-largest import commodity is nonmetal minerals, which include precious and semi-precious stones, primarily rough unset diamonds. Diamonds accounted for 15 percent of India's exports in 1992. Indonesia's imports also vary substantially from the group's overall profile.

Another way in which the BEMs differed from each other was in who their largest sources of imports were (see table 2). As could be expected, several countries had a neighboring country among their top three sources. For example, of all the goods that China imports, Hong Kong was the single largest supplier, capturing over 25 percent of the total. Of Argentina's total imports, Brazil was the largest source, providing 22 percent. In turn, Argentina was Brazil's third-largest source, providing 8 percent of the latter's imports. Total import growth for the BEMs over the 1988-92 period was nearly 59 percent. By comparison, total world imports grew 32 percent, and among the industrialized countries, U.S. imports grew by 21 percent, Japan's by 25 percent, and Germany's by 63 percent. Germany's spectacular increase can be attributed to the country's reunification and the increased demand needed to bring the former East Germany up to par with the rest of the country. (East Germany was not included in the 1988 data). In addition, the BEMs as a whole registered a higher average annual import growth rate than did either the U.S. or Japan, both of which have experienced recent periods of economic slowdown. However, Germany still outperformed the BEMs (on average) for the reason noted above.

Individually, BEM import growth ranged from a high of 179 percent for Argentina to a low of 7 percent for South Africa. In addition to Argentina, Mexico and Indonesia also had above-average import growth, rising 145 percent and 106 percent respectively. South Africa's weaker gains were likely due to its overall stagnant economic growth that persisted through the early 1990s.

Table 1
Top commodities imported by the BEMs, 1992
by SITC classification
(\$ U.S. Billions)

China	\$8.3	Mach. for special industries	Mexico	\$7.9	Road vehicles
	7.8	Textile yarns		3.3	Gen'l industrial mach., NES
	4.9	Electrical machinery, NES		2.6	Mach. for special industries
	4.5	Iron and steel		2.6	Electrical machinery, NES
	4.2	Plastic materials		2.1	Telecomm., sound equip.
	35.6%	Percent of total imports		38.4%	Percent of total imports
Indonesia	\$2.7	Mach. for special industries	Poland	\$2.2	Petroleum and products
	2.5	Gen'l industrial mach., NES		1.1	Gen'l industrial mach., NES
	2.1	Petroleum and products		0.8	Mach. for special industries
	1.7	Power generating equipment		0.8	Misc. manuf. goods, NES
	1.5	Iron and steel		0.7	Road vehicles
	38.3%	Percent of total imports		39.1%	Percent of total imports
India	\$6.6	Petroleum and products	Turkey	\$3.0	Petroleum and products
	2.8	Nonmetal mineral MFS, NES		1.6	Mach. for special industries
	0.9	Inorganic chemicals		1.3	Electrical machinery, NES
	0.9	Iron and steel		1.3	Gen'l industrial mach., NES
	0.8	Fertilizers, mfg		1.3	Iron and steel
	59.1%	Percent of total imports		37.7%	Percent of total imports
Argentina	\$2.0	Road vehicles	Korea	\$12.0	Petroleum and products
	1.1	Telecomm., sound equip.		8.5	Electrical machinery, NES
	1.1	Electrical machinery, NES		4.7	Gen'l industrial mach., NES
	0.8	Gen'l industrial mach., NES		4.2	Mach. for special industries
	0.7	Mach. for special industries		3.3	Iron and steel
	38.7%	Percent of total imports		39.9%	Percent of total imports
Brazil	\$4.4	Petroleum and products	S.Africa	\$1.8	Road vehicles
	2.2	Electrical machinery, NES		1.3	Gen'l industrial mach., NES
	1.4	Organic chemicals		1.0	Electrical machinery, NES
	1.0	Cereals and preparations		1.0	Mach. for special industries
	1.0	Gen'l industrial mach., NES		0.8	Office equipment
	48.5%	Percent of total imports		34.7%	Percent of total imports

NES: Not elsewhere specified.
Source: United Nations (1993).

Table 2
BEMs largest import trading partners, 1992
(\$ U.S. Billions)

		Imports	Mkt. share			Imports	Mkt. share
China	World	\$80.6		Mexico	World	\$47.9	
	Hong Kong	20.5	25.4%		USA	30.1	62.8%
	Japan	13.7	17.0%		Germany	2.5	5.2%
	USA	8.9	11.0%		Japan	3.0	6.3%
	Germany	4.0	5.0%		France	1.3	2.7%
	Russia	3.5	4.3%		Brazil	1.1	2.3%
Indonesia	World	\$27.3		Poland	World	\$15.9	
	Japan	6.0	22.0%		Germany	3.8	23.9%
	USA	3.8	13.9%		Russia	1.4	8.8%
	Germany	2.1	7.7%		Italy	1.1	6.9%
	Korea	1.9	7.0%		UK	1.1	6.9%
	Singapore	1.7	6.2%		Austria	0.7	4.4%
India	World	\$24.2		Turkey	World	\$22.9	
	USA	2.3	9.5%		Germany	3.8	16.6%
	Belgium	2.0	8.3%		USA	2.6	11.4%
	Germany	1.8	7.4%		Italy	1.9	8.3%
	Japan	1.6	6.6%		Saudi Arabia	1.7	7.4%
	UK	1.5	6.2%		France	1.4	6.1%
Argentina	World	\$14.9		Korea	World	\$81.4	
	Brazil	3.3	22.1%		Japan	20.0	24.6%
	USA	3.2	21.5%		USA	18.3	22.5%
	Germany	1.1	7.4%		Saudi Arabia	3.8	4.7%
	Italy	0.8	5.4%		Germany	3.7	4.5%
	Japan	0.7	4.7%		China	3.7	4.5%
Brazil	World	\$23.1		S. Africa	World	\$18.4	
	USA	5.4	23.4%		Germany	3.0	16.3%
	Germany	2.0	8.7%		USA	2.5	13.6%
	Argentina	1.8	7.8%		Japan	2.0	10.9%
	Saudi Arabia	1.7	7.4%		UK	1.9	10.3%
	Japan	1.3	5.6%		France	0.7	3.8%

Source: United Nations (1993).

To summarize, the import profile of the BEMs over the last few years indicates that they are indeed growth markets. Import growth in seven of the ten BEMs exceeded world import growth, the types of goods the BEMs import are those most needed to support a growing economy, and the major industrialized countries of the world have recognized the importance of serving these markets, particularly the United States. The next section will present in more detail the export patterns of the U.S. and Seventh District in terms of meeting the BEMs' needs.

U.S. exports to the BEMs

Over the 1987-94 period, U.S. exports to the BEMs grew \$65 billion, or 177 percent, for an average annual compound gain of 16 percent. U.S. exports to the rest of the world grew by 95 percent over the same period, for an average annual compound gain of 10 percent. With the exception of two industries—mining of quarry nonmetal minerals (such as sand or clay), and lumber and wood products—BEM export growth by industry exceeded U.S. export growth to the rest of the world. The machinery industries did particularly well in terms of absolute increases with both electrical and nonelectrical machinery increasing by over \$11 billion each and transportation equipment increasing by nearly \$10 billion.

In terms of market share, the BEMs have grown from 15 percent of total U.S. exports in 1987 to 20 percent in 1994. While all the BEMs had positive growth over the period, Argentina, Indonesia, and Mexico had the largest percentage increases, at 310 percent, 266 percent, and 247 percent, respectively. However, U.S. exports to Mexico in many ways stand out from those to other BEMs because of certain characteristics unique to Mexico. One major factor is that Mexico is a free trade partner of the U.S. The U.S., Mexico, and Canada have a formal trade agreement that fosters free and open trade among our countries, and includes rules and agreements that go beyond GATT. In addition, U.S. trade with Mexico is augmented by the proximity of these two nations. Thus, while U.S. export growth to the combined BEMs has outpaced export growth to the rest of the world, the Mexican market is especially significant.

While Mexico is by far the largest BEM export market for the U.S., South Korea, China, and Brazil are also major markets for the U.S. The South Korean market is the largest of the three, nearly double the size of the Chinese

or Brazilian market in 1994. The top export industries to South Korea in 1994 were electrical machinery, nonelectrical machinery, and transportation equipment. On a more detailed basis, in 1993 (the latest year for which such data are now available), the top exports to South Korea were semiconductors, aircraft, and meat products. The top exports to China were aircraft, motor vehicles, and radio and TV equipment; those to Brazil were data processing equipment, aircraft, and industrial organic chemicals. (See appendix for the top U.S. goods exported to the BEMs as a group and individually in 1993.)

Seventh District trade with the BEMs

Exports to the BEMs from the Seventh District states increased by \$5.6 billion, or 152 percent, over the 1987-94 period. By contrast, exports to the rest of the world grew 90 percent. Almost all industries had positive export growth to the BEMs with the exception of forestry, scrap and waste, and the two mining industries. Nonelectrical machinery, electrical machinery, and chemicals had the largest absolute increases, accounting for 60 percent of the District's total export increase to the BEMs over the period.

The BEMs' share of Seventh District exports has also grown. In 1987, exports to the BEMs comprised 10 percent of total District exports; by 1994, that share had risen to 13 percent. The largest BEM export markets for the District were Mexico, South Korea, and China, which together comprised three-fourths of the District's exports to the BEMs in 1994. However, in terms of the fastest-growing markets, Indonesia, Argentina, and Brazil had the largest percentage increases over the period (425 percent, 334 percent, and 249 percent, respectively). Like the U.S., exports to Mexico tended to dominate the profile of District exports to the BEMs as a group because of the large share Mexico consumes; nearly half of all District exports to the BEMs are to Mexico.

An interesting development in the District between 1987 and 1994 was that transportation equipment declined as a share of total District exports. This was true for total District exports as well as District exports to the BEMs. In 1987, transportation equipment exports comprised 38 percent of total District exports; by 1994, their share had fallen to 30 percent. While transportation was still the top export industry for the District as a whole (in dollar value), other major industries such as nonelectrical machinery, electrical machinery, and chemicals, were either gaining or maintaining market share (see table 3).

Table 3
A. Top 5 District export industries to the world, 1987 and 1994

Ranked by 1987 value	1987 value	Industry market share*	Ranked by 1994 value	1994 value	Industry market share*
	(billions)	(percent)		(billions)	(percent)
Transportation equipment	\$14.0	38.1	Transportation equipment	\$21.4	29.6
Nonelectrical machinery	7.8	21.2	Nonelectrical machinery	15.8	21.9
Electrical machinery	2.9	8.0	Electrical machinery	8.6	12.0
Chemicals	2.9	7.8	Chemicals	6.4	8.9
Fabricated metals	2.1	5.7	Measuring instruments	3.4	4.7

B. Top 5 District export industries to the BEMs, 1987 and 1994

Ranked by 1987 value	1987 value	Industry market share*	Ranked by 1994 value	1994 value	Industry market share*
	(billions)	(percent)		(billions)	(percent)
Transportation equipment	\$1.2	32.1	Nonelectrical machinery	\$2.4	26.0
Nonelectrical machinery	0.9	24.2	Electrical machinery	1.6	16.8
Electrical machinery	0.4	10.8	Transportation equipment	1.5	16.5
Chemicals	0.4	9.6	Chemicals	1.1	11.4
Measuring instruments	0.2	5.0	Food and kindred products	0.5	5.9

*Industry market share is that industry's share of total District exports.
 Source: Massachusetts Institute for Social and Economic Research (1992 and 1995).

District exports to the BEMs show an even more pronounced pattern of change. In dollar value, transportation equipment exports have fallen in rank from first in 1987 to third in 1994. Also, their market share has fallen from 32 percent of total District exports to 17 percent. This pattern is largely driven by trade with Mexico, where transportation exports (largely auto parts) have fallen from 49 percent of the total to 21 percent. Another significant change occurred in electrical machinery exports, which grew from 11 percent of total District exports to the BEMs to 17 percent.

Several positive things can be said about this change in the District's export profile. First, compared with the past, the fortunes of the auto industry will have a smaller impact on the District during both lean times and good times. Second, less concentration of exports along industry lines suggests that overall District export performance will not be so closely tied to one or two industries in the future. Finally, District exports tend to correspond—even more than U.S. exports as a whole—to those industries in which BEM purchases are experiencing significant growth.

U.S. agricultural exports to the BEMs

U.S. agricultural exports make an important contribution to farm income as well as to our nation's trade balance. The U.S. Department of Agriculture (USDA) reported that 17 percent of the value of U.S. agricultural production was exported last year, accounting for a tenth of the value of all U.S. exports and generating a major positive contribution to the merchandise trade balance.⁶ Furthermore, current developments suggest that foreign markets will become even more important to U.S. agriculture. The budget constraints so prominent in the 1995 farm bill debate and the trend towards greater market orientation portend a decrease in the level of federal spending on programs that support farm prices and income. Slow population growth in the U.S. will continue to be a significant constraint on future gains in domestic food demand. Moreover, biogenetic research promises to augment strides in agricultural productivity. Given these factors, farmers and agribusinesses must increasingly look to foreign markets as an outlet for continued gains in output and as a vehicle to maintain or improve income levels.

The states of the Seventh Federal Reserve District make an important contribution to both agricultural output and trade. Farms in these states account for a substantial share of the nation's domestic livestock, milk, corn,

and soybean production. The high level of output propelled District states into an 18 percent share of U.S. farm commodity receipts in 1993 and also provided raw material to a sizable food processing sector. Furthermore, District states play an important role in international agricultural trade. The USDA estimates that the five states together accounted for over a fifth of the value of U.S. agricultural exports in 1993.⁷

The BEMs represent a major market for U.S. agriculture. From 1987 through 1994, their share of foreign sales of U.S. agricultural products rose from 14 percent to 20 percent. Moreover, the potential for future gains is significant, as rising incomes and international agreements that liberalize trade are expected to boost purchases of U.S. agricultural products. Among the BEMs, the top three buyers of U.S. agricultural products are Mexico, South Korea, and China. These three nations accounted for over 80 percent of total U.S. agricultural exports to the BEMs from 1987 through 1994. Sales to Mexico increased nearly four times during this period, while those to China tripled. But the most rapid growth rates in U.S. agricultural sales were to the relatively smaller markets of Argentina, Brazil, and Indonesia. (Agricultural exports to South Africa also rose quickly, but this was due to a severe drought in that nation.)

Much of the growth in the value of agricultural exports to the BEMs stemmed from rising sales of value-added processed products, a trend that is reflected in agricultural exports to other nations as well. Since 1985, the share of U.S. agricultural exports made up of these products has been growing.⁸ Processed products include meat, poultry, dairy products, fats and oils, beverages, and a wide variety of other consumer food products. Moreover, foreign sales of processed products have exceeded the export value of bulk agricultural commodities (such as wheat, cotton, and other crops) since 1991. In general, bulk exports have suffered as the effects of more favorable exchange rates have been offset by greater competition from other nations as well as weakened foreign demand. In contrast, U.S. sales of processed products have benefited from reduced trade barriers, income growth in many developing nations, a growing taste for Western foods, and the convenience offered by processed foods. Furthermore, the transport of perishable food items has been aided by advancements in technology that improved cost-effectiveness and reduced the potential for spoilage.⁹

From 1987 through 1994, the processed share of U.S. agricultural exports to the BEMs rose from a third to nearly half. The major processed exports are red meat and poultry, which together accounted for a fifth of the value of U.S.

agricultural sales to the BEMs from 1989 through 1993, the latest year for which individual industry data are available. Mexico and South Korea are by far the largest buyers. But while exports of red meat to the BEMs tended to rise from 1989 to 1992, a sharp drop in 1993 pushed the value back down to the level of five years earlier. In comparison, the value of U.S. poultry exports made brisk gains—particularly to Mexico, China, and Poland—and continued to climb even as sales of red meat faltered.

A host of other processed products exported to the BEMs made only modest individual contributions to total sales, yet together accounted for 21 percent of the aggregate figure from 1989 through 1993. The most important are soybean oil, animal fats and oils, milled corn products, and milk powder. Those products experiencing the most rapid export growth include soft drinks, ice cream and cheese, potato chips and snacks, and breakfast foods. Over the period, the BEMs increased their purchases of all processed products other than red meat and poultry by a remarkable 50 percent. In comparison, purchases of red meat and poultry rose by a more modest 20 percent.

Among the major bulk commodities, sales of wheat and cotton to the BEMs were generally declining from 1989 through 1993. The drop in wheat exports was largely attributable to China, which reduced its purchases by roughly 75 percent. Furthermore, cotton export sales experienced not only an overall decline but a shift away from South Korea and China toward Mexico and Brazil. The value of U.S. corn exports to the BEMs also suffered a serious decline from \$1.2 billion to \$288 million. This stemmed mostly from a steady decline in sales to South Korea and Mexico. China supplanted the U.S. as South Korea's major supplier, but China's recent switch from corn exporter to importer will give the U.S. an opportunity to recapture market share. U.S. sales of corn to Mexico suffered partly because of past Mexican policy that encouraged domestic production and erected trade barriers insulating Mexican producers from foreign competition. But reform of those policies and the implementation of the North American Free Trade Agreement (NAFTA) helped revive U.S. corn exports to Mexico last year. In contrast to wheat, cotton, and corn, the value of soybean exports fared much better, rising by over one-third. Most of it went to Mexico and South Korea, though sales to Indonesia also registered strong gains.

What share of agricultural exports to the BEMs is produced within Seventh District states? Though data on state-level exports to the BEMs are available, they must be interpreted with caution for two reasons. First, the data are aggregated along broad product categories rather than individual commodities.

But more importantly, exporters may assemble commodities at a central location (such as a major port) and then report that site as the point of origin of shipments.¹⁰ Consequently, the data on agricultural exports originating from District states tend to be understated, while those from states with major ports are likely inflated. However, some insight may be gained regarding District agricultural exports to the BEMs by examining the trends in these data.

From 1987 through 1994, the value of District agricultural exports to the BEMs tripled, a much faster increase than sales to the rest of the world. Nearly all the gain in District exports to the BEMs stemmed from crops and processed products rather than forestry products, fish, or live animals. However, there was considerable difference between the sales pattern of bulk commodities and that of processed products. While the export value of processed products to the BEMs generally gained steadily from year to year, District crop exports experienced wide swings. As an example, China's displacement of the U.S. as the primary corn supplier to South Korea was likely responsible for the sharp decline in District crop exports to the BEMs in 1991.

A closer look at the BEMs

It should be clear by now that the BEMs are not a homogeneous group. While they have some similarities, such as in the types of goods they import, individually they appear to present unique challenges in terms of U.S. export promotion and market strategies. Collectively they exhibit considerable growth potential, yet several of them already are large export markets for U.S. goods, and some are still very much in the growth stages of becoming leading world markets. Following is a closer look at all ten markets.

China

In 1992, China's imports¹¹ topped \$80.5 billion, up \$25.0 billion from 1988. China's largest source of imports in 1992 were Hong Kong with 25 percent of total imports, Japan with 17 percent of total, and the U.S. with 11 percent. China is the second largest import market of the BEMs, led only by Korea. China's largest import industries in 1992 were equipment for special industries (such as textile and leather machinery, and machinery related to weaving and felt manufacturing), textile yarns and fabrics, and electrical machinery. Textile

machinery and textile yarns accounted for nearly 20 percent of China's imports in 1992. These imports in turn support two of China's major export industries—clothing and accessories, and textile yarn and fabrics, which combined, accounted for 30 percent of the country's exports in 1992.

U.S. commodity exports to China grew 166 percent over the 1987-94 period, with transportation equipment, nonelectrical machinery, and chemicals the largest export industries to China in 1994 (see figure 3). These three industries accounted for over 60 percent of all U.S. exports to China that year. At a more detailed level, the top U.S. export to China in 1993 (latest year such data are available) was aircraft, accounting for nearly one-fourth of all exports to China that year. Motor vehicles and car bodies was the next largest export commodity, accounting for over 7 percent of total exports to China.

Figure 3
U.S. exports and total imports
China, 1987-1994



In terms of catering to China's largest import needs, 13 percent of U.S. exports in 1993 were in China's three largest 1992 import industries.¹² In other words, China's top three import industries in 1992 were machines for special industries, general industrial machinery, and textile yarn and fabrics. U.S. exports to China of these goods in 1993 represented 13 percent of total exports to China that year.

U.S. exporters have historically found trade with China difficult. Several methods of import restrictions used are—restrictive import licensing requirements, quantitative restrictions, embargoes on certain consumer goods, and higher quality standards and testing for imports versus domestic products. In 1992, the U.S. and China signed a memo of understanding (MOU) to reduce some of these trade barriers. In particular, China agreed to phase-in lower tariffs on certain goods over time, and apply standards and testing requirements equally to both foreign and domestic goods.¹³

Nonetheless, U.S. exports to China comprised less than 2 percent of all exports in 1994. So in March of 1995, the United States and China moved toward broader market access for U.S. goods, in particular telecommunications, insurance, and agriculture, by agreeing to an eight point plan to open China's market to U.S. goods. Part of the agreement includes U.S. support of China's accession to the newly formed World Trade Organization.

Exports from the Seventh District states to China increased 123 percent over the 1987-94 period. Like the U.S., China was the District's third largest export market in 1994 with \$1.2 billion in goods. District exports to China were the most concentrated of the BEMs. That is, the top three largest export industries (electrical machinery, nonelectrical machinery, and chemicals) accounted for 83 percent of all District exports to China that year.

Indonesia

Indonesia's total imports in 1992 stood at \$27.3 billion, with Japan, the U.S., and Germany accounting for nearly 44 percent of all imports. Total imports in 1992 were more than double their 1988 level. Indonesia's largest import industries in 1992 were machinery for special industries, particularly textile and leather machinery, and machinery for general industries, such as heating and cooling equipment and mechanical handling equipment (fork lift trucks, and lifting and loading machines). Indonesia's other major import industry in 1992 was petroleum and products.

Nearly one-third of Indonesia's exports are mineral fuels, mainly crude petroleum and natural gas. Another major export industry is textile yarn and fabrics, and clothes and accessories, which, like China, tie directly to their imports of textile machinery.

U.S. exports to Indonesia enjoyed exceptional growth over the 1987-94 period with a 266 percent increase, representing over a \$2 billion increase in goods (see figure 4). Indonesia ranked second in terms of percentage increase of the BEMs. Nonelectrical machinery, transportation equipment, and chemicals were the largest U.S. export industries to Indonesia in 1994, accounting for 58 percent of all exports that year.

Figure 4
U.S. exports and total imports
Indonesia, 1987-1994



In terms of meeting Indonesia's largest import needs, 15 percent of U.S. exports to Indonesia in 1993 were in Indonesia's three largest import industries. U.S. exports of machinery for special industries, including textile and leather machinery, totaled \$183 million or 7 percent of U.S. exports to Indonesia that year. General industrial machinery exports, such as heating and cooling equipment, mechanical handling equipment, and pumps, totaled \$134 million or 5 percent of U.S. exports, and exports of power generating equipment totaled \$106 million or 4 percent of U.S. exports.

In general, Indonesia does not restrict imports but some licensing requirements do exist for certain agricultural commodities, alcoholic beverages, and some iron and steel products.¹⁴ However, Indonesia participated last year, along with 17 of its Asian/Pacific Rim neighbors, in a declaration to create a free trade zone in the area by the year 2020. Yet this did not preclude the U.S. and Indonesia from recently announcing \$40 billion in joint investment projects over the next decade, with the bulk of this sum involving a joint project between Exxon and Pertamina, the state-owned oil company.¹⁵ Also, U.S. exports are anticipated to continue to grow as Indonesia is expected to spend about \$100 million over the next five years in infrastructure improvements.¹⁶

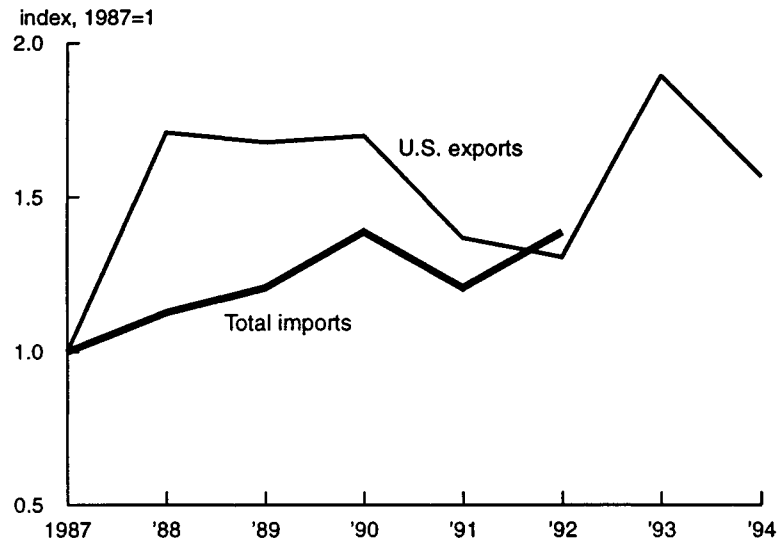
District exports to Indonesia increased 425 percent over the 1987-94 period, the largest District increase of the BEMs. Most industries experienced spectacular growth over the period with three industries—leather and products, paper and products, and fabricated metals, having increases greater than 2,000 percent.

India

The U.S., Belgium, and Germany provided India's top imports in 1992. Total imports that year were \$24.2 billion, up 25 percent from 1988. India's major import industries in 1992 were petroleum and products, nonmetal minerals (precious and semi-precious stones, primarily rough unset diamonds) and organic chemicals (such as phosphoric acids used in fertilizers). Diamonds also play a role in India's exports, accounting for 15 percent of India's exports in 1992. Textile yarns and fabrics, and clothing and accessories, were also major export commodities.

U.S. exports to India grew only 57 percent over the 1987-94 period, the smallest increase of the BEMs for that period (see figure 5). Nonelectrical machinery, chemicals, and transportation equipment were the largest export industries to India in 1994.

Figure 5
U.S. exports and total imports
India, 1987-1994



While India is one of the smaller BEMs in terms of U.S. exports, nonetheless, the U.S. is India's largest trading partner. In 1993, imports from the U.S. accounted for 11.5 percent of India's total imports.¹⁷

In 1993, only 3 percent of U.S. exports met India's largest import needs with nonmetal minerals (such as precious and semi-precious stones) comprising the largest share with 2 percent.

As with most of the BEMs, India has only recently begun market liberalization reforms. Market access, high tariffs, and nontariff barriers to trade are still a problem. Import licenses are still necessary for most consumer durables, certain electronics, fruits and vegetables, processed food products, and goods required for small-scale industry.¹⁸

However, despite these trade-related problems, U.S. investment in India is large and growing since India loosened restrictions on investment in 1991. In 1993, approvals for investment in India by U.S. firms totaled \$1.2 billion, or

approximately 40 percent of all approvals for new investment that year. In early 1995, a trade delegation from the U.S. signed approximately \$4 billion in trade and investment deals with Indian business leaders with potentially an additional \$12 billion under negotiation. The \$4 billion included industries such as petrochemicals, power generation, telecommunications, and transportation.¹⁹

Like the U.S., District exports to India in 1993 experienced slow growth over the 1987-94 period with only a 54 percent increase. Nonelectrical machinery, chemicals, and food and kindred products were the largest District export industries to India in 1994. Of the BEMs, India was the only country to have food and kindred products within the top three District export industries, and this is despite India's import licensing requirements on processed foods.

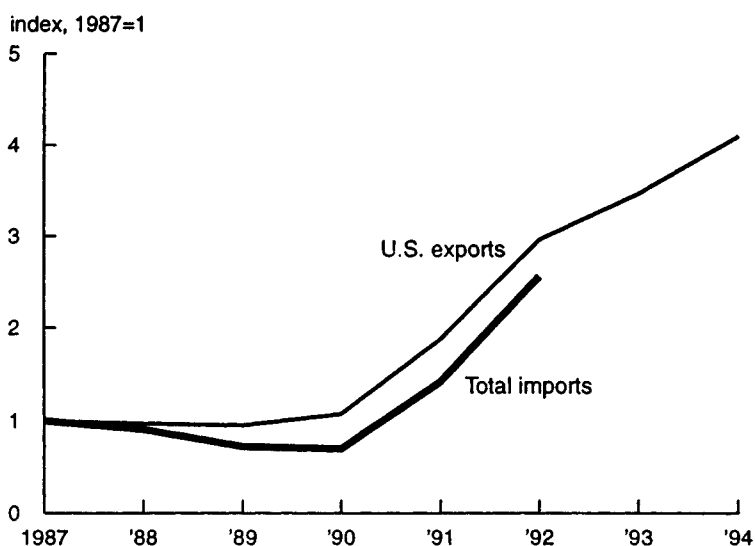
Argentina

Argentina's imports nearly tripled over the 1988-92 period to \$14.9 billion in 1992. Argentina was the smallest of the BEM import markets in 1992. The U.S. and Brazil were Argentina's largest source of imports in 1992 with over 20 percent market share each, followed by Germany with a 7 percent share. Road vehicles, telecommunication equipment, and electrical machinery were Argentina's major import industries in 1992. Electrical machinery imports varied from consumer-type items such as laundry machines, to electrical components such as switchgears.

Argentina's exports are primarily agricultural related. Their top export commodity in 1992 was food and live animals, followed by feeding stuff for animals (soya beans, linseed, and sunflower seeds) and cereals and preparations. Combined, these three commodity groups accounted for 70 percent of Argentina's exports in 1992.

Over the 1987-94 period, Argentina was the largest growth market of the BEMs for U.S. exports with a 310 percent increase (see figure 6). All manufacturing industries had positive growth, and in most cases, significant growth (all manufacturing industries minimally doubled their exports to Argentina over the period, while others, like furniture and fixtures and leather and leather products, had increases greater than 3,000 percent). Nonelectrical machinery, electrical machinery, and chemicals were the largest U.S. export industries to Argentina in 1994, accounting for 63 percent of all U.S. exports to Argentina that year.

Figure 6
U.S. exports and total imports
Argentina, 1987-1994



Over 21 percent of U.S. exports to Argentina in 1993 were in Argentina's largest import industries. Electrical machinery exports were \$289 million or 8 percent of total U.S. exports, road vehicles were \$234 million or 6 percent, and telecommunications equipment were \$273 million or 7 percent.

In recent years, Argentina has taken steps to remove import barriers including tariff reductions (average tariffs have been reduced from 29 percent in 1990 to less than 10 percent currently) and the abolishment of its import licensing system in 1989.²⁰

Argentina is a member of MERCOSUL, a common market agreement between Argentina, Brazil, Uruguay, and Paraguay, that was scheduled to go into effect on January 1, 1995 to create a customs union (an agreement that allows free flow of capital, goods, flow, and services; common external tariffs; common foreign policy; and the coordination of macroeconomic and sectoral policies) between the four countries.²¹ Depending on the types of goods these four countries produce, U.S. exports to Argentina could be hindered. Brazil is

already Argentina's largest importer, capturing 22 percent of Argentina's import market in 1992.

District export growth to Argentina over the 1987-94 period was similar to U.S. growth. Top District export industries to Argentina in 1994 were nonelectrical machinery, electrical machinery, and chemicals, accounting for nearly 70 percent of all exports to Argentina that year. Like total U.S., nearly all District industries experienced large and positive export growth to Argentina over this period. In particular, mined quarry minerals (such as sand and clay) increased nearly 4,400 percent and measuring instruments increased nearly 1,800 percent.

Brazil

Brazil's import growth has slowed over the last two years, stalling at around \$23 billion since 1990, for an overall growth of 44 percent over the 1988-92 period. The U.S. provided the largest share of Brazil's imports with 23 percent in 1992. Germany and Argentina were the next largest sources of imports. Petroleum and products, electrical machinery, and organic chemicals were Brazil's largest import industries in 1992.

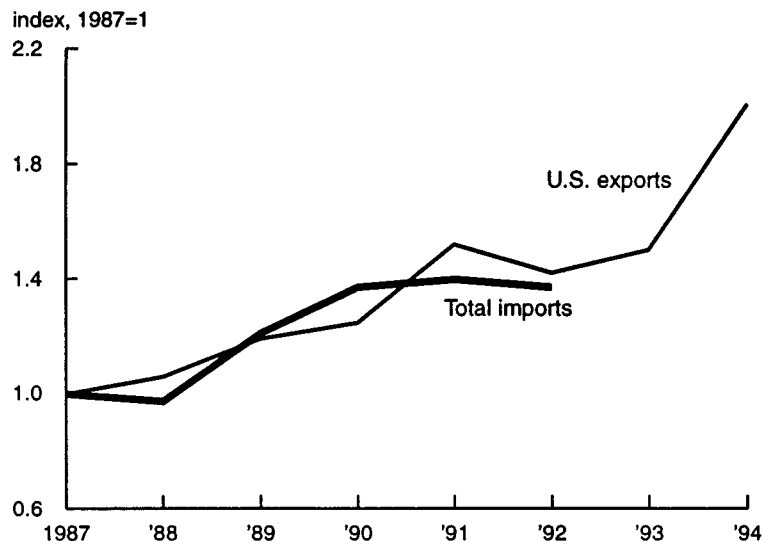
Basic manufactures, such as iron and steel, and machinery and transportation equipment, such as road vehicles, are Brazil's largest export industries. Food and live animals is also a major export industry.

U.S. exports to Brazil increased 101 percent over the 1987-94 period (see figure 7). Nonelectrical machinery, chemicals, and electrical machinery were the largest export industries to Brazil in 1994.

In terms of meeting Brazil's import needs, 15 percent of U.S. exports to Brazil in 1993 were in the country's three largest import industries—organic chemicals with \$487 million or 8 percent of total exports, electrical machinery with \$405 million or 7 percent, and cereals and preparations with \$35 million or .6 percent.

Until 1990, Brazil's trade policy in regard to imports was highly restrictive. Over the 1980-92 period, annual import growth was nil, and import tariffs averaged 78 percent.²² However, economic reforms that began in 1989 have helped both import and export growth. In 1993, imports increased by over \$5 billion or 25 percent over the prior year. Average tariffs have been reduced to 14 percent.²³

Figure 7
U.S. exports and total imports
Brazil, 1987-1994



According to various newspaper reports, several key market opportunities exist for U.S. companies, particularly in the computer and textile manufacturing industries. With a population of 155 million, Brazil's computer market is expected to quadruple from 2.5 million in 1994 to 10 million by the end of the decade.²⁴ Textile manufacturing has already become a boom industry in Brazil with 45 new textile and clothing companies expected to open in the city of Forteleza alone.²⁵ U.S. exports of cotton have already increased dramatically, from \$5 million in 1989 to \$85 million in 1993. In addition, new manufacturing facilities will require new equipment thereby creating opportunities for U.S. textile equipment manufacturers.

District exports to Brazil increased 249 percent over the 1987-94 period, more than twice the U.S. percentage increase. The top three District export industries to Brazil in 1994 were nonelectrical machinery, transportation equipment, and chemicals. These three industries accounted for 68 percent of all District exports to Brazil that year.

Mexico

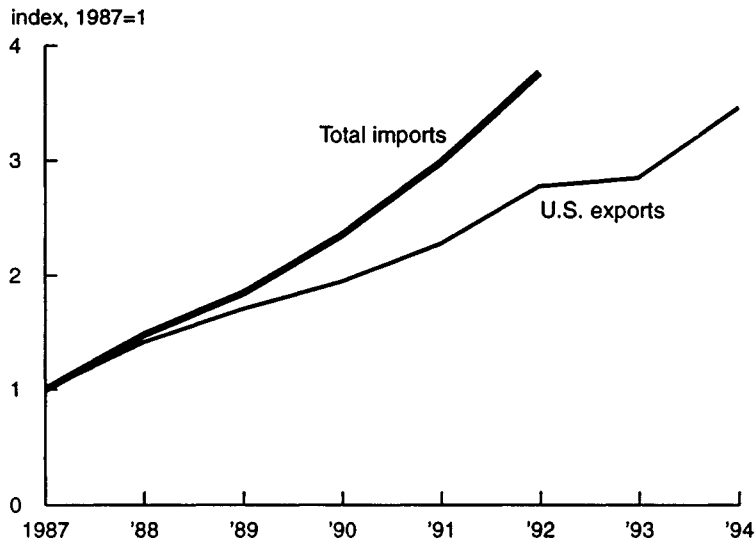
Mexico's imports grew 122 percent over the 1988-92 period. The U.S. provided the bulk of those imports with 63 percent of total imports in 1992. Japan and Germany are Mexico's next largest source of imports, with 6 and 5 percent respectively. Road vehicles and machinery (including electrical, general industrial, and machines for special industries) are Mexico's largest import commodities. Machinery imports cover a broad spectrum including telecommunications equipment, metal working machinery, textile and leather machinery, and civil engineering equipment (such as shovels and excavating equipment). Mexico's largest export commodities are crude petroleum and road vehicles, accounting for 44 of total exports.

In 1993, 19 percent of U.S. exports were in Mexico's three largest import industries—road vehicles (mainly auto parts), general industrial machinery, and machines for special industries. Mexico's close proximity to the U.S. in conjunction with recent market liberalizations in Mexico and the free trade agreement between Mexico, the U.S., and Canada, negotiated in 1993 have helped make the Mexican market more accessible than just a decade ago.

Mexico is the largest U.S. export market of the BEMs, accounting for nearly half of the BEM exports in 1994. U.S. exports to Mexico increased 247 percent over the 1987-94, the third largest percentage increase of the BEMs (see figure 8). The U.S. is Mexico's largest trading partner with 65 percent of all imports coming from the U.S. and approximately 80 percent of all exports going to the U.S. Machinery, both electrical and nonelectrical, and transportation equipment were the largest U.S. export industries to Mexico in 1994. Nearly half of all U.S. exports to Mexico are in these three industries.

Economic reform began in Mexico in 1986 when they became members of the General Agreement on Tariffs and Trade (GATT). Since then, the country has made significant strides in opening its economy by lowering tariffs, which in some cases were as high as 100 percent, privatizing many of its state-owned industries, and reducing barriers to foreign investment. Between 1986 and 1992, Mexican imports rose an average of 25 percent per year.

Figure 8
U.S. exports and total imports
Mexico, 1987-1994



District exports to Mexico increased 143 percent over the 1987-94 period. The top three export industries of the District were the same as the U.S.—nonelectrical machinery, transportation equipment, and electrical machinery. District exports of transportation equipment (mainly motor vehicle parts) accounted for 14 percent of all U.S. exports of motor vehicle parts to Mexico in 1994.

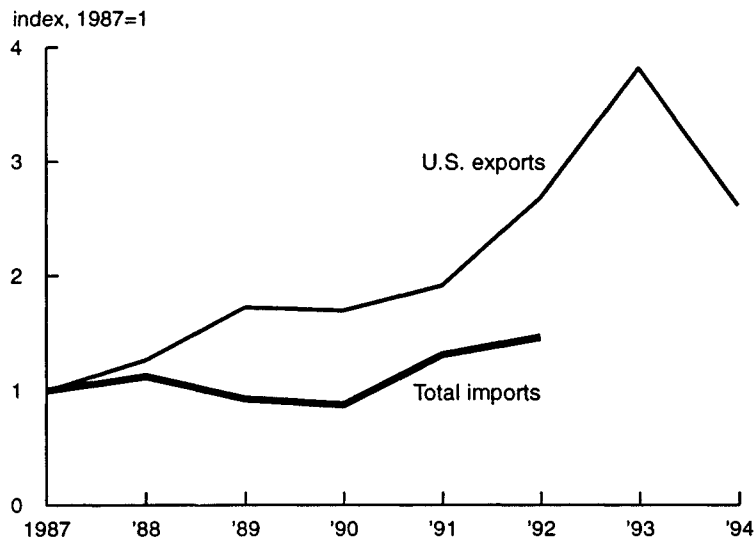
Poland

Poland's import levels have been erratic over the 1988-92 period. In 1988, imports stood at \$13 billion, dropped to \$8 billion in 1990, and rose to nearly \$16 billion in 1992. Poland's import partners are the most localized of the BEMs. That is, many of its major import partners are from the same region of the world—Germany, Russia, Austria, and Czechoslovakia. Germany is Poland's largest importer, capturing 24 percent of the import market in 1992. Petroleum and petroleum products, general industrial machinery, and machines

for special industries (such as industrial food processing and textile and leather machinery), were Poland's largest import industries in 1992. Poland's export growth has been extremely slow over the 1989-1992 period, and actually declined 2 percent from the beginning to the end of the period. Coal, coke and briquettes, iron and steel, and nonferrous metals such as silver, copper, and aluminum, were Poland's largest export commodities in 1992.

In 1994, U.S. exports to Poland stood at \$625 million, the smallest export market of the BEMs. In terms of growth, U.S. exports grew 162 percent over the 1987-94 period, with nonelectrical machinery, transportation equipment, and electrical machinery the largest export industries in 1994 (see figure 9).

Figure 9
U.S. exports and total imports
Poland, 1987-1994



In terms of meeting Poland's largest import needs, 16 percent of U.S. exports in 1993 were in Poland's top three import industries. Machines for special industries exports accounted for \$97 million or 11 percent, while general industrial machinery exports and miscellaneous manufactured goods each accounted for \$23 million or 3 percent of total exports.

Poland's overall trade policy has no restrictions on trade, except in a few sensitive areas. However their trade policy has changed several times in the 1990s alone in reaction to domestic pressures from consumers with pent up demand on the one hand, and farmers and manufacturers wanting protection from foreign competition on the other hand.²⁶

U.S. exporters are hindered by Poland's close ties to the European Community which includes a tariff preference arrangement. Also, standards for testing, labeling, and certification for U.S. goods are stricter than equivalent regulations in Western countries.²⁷ However, some relief is expected by Poland's upcoming re-accession to GATT.²⁸

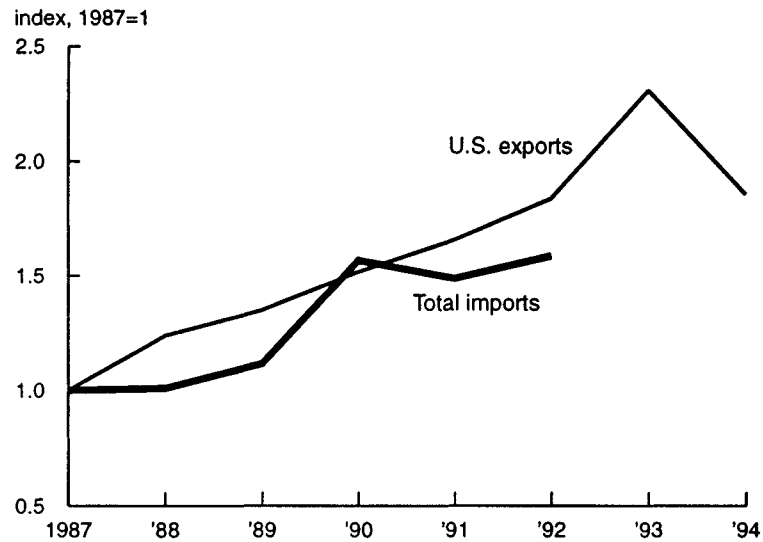
District exports to Poland increased 205 percent over the 1987-94 period with nonelectrical machinery, electrical machinery, and chemicals the largest export industries. Poland is the smallest BEM market for District exports and the least concentrated of the BEMs. That is, the top three District export industries in 1994 accounted for only 53 of total District exports (compared to 80 percent for China).

Turkey

Turkey's imports stood at nearly \$23 billion in 1992, up 60 percent from 1988. Germany, the U.S., and Italy were Turkey's largest source of imports in 1992, capturing over one-third of the import market. Turkey's largest import commodities in 1992 were petroleum and products, machines for special industries, and electrical machinery. Turkey's largest export commodities in 1992 were clothing and accessories and textile yarn and fabrics, accounting for nearly 40 percent of all exports. Vegetables and fruits, and iron and steel, were Turkey's next largest export commodities.

U.S. exports to Turkey increased 86 percent over the 1987-94 period (see figure 10). The top three export industries in 1994 were transportation equipment, measuring instruments, and nonelectrical machinery. Transportation equipment, mainly aircraft and aircraft parts, accounted for 38 percent of all U.S. exports to Turkey in 1994.

Figure 10
U.S. exports and total imports
Turkey, 1987-1994



Only 8 percent of U.S. exports to Turkey cater to Turkey's largest import industries. Exports of machines for special industries in 1994 were \$95 million or 3 percent of total exports, electrical machinery exports were \$86 million or 3 percent, and general industrial machinery exports were \$74 million or 2 percent.

Turkey has undergone substantial economic change over the last 10 years including structural reform, trade liberalization, and privatization of state-owned enterprises. Only a few items still require import licenses, but import surcharges and fees are used to protect domestic industries.²⁹ Like with Poland, U.S. exporters may be hindered when Turkey enters into an association agreement with the EU in 1996, thereby granting more favorable trade terms to its European partners than to the non-EU community.

District exports to Turkey increased 35 percent over the 1987-94, the smallest percentage increase of the BEMs for that period. Transportation equipment, nonelectrical machinery, and electrical machinery were the largest District export industries to Turkey in 1994.

South Korea

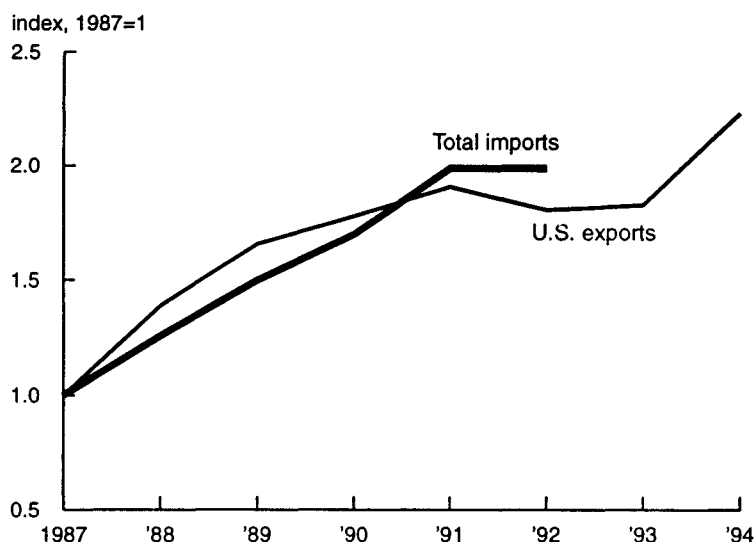
Korea's³⁰ imports in 1992 stood at \$81 billion, making it the largest import market of the BEMs. However, Korea experienced almost no growth in imports between 1991 and 1992. Japan and the U.S. are Korea's largest source of imports, capturing a combined 47 percent of Korea's import market in 1992. Petroleum and products, electrical machinery, and general industrial machinery were Korea's largest import industries in 1992. Electrical machinery (including electronic microcircuits), textile yarn and fabrics, and clothing and accessories, were Korea's largest export commodities in 1992.

U.S. exports to South Korea increased 123 percent over the 1987-94 period with all industries except agricultural crops increasing over the period (see figure 11). The machinery industries, both electrical and nonelectrical, had increases of over \$2 billion each over the period, with transportation equipment also having a large increase (\$1.5 billion). At a more detailed level, the top U.S. exports to South Korea in 1993 were semiconductors and aircraft, accounting for over 15 percent of all U.S. exports to South Korea that year.

In 1993, 21 percent of U.S. exports to South Korea were in South Korea's three largest import industries. Electrical machinery exports, mainly transistors and valves, accounted for the largest share with \$1.2 billion or 12 percent of total exports, and general industrial machinery exports (heating and cooling equipment, pumps, etc.) accounted for \$677 million or 5 percent. Exports of machines for special industries accounted for \$595 million or 4 percent of total exports that year.

As mentioned, South Korea is the largest of the BEMs in terms of imports, yet import restrictions are still common impediments to doing business with South Korea. Policies to reduce barriers have resulted in less formal barriers yet still include high tariffs, particularly on agricultural products, and emergency tariffs and adjustment tariffs.³¹ Another major barrier is a restriction to import on credit. U.S. exporters estimate they could increase exports to South Korea by nearly a third if this restriction were not in place.³²

Figure 11
U.S. exports and total imports
Korea, 1987-1994



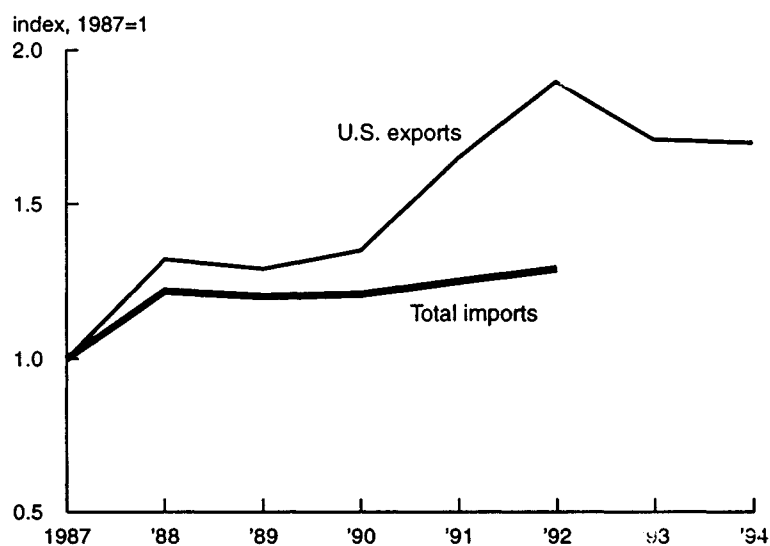
District exports to South Korea increased 174 percent over the 1987-94, with nonelectrical machinery, electrical machinery, and transportation equipment the largest District export industries to South Korea in 1994. South Korea is the second largest market for District goods of the BEMs.

South Africa

In 1992, imports to South Africa³³ stood at nearly \$18.5 billion. Germany, the U.S., and Japan were South Africa's largest source of imports that year, capturing just over 40 percent of the import market. South Africa's largest import industries in 1992 were road vehicles, general industrial machinery (particularly heating and cooling related machinery and parts), and electrical machinery. South Africa's 1992 exports consisted of rough unsorted diamonds, iron and steel, and coal, lignite, and peat.

Over the 1987-94 period, U.S. exports to South Africa grew 70 percent, the second smallest percentage increase of the BEMs. Nonelectrical machinery, chemicals, and electrical machinery were the largest export industries to South Africa in 1994 (see figure 12).

Figure 12
U.S. exports and total imports
South Africa, 1987-1994



In terms of meeting South Africa's import needs, 13 percent of U.S. exports in 1993 were in South Africa's three largest import industries. General industrial machinery exports were \$126 million or 6 percent of total exports in 1993, electrical machinery exports were \$105 million or 5 percent, and road vehicle exports were \$55 million or 3 percent.

South Africa, for the most part, still operates under a restrictive import regime. The country uses import permits, import surcharges, as well as tariffs to restrict competitive imports.³⁴ In 1993, the U.S. captured 13 percent of South Africa's import market with goods such as aircraft, data processing machines, and low value goods. The U.S.' small growth over the 1987-94 period can be attributed to several factors including South Africa's dismal economic performance during the 1990s which included almost zero import growth, and the absence of many U.S. firms from the South African market during the last decade because of apartheid concerns.

District exports to South Africa increased 87 percent over the 1987-94 period with nonelectrical machinery, electrical machinery, and chemicals the largest District export industries in 1994. These three industries accounted for 64 percent of all District exports to South Africa in 1992.

U.S. export promotion initiatives: Advocacy and assistance

Various government agencies provide export assistance to U.S. firms in search of foreign sales. To date, these efforts have tended to be fragmented and confusing to users. For example, certain programs are available only to small businesses or new businesses but not to large or established ones, and vice versa; other programs are available only to specific industries or for purposes of job creation. To address this problem, the U.S. Department of Commerce opened export assistance centers in 1994 in Chicago, Baltimore, Los Angeles, and Miami. These are "one-stop shops" that provide exporters and potential exporters with information to help them enter new markets or build on existing ones. For example, the centers provide trade leads, information on overseas-related trade shows, and information on major project and procurement opportunities abroad. In addition, they offer information and assistance on the various trade finance programs available at the federal level, help exporters determine the right program for them, assist with paperwork, and provide ongoing support. Nearly a dozen more such centers are scheduled to open in 1995.

Another recent effort by Commerce was to open an in-house information center and clearinghouse for advocacy requests.³⁵ These advocacy efforts represent a coordinated interagency initiative by the federal government to help American firms compete and win major contracts such as infrastructure projects with BEM governments or joint ventures with BEM firms. The

center maintains information on major projects and procurement opportunities worldwide and tracks advocacy requests.³⁶

Export promotion efforts at the state level are similar to federal efforts but provide more one-on-one support and are geared more toward helping small and medium-sized businesses. Most states also have overseas trade offices in key markets to help facilitate the process at the other end, as well as to generate new trade leads, host trade shows, and promote their states' exports. Table 4 lists the overseas offices of the Seventh District states. Note that most of the states have at least two offices in the BEMs.

The USDA also operates several agricultural export promotion programs. The two largest and best-known are the Export Enhancement Program (EEP) and an export credit guarantee program. The EEP offers "bonus" payments to U.S. exporters that enable them to meet the subsidized prices offered by other nations, particularly the European Union. However, over time, implementation of GATT will reduce the amount of direct subsidies that member nations may use to promote agricultural exports. The export credit guarantee program provides federal guarantees to private lenders involved in financing purchases of U.S. agricultural commodities from abroad. Unlike the EEP, there is no specific outlay unless a borrower defaults and the lender incurs a loss. Moreover, this program is not affected by GATT. Finally, the USDA also operates separate programs to support exports of soybean oil, cottonseed oil, and dairy products, and to promote the sale of processed products in general.

Table 4
Seventh District overseas trade offices, 1994

Illinois	Indiana	Iowa	Michigan	Wisconsin
Belgium	Canada*	Germany	Belgium	Canada*
Hong Kong	China	Japan	Canada	Germany
Hungary	Japan		Hong Kong	Hong Kong
Japan	Mexico		Japan	Japan
Mexico	Netherlands		Mexico	Mexico
Poland	South Korea		South Africa	South Korea
	Taiwan			

*Indiana, Wisconsin, and Pennsylvania share a Canadian trade office in Toronto.

Summary

This article examined the recent U.S. experience in export sales to the ten nations identified by the Department of Commerce as potential growth markets. Specifically, we assessed the current size and growth potential of the ten BEMs as export markets, and we put the current U.S. presence in these markets into perspective. We also examined the role played by Seventh District firms in supplying these markets. A separate discussion of U.S. agricultural exports to the BEMs was included because of agriculture's important contribution to the U.S. trade balance and because of the large share of U.S. agricultural production held by Seventh District states.

The ten BEMs clearly represent an important outlet for many types of U.S. products. Recognizing this, U.S. exporters have already made inroads into these markets. U.S. export sales to the BEMs have posted significant gains in recent years, accounting for an ever-larger share of total U.S. exports. Most industries have increased their sales to the BEMs, though they have not shared equally in the overall gain. Furthermore, the rise in U.S. exports to the BEMs has generally outpaced the increase in exports to the rest of the world. In addition, the U.S. share of BEM imports indicates that American exporters are holding their own against tough competitors from nations such as Japan and Germany. This is true despite the fact that the U.S. is the leading supplier to only three of the BEMs.

In 1994, of all U.S. industries, the nonelectrical, electrical, and transportation equipment industries registered the largest sales to the BEMs. These industries also accounted for half of the export sales gain to the BEMs from 1987 through 1994. However, several other industries experienced even more rapid growth over this period. This underscores two important points. First, the U.S. is responding to the BEMs' current requirements, which are characteristic of developing nations. As the economies of these nations grow and evolve, their needs and wants will change. The challenge to U.S. industry is to anticipate and respond to these potential shifts in demand. To a large extent, this will determine whether we can maintain or increase current levels of export sales to the BEMs. Second, the rapid growth of these markets holds promise for smaller firms, as a greater number of opportunities are available in rapidly expanding markets.³⁷

Exports from the Seventh District states to the BEMs also rose more quickly than to the rest of the world from 1987 through 1994. However, the growth of Seventh District exports tended to lag that of the U.S. in general. While Mexico, South Korea, and China were the major customers for Seventh District products, sales to Indonesia, Argentina, and Brazil experienced the fastest growth. Furthermore, processed food products moved into the top five District industries in terms of export sales to the BEMs, reflecting rising incomes and the growing demand for U.S. agricultural products in these nations.

Among the industries exporting agricultural products to the BEMs, processed products showed the steadiest growth in recent years and seem better positioned to achieve future gains than bulk agricultural commodities. This is true because the factors driving foreign demand for processed products are more lasting than the year-to-year production and price variations that tend to exert a relatively greater influence over imports of bulk commodities.

In conclusion, it is clear that there are many opportunities for U.S. exporters in the emerging markets. While several industries have made substantial inroads into these markets, considerable potential for future growth appears to lie in other industries as well. Firms that are considering entering these markets may receive further information by contacting a U.S. export assistance center.

Footnotes

¹U.S. Department of Commerce (1994a).

²"The big emerging markets" (1994).

³Ibid.

⁴Ibid.

⁵Coughlin and Cartwright (1987) found evidence that state export promotion expenditures support manufacturing export levels.

⁶Capehart (1994) and Carter (1994).

⁷U.S. Department of Agriculture (1994).

⁸Greene (1994).

⁹Tse (1993).

¹⁰Coughlin and Mandelbaum (1991).

¹¹This section uses United Nation's data as the source of China's imports and excludes the province of Taiwan.

¹²Due to different data sources, 1993 U.S. exports are compared to 1992 BEM imports. Also, for BEMs where petroleum and products was one of their top three imports in 1992, the U.S. export comparison excludes this industry because BEM imports in this category are primarily crude petroleum and U.S. exports to the BEMs in this category tend to be petroleum products.

¹³U.S. Department of State (1994b).

¹⁴U.S. Department of State (1994d).

¹⁵Sciolino (1994).

¹⁶Ibid.

¹⁷"India: Reforms spawn superb business opportunities" (1995).

¹⁸U.S. Department of State (1994c).

¹⁹Burns (1995).

²⁰U.S. Department of State (1994a).

²¹Confederação Nacional da Indústria (1994).

²²Brooke (1994b).

²³Ibid.

²⁴Brooke (1994c).

²⁵Brooke (1994a).

²⁶U.S. Department of State (1994e).

²⁷Ibid.

²⁸Ibid.

²⁹U.S. Department of State (1994f).

³⁰This section uses United Nation's import data which reports import data for the Republic of Korea (versus North and South Korea). However, U.S. export data include only South Korea (U.S. trade with North Korea is minimal).

³¹U.S. Department of State (1994h).

³²Ibid.

³³The United Nations import data represent the customs union of South Africa which includes Botswana, Lesotho, Namibia, South Africa, and Swaziland. U.S. exports are for South Africa only.

³⁴Department of State (1994g).

³⁵Department of Commerce (1994a).

³⁶Department of Commerce (1993).

³⁷Lyon (1995).

References

- "The big emerging markets," *Business America*, March 1994, pp. 4-6.
- Brooke, James**, "Denim and jeans pour out of northeastern Brazil," *New York Times*, April 7, 1994a, sec. D, p. 7.
- _____, "U.S. business flocking to Brazilian ventures," *New York Times*, May 9, 1994b, sec. D, p. 1.
- _____, "Brazil luring computer companies," *New York Times*, August 6, 1994c, sec. 1, p. 33.
- Burns, John F.**, "U.S. ends a \$4 billion visit to India," *New York Times*, January 18, 1995, sec. D, p. 3.
- Capelhart, Tom**, "Exports as a share of agricultural production," *Agricultural Outlook*, August 1994, pp. 20-22.
- Carter, Ernest**, "Agriculture's trade balance retains second place among eleven major U.S. industries in 1993," *Agricultural Trade Highlights*, April 1994, pp. 5-6.
- Confederação Nacional da Indústria (Brasil), Departamento de Comércio Exterior e Investimentos**, *Doing Business with Brazil*, 1994.
- Coughlin, Cletus C., and Phillip A. Cartwright**, "An examination of state foreign export promotion and manufacturing exports," *Journal of Regional Science*, August 1987, pp. 439-449.
- Coughlin, Cletus C., and Thomas B. Mandelbaum**, "Measuring state exports: Is there a better way?" *Economic Review*, Federal Reserve Bank of St. Louis, July/August 1991, pp. 65-79.
- Greene, Joel**, "High-value food products boost agricultural exports," *FoodReview*, September-December 1994, pp. 18-22.
- "India: Reforms spawn superb business opportunities," *Business America*, January 1995, pp. 11-14.
- Lyon, Carmi**, "Target marketing consumer food products," *Agricultural Trade Products*, May 1995, pp. 7-9.
- Massachusetts Institute for Social and Economic Research**, "Exports from all states to all countries by 2 digit SIC, 1987," diskette, 1992.

_____, "Exports from all states to all countries by 2 digit SIC, 1994,"
diskette, 1995.

Sciolino, Elaine, "Clinton is stern with Indonesia on rights but gleeful on
trade," *New York Times*, November 17, 1994, sec. A, p. 1.

Tse, Robert, "Grain and meal shipments in the form of meat are on the rise,"
Agricultural Trade Highlights, September 1993, pp. 6-7.

United Nations, Department of Economic and Social Development, *1992
International Trade Statistics Yearbook*, New York, 1993.

U.S. Department of Agriculture, *Foreign Agricultural Trade of the United
States*, March/April 1994.

U.S. Department of Commerce, International Trade Administration,
Implementation of the National Export Strategy, December 1993.

U.S. Department of Commerce, *Competing to Win in a Global Economy*,
September 1994a.

_____, Bureau of Census, *U.S. Exports History: Historical Summary,
1989-1993*, CD-ROM, July 1994b.

U.S. Department of State, *Argentina: Economic Policy and Trade Practices*,
Country Reports on Economic Policy and Trade Practices, CD-ROM, 1994a.

_____, *China: Economic Policy and Trade Practices*, Country Reports
on Economic Policy and Trade Practices, CD-ROM, 1994b.

_____, *India: Economic Policy and Trade Practices*, Country Reports
on Economic Policy and Trade Practices, CD-ROM, 1994c.

_____, *Indonesia: Economic Policy and Trade Practices*, Country
Reports on Economic Policy and Trade Practices, CD-ROM, 1994d.

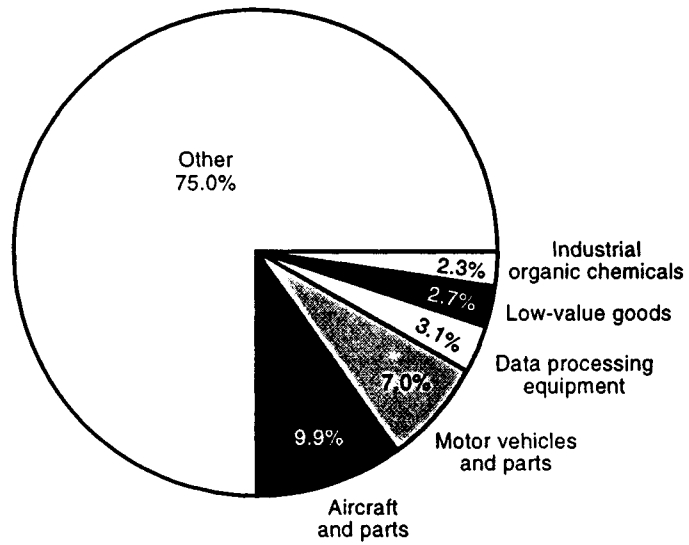
_____, *Poland: Economic Policy and Trade Practices*, Country Reports
on Economic Policy and Trade Practices, CD-ROM, 1994e.

_____, *Turkey: Economic Policy and Trade Practices*, Country
Reports on Economic Policy and Trade Practices, CD-ROM, 1994f.

_____, *South Africa: Economic Policy and Trade Practices*, Country
Reports on Economic Policy and Trade Practices, CD-ROM, 1994g.

_____, *South Korea: Economic Policy and Trade Practices*, Country
Reports on Economic Policy and Trade Practices, CD-ROM, 1994h.

Appendix Figure 1
Top U.S. exports to all BEMs combined, 1993



Note: SITC commodities imported from all countries, measured by U.S. dollar value.
Source: United Nations (1993).

Appendix
Top U.S. exports to the BEMS, 1993

	1993 exports (millions)	Percent of total	SIC Commodity		1993 exports (millions)	Percent of total	SIC Commodity
Argentina	\$3,775.7		Total	Mexico	\$41,581.1		Total
	349.7	9.3%	Automated data processing machines		4,188.4	10.1%	Motor vehicle parts, accessories
	160.2	4.2%	Aircraft		1,538.1	3.7%	Low value goods
	129.2	3.4%	Low value goods		996.4	2.4%	Automated data processing machines
	126.2	3.3%	Industrial organic chemicals, NEC		916.5	2.2%	Elec equipment - internal comb. engines
	113.0	3.0%	Motor vehicles & car bodies		906.3	2.2%	Electronic components, NEC
	95.8	2.5%	Plastics, resins, elastomers		853.1	2.1%	Radio & TV receiving sets
	90.5	2.4%	Drawing, insulating nonfer. wire		816.4	2.0%	Plastic plates, sheets, etc.
	90.1	2.4%	Steam, gas, hydraulic turbines		760.0	1.8%	Petroleum refining
	89.4	2.4%	Radio, TV, comm equip, apparatus		738.3	1.8%	Plastics, resins, elastomers
	77.3	2.0%	Pesticides, agric chemicals, NEC		681.8	1.6%	Furniture and fixtures, NEC
Brazil	\$6,058.0		Total	Poland	\$911.6		Total
	467.0	7.7%	Automated data processing machines		142.4	15.6%	Low value goods
	461.4	7.6%	Aircraft		140.4	15.4%	Aircraft
	299.9	5.0%	Industrial organic chemicals, NEC		85.8	9.4%	Corn
	228.4	3.8%	Motor vehicles & car bodies		46.4	5.1%	Oil field machinery & equipment
	227.5	3.8%	Metallurgical bituminous coal		35.1	3.9%	Chicken cuts
	183.3	3.0%	Plastics, resins, elastomers		29.6	3.3%	Automated data processing machines
	164.9	2.7%	Motor vehicle parts, accessories		26.8	2.9%	Wheat
	159.3	2.6%	Electronic components, NEC		19.8	2.2%	Radio, TV, comm equip, apparatus
	133.7	2.2%	Photographic equipment & supplies		18.9	2.1%	Motor vehicles & car bodies
	127.3	2.1%	Pesticides, agric chemicals, NEC		17.4	1.9%	Telephone & telegraph apparatus
China	\$8,762.8		Total	S. Africa	\$2,188.4		Total
	2,029.7	23.2%	Aircraft		272.2	12.4%	Aircraft
	645.9	7.4%	Motor vehicles & car bodies		129.1	5.9%	Automated data processing machines
	331.3	3.8%	Radio, TV, comm equip, apparatus		94.9	4.3%	Low value goods
	292.8	3.3%	Nitrogenous fertilizers		85.7	3.9%	Wheat
	274.2	3.1%	Wheat		72.6	3.3%	Industrial organic chemicals, NEC
	243.0	2.8%	Petroleum refining		68.3	3.1%	Corn
	194.1	2.2%	Telephone & telegraph apparatus		67.7	3.1%	Paper mills, ex building paper
	190.7	2.2%	Aircraft parts		59.9	2.7%	Aircraft parts
	175.6	2.0%	Industrial organic chemicals, NEC		59.4	2.7%	Construction machinery & equipment
	174.9	2.0%	Automated data processing machines		40.9	1.9%	Farm machinery & equipment

Appendix (continued)
 Top U.S. exports to the BEMS, 1993

	1993 exports (millions)	Percent of total	SIC Commodity		1993 exports (millions)	Percent of total	SIC Commodity
India	\$2,778.1		Total	S. Korea	\$14,782.0		Total
	581.6	20.9%	Aircraft		1,235.1	8.4%	Semiconductors, related devices
	180.2	6.5%	Steam, gas, hydraulic turbines		1,052.1	7.1%	Aircraft
	175.1	6.3%	Nitrogenous fertilizers		695.9	4.7%	Meat packing plants
	117.9	4.2%	Aircraft parts		592.0	4.0%	Scrap and waste
	81.5	2.9%	Industrial organic chemicals, NEC		498.2	3.4%	Industrial organic chemicals, NEC
	79.5	2.9%	Petroleum refining		464.3	3.1%	Petroleum refining
	78.3	2.8%	Wheat		439.2	3.0%	Aircraft parts
	77.6	2.8%	Construction machinery & equipment		430.3	2.9%	Automated data processing machines
	62.9	2.3%	Rolling mill machinery & equipment		298.8	2.0%	Special industrial machinery, NEC
	61.9	2.2%	Scrap and waste		298.1	2.0%	Cotton
Indonesia	\$2,770.3		Total	Turkey	\$3,428.9		Total
	667.9	24.1%	Aircraft		758.8	22.1%	Aircraft
	142.6	5.1%	Cotton		292.0	8.5%	Aircraft parts
	112.4	4.1%	Petroleum refining		154.2	4.5%	Scrap and waste
	106.7	3.9%	Soybeans		153.0	4.5%	Aircraft engines
	100.4	3.6%	Oil field machinery & equipment		136.9	4.0%	Cigarettes
	89.0	3.2%	Aircraft parts		119.2	3.5%	Radar apparatus
	84.0	3.0%	Plastics, resins, elastomers		111.3	3.2%	Tobacco
	79.4	2.9%	Industrial organic chemicals, NEC		93.4	2.7%	Industrial organic chemicals, NEC
	75.7	2.7%	Pulp mills		80.0	2.3%	Secondhand goods
	56.1	2.0%	Industrial inorganic chemicals, NEC		75.8	2.2%	Small arms ammunition

Note: NEC is not elsewhere classified.
 Source: U.S. Department of Commerce (1994b).

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