

# U.S. Export Opportunities

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In discussions about international trade, we hear a lot more about imports than about exports, which is why I have chosen to discuss exports. My focus will be on the opportunities provided by a trading environment that is free of unnecessary governmentally imposed barriers. Such an environment is ideal not only for providing opportunities for U.S. exporters but also for maximizing economic prospects throughout the United States. In light of the recent news of unsafe products that have been imported from China—melamine-laced pet food, lead-tainted toys, antifreeze-tainted counterfeit toothpaste, antibiotic-tainted fish and tread-separating tires to name a few—I want to stress that there is a role for government in protecting U.S. consumers from unsafe products. My concern is that certain groups will attempt to use concerns over safety and job loss to restrict imports and thereby pursue an agenda of economic isolation in an increasingly globalized world.

My key points can be made rather succinctly. First, limiting imports into the United States tends to also reduce exports. Second, economic growth abroad provides export opportunities for U.S. firms. The benefits of expanding exports are not restricted solely to exporters. Third, the citizens of Arkansas have gained much from international trade, and the benefits will increase in the future provided we can maintain an open trading environment. Fourth, trade disputes are a natural consequence of a dynamic international environment. It is easy for retaliatory trade measures to escalate and derail the desirable movement to a more open trading environment. It is in the best interests of all the countries of the world to avoid trade wars.

Before proceeding, I want to emphasize that the views I express here are mine and do not necessarily reflect official positions of the Federal Reserve System. I thank my colleagues at the Federal Reserve Bank of St. Louis for their comments, particularly Cletus C. Coughlin, vice president and deputy director of research, who provided special assistance. However, I retain full responsibility for errors.

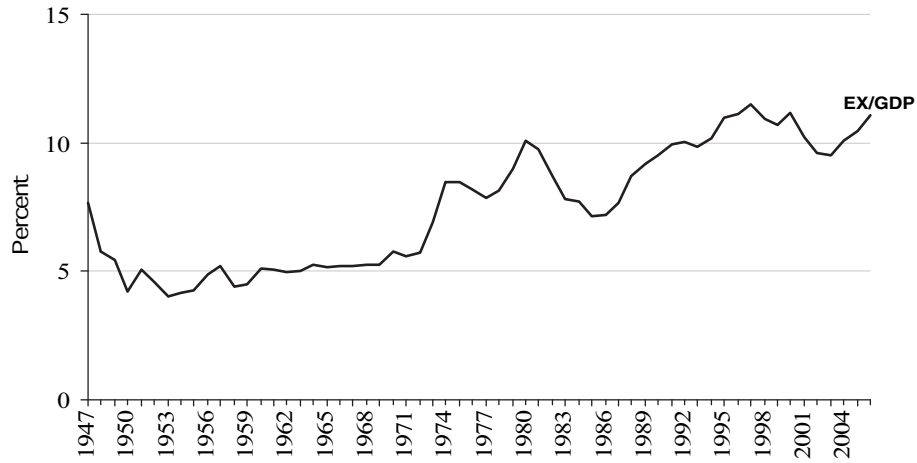
## SOME FACTS ABOUT U.S. EXPORTS

International trade is playing an increasing role in the U.S. economy. Since 1970, exports as a share of gross domestic product (GDP) have about doubled, from a bit less than 6 percent to 11 percent in 2006 (see Figure 1). These exports consist of both goods, such as industrial equipment and consumer goods, and services, such as insurance and financial services. For 2006, exports of goods were 70 percent of total exports and exports of services were 30 percent. This split has held relatively constant since the late 1980s.

Some additional insight into the increasing role of international trade can be gleaned by adjusting exports and GDP for the impact of price changes. Beginning in the early 1970s until the early 1980s, export prices tended to rise at a much faster rate than the overall price level as measured by the GDP deflator (see Figure 2). Primarily because of relatively rapid productivity growth, for roughly the next 20 years, export prices increased very little, especially relative to prices generally. Price-adjusted, or real, exports increased rapidly during the late 1980s and the 1990s rela-

**Figure 1**

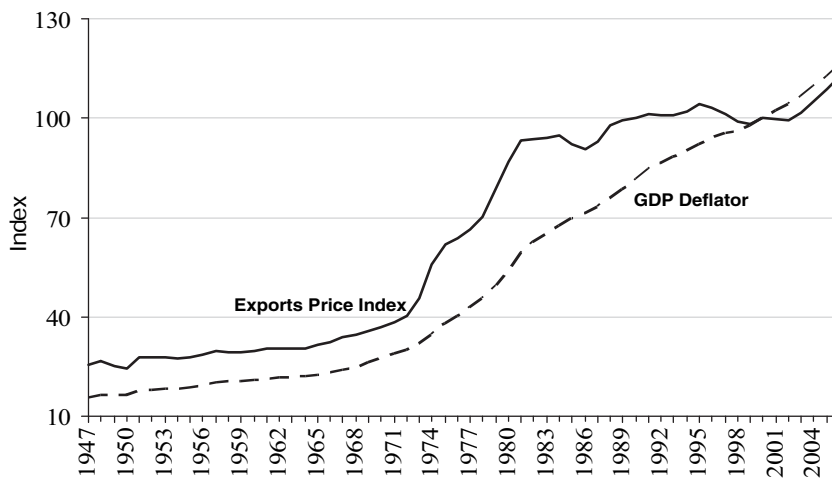
**Nominal Exports as a Percent of GDP, 1947 to 2006**



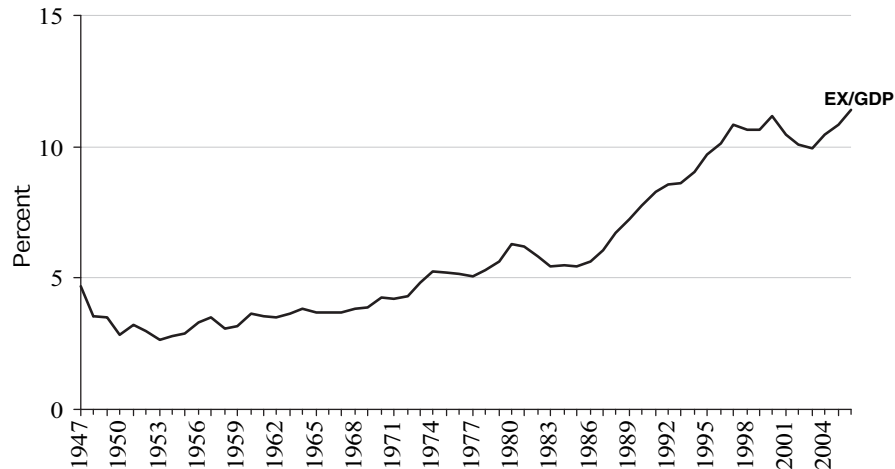
SOURCE: BEA, Haver Analytics.

**Figure 2**

**Exports Price Index and GDP Deflator, 1947 to 2006 (2000 = 100)**



SOURCE: BEA, Haver Analytics.

**Figure 3****Real Exports as a Percent of GDP, 1947 to 2006**

SOURCE: BEA, Haver Analytics.

tive to real GDP (see Figure 3). After the recession early in this decade, the rapid increase in real exports relative to real GDP resumed.

Underlying the increases in U.S. trading activity is the behavior of numerous firms. Although I will confine my discussion to trade in goods, trade in services is important and a worthy topic for a future speech.

In recent years, researchers have generated a number of facts about exporting firms.<sup>1</sup> The number of firms involved in international trade in goods is increasing rapidly, and they are shipping more products to more foreign destinations than in the past. Exporting firms experienced relatively rapid employment growth and were a major force in U.S. job creation.

Despite rapid growth in recent years, plants and firms directly involved in exporting represent a small percentage of the total number of U.S. plants and firms. In 2000, for example, of the 5.5 million firms operating in the United States, roughly 4 percent were exporters. These firms, although relatively small in number, employ over one-third of the U.S. workforce. Furthermore, a

subset of these firms does the bulk of the trading. For example, in 2000, the top 10 percent of exporting firms accounted for 96 percent of total U.S. exports. These firms exhibit a number of characteristics, such as relatively higher productivity and larger size, which likely contribute to their export success. Moreover, exporters tend to be more innovative and pay higher wages than their domestic counterparts.

Not surprisingly, goods-producing firms account for the majority of exports (and imports) by value, although increasing numbers of firms in wholesale and retail trade are engaging in international trade. Table 1 highlights some features of the distribution of exporting firms across 10 manufacturing industries, ranked in terms of industry employment as a share of total manufacturing in 2002. Across all industries, firms' foreign shipments represent only a small share of total shipments, as they never exceed 21 percent. In manufacturing as a whole, only 18 percent of firms were exporters in 2002, with exports accounting for 14 percent of total shipments.

<sup>1</sup> See Bernard, Jensen, and Schott (2005) and Bernard, Jensen, Redding, and Schott (forthcoming).

**Table 1**  
**Firms That Trade**

Industry Employment Share Rank	NAICS	Industry	% of Firms	% of Firms that Export	Mean Exports as a % of Total Shipments	% of Total Manuf. Employment
1	336	Transportation Equipment	3.4	28	13	11.5
2	332	Fabricated Metal Product	19.9	14	12	10.7
3	311	Food Manufacturing	6.8	12	15	10.2
4	334	Computer and Electronic Product	4.5	38	21	8.7
5	333	Machinery Manufacturing	9.0	33	16	7.9
17	313	Textile Mills	1.0	25	13	1.8
18	314	Textile Product Mills	1.9	12	12	1.2
19	312	Beverage and Tobacco Product	0.7	23	7	1.1
20	324	Petroleum and Coal Products	0.4	18	12	0.7
21	316	Leather and Allied Product	0.4	24	13	0.3
		Aggregate Manufacturing	100	18	14	100.0

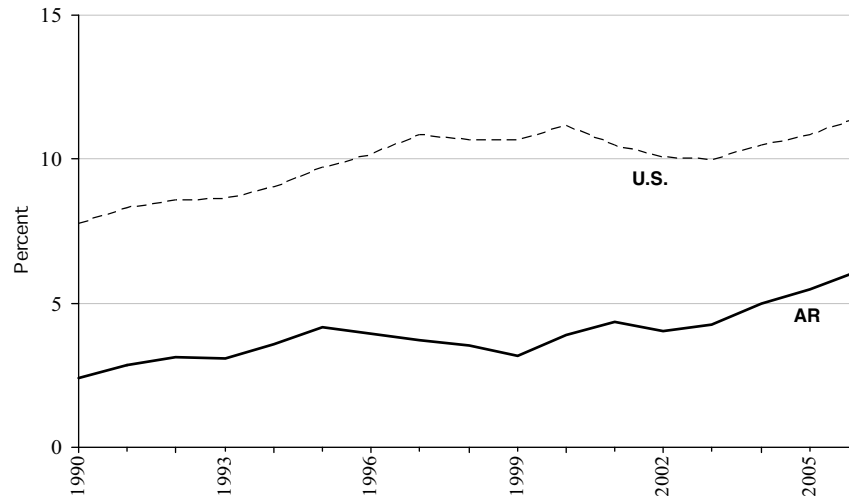
SOURCE: Source: Bernard et al., "Firms in International Trade," from the 2002 Census of Manufacturers. NAICS=North American Industry Classification System.

While my preceding comments refer to firms that are trading goods, I would like to highlight the linkages between firms directly engaged in international trade and those that are linked to such firms. While a number of small and medium-sized enterprises are exporters, numerous small and medium-sized enterprises are also linked via outsourcing, technology transfer and training of local suppliers to multinational corporations. These linkages can create business opportunities and enhance the productivity of small and medium-sized enterprises.

Data on international trade and trade-related employment for Arkansas indicate that there are undoubtedly many linkages between exporting firms and other firms. Before discussing exports from Arkansas, I need to provide a note of caution. The export data I will be using, which are the best available, allocate exports to states based on the state from which goods began their journey

to the port or some other point of exit from the United States. The transportation origin of exports is not necessarily identical to the location where the goods were produced. Thus, despite the inclination to think that exports from Arkansas were produced in Arkansas, that is not necessarily the case. Certain goods produced in Arkansas may be counted as exports from some other state.

Keeping this note of caution in mind, the extent of Arkansas's involvement in international trade appears somewhat lower than that of the nation as a whole; however, Figure 4 indicates that firms in Arkansas are increasingly involved in international trade and that the increase during recent years has tended to mirror that of the United States as a whole. In price-adjusted terms, exports from Arkansas as a share of gross state product increased from 2.4 percent in 1990 to 6.1 percent in 2006, an increase of 3.7 percentage points. Meanwhile, U.S. exports as a share of GDP

**Figure 4****AR State Exports and U.S. Exports as a Percent of Real GDP, 1990-2006**

SOURCE: WISER Trade, BEA, and Haver Analytics.

increased from 7.8 percent to 11.4 percent, an increase of 3.6 percentage points. These growth rates are significant and, if projected forward, show that exports will become increasingly important for the Arkansas and national economies.

In 2006, Arkansas' export shipments of merchandise totaled \$4.3 billion, an increase of 52 percent over its 2002 value.<sup>2</sup> In 2006, these exports were shipped to 159 foreign destinations. Figure 5 provides a summary view of these destinations and the magnitude of exports. The two largest markets are Canada (\$1.1 billion) and Mexico (\$528 million). In addition to the sizes of these markets, proximity as well as the relatively free trade environment stemming from the North American Free Trade Agreement contributed to the large export shares of these markets. Other top export markets are France, the United Kingdom, China, Portugal, Japan, South Korea, Germany, and Russia.

Turning to specific industries, Figure 6 provides a view of the export shares of specific indus-

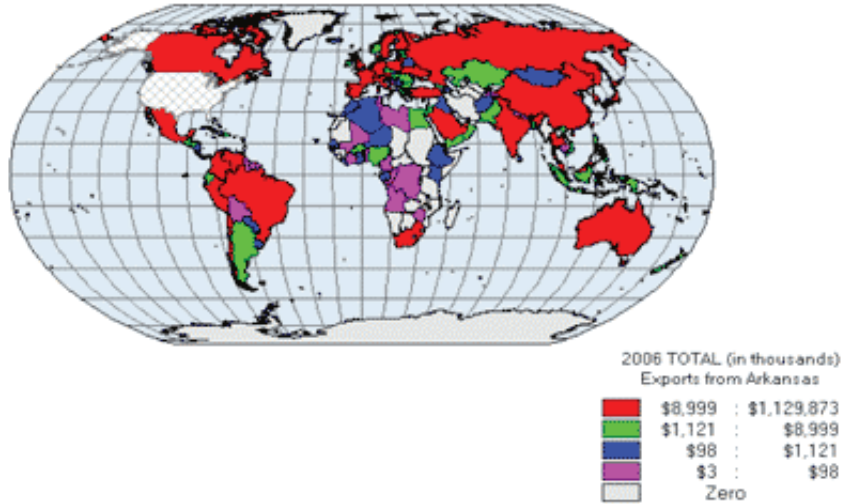
tries. Transportation equipment is the largest export category, accounting for 28 percent, or \$1.2 billion, of Arkansas' merchandise exports in 2006. Other leading export categories were chemical manufactures, machinery manufactures, processed foods and primary metal manufactures.

With regard to employment related to manufactured goods exports, Arkansas' involvement is also slightly below the nation as a whole. Using data for 2003, the most recent available, estimates by the International Trade Administration indicate that 43,100 jobs in Arkansas were related to exports. Of these jobs, 18,400 were in the manufacturing sector, while 24,700 were in non-manufacturing sectors. These data show the importance of linkages across various types of firms. Manufacturing-related export employment as a share of private sector employment in Arkansas was 4.3 percent, slightly below the national average of 4.5 percent. Thus, slightly more than one of every 25 jobs in Arkansas was linked to manufactured exports.

<sup>2</sup> For a summary of Arkansas' international involvement, see [www.ita.doc.gov/td/industry/otea/state%5Freports/arkansas.html](http://www.ita.doc.gov/td/industry/otea/state%5Freports/arkansas.html).

**Figure 5**

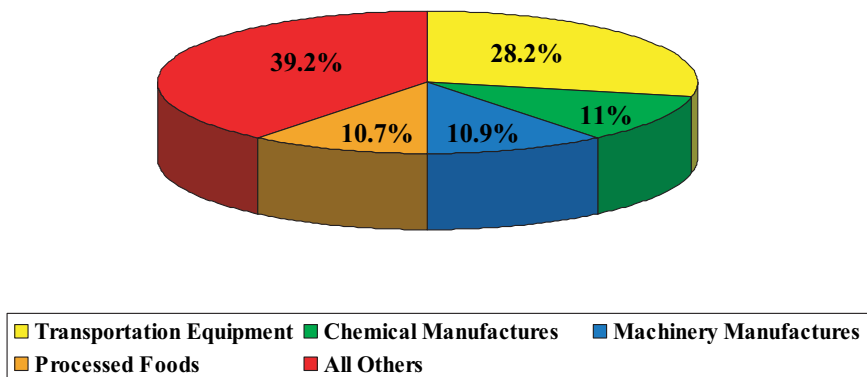
**Global Pattern of Arkansas 2006 Exports (\$ USD)**



SOURCE: TradeStatsExpress. Presented by the Office of Trade and Industry Information (OTII), Manufacturing and Services, International Trade Administration, U.S. Department of Commerce.

**Figure 6**

**Product Profile of Arkansas 2006 Global Exports (\$ USD)**



SOURCE: TradeStatsExpress. Presented by the Office of Trade and Industry Information (OTII), Manufacturing and Services, International Trade Administration, U.S. Department of Commerce.

A total of 1,396 companies exported goods from locations throughout Arkansas during 2005. Roughly 76 percent of these companies had employment of 500 or less and, thus, were small and medium-sized enterprises. These firms accounted for 19 percent of Arkansas' merchandise exports in 2005.

## **THE IMPORTANCE OF FOREIGN INCOME GROWTH FOR EXPORTS**

Increases in international trade depend on income growth and changes in the costs of international trade. Some trade costs reflect barriers imposed by governments and some are the result of nature. A tariff, which is a tax imposed on imported goods, is an example of the former, while transportation cost is an example of the latter. When two researchers examined the relative importance of income growth, reductions in government barriers to trade and declines in transportation costs, they found that income growth was the most important of these three factors stimulating trade worldwide, with reductions in trade barriers a distant second and declines in transportation costs an even more distant third.<sup>3</sup> This ranking, though, reflects experience over two particular periods in the latter half of the 20th century—the analysis uses the average trade of 1958-1960 and 1986-1988. We should not forget that trade barriers were critically important in depressing trade at certain times in the past, especially during the Great Depression, and could be so again should the United States become involved in trade wars.

As foreign economies grow, the purchasing power of its residents increases. To tap into rising purchasing power abroad, U.S. firms must provide goods and services desired by these potential consumers. A sensible export strategy is to focus

attention on foreign countries that are growing the most rapidly.

U.S. export growth to a country and the growth of that foreign country are closely related. When we examine export growth from 2002 to 2006 and the top 50 U.S. export destinations in 2006, we find that the simple correlation between export growth and income growth is 0.63. Given this high correlation, it is not surprising that U.S. exports to China and India, two rapidly growing countries, increased at a rapid pace between 2002 and 2006. U.S. exports to each of these countries increased by a factor of roughly 2.5, which is substantially greater than the 1.5 factor by which overall U.S. exports increased. As with the United States as a whole, Arkansas' exports to China and India grew rapidly between 2002 and 2006. In fact, Arkansas' exports increased more rapidly than for the total United States—by a factor of 4 to China and by a factor of 7.3 to India. Arkansas' total exports to all destinations abroad increased by a factor of 1.5.

Consider an example of how China's growing economy is providing opportunities for firms based in Arkansas. An inevitable consequence of economic growth is trash. A Springdale, Arkansas company, JV Manufacturing, is providing technology for hydraulic compactors that smash the refuse before it is taken to a landfill.<sup>4</sup> Currently, these compactors are being used in Huaibei, China. Plans are in the works to export the technology to other regions of China.

Another consequence of economic growth is increased demand for food products. Increases in income from low levels invariably lead to increased demand for animal protein. Chicken, pork and beef are all exported from Arkansas to China.<sup>5</sup> Tyson Foods exported the majority of frozen chicken cuts, which is the leading food export from Arkansas to China.

The key role that income growth plays in international trade suggests that, from a national

<sup>3</sup> See Baier and Bergstrand (2001).

<sup>4</sup> See Morasch (2006).

<sup>5</sup> See Smith (2007).



perspective, exports and imports are linked. One linkage is as follows: Foreign income growth affects U.S. exports, which help to determine U.S. income and, therefore, imports. Consequently, changes that affect exports will affect imports and vice versa. Thus, actions that limit U.S. imports will also tend to reduce U.S. exports because they depress income growth abroad. Few people seem to understand that raising import barriers will tend to reduce export opportunities. Countries with high trade barriers and relatively low levels of imports will also have relatively low levels of exports.

## THE CURRENT POLITICAL ECONOMY OF INTERNATIONAL TRADE

Earlier in my presentation I discussed some key findings concerning firms that export. I'll return to one of these findings and then use it as a foundation for a brief discussion of trade policy. Let's look more closely at the finding that exporting firms have relatively higher productivity than non-exporting firms do.

Research shows that the higher productivity of exporting firms relative to non-trading firms exists even before they enter export markets. Furthermore, the productivity of exporting firms after they enter export markets does not grow more rapidly than the productivity of non-exporting firms. The conclusion is that higher productivity is a requirement for, rather than a consequence of, engaging in international trade. A possible reason for the requirement of high productivity is that high entry costs of becoming an exporter can only be borne profitably by the most efficient firms.

Interestingly, research has shown that after firms enter export markets they do experience faster growth of employment and output than non-exporters do. A reduction in trade barriers

would increase profit opportunities from exporting to a specific destination and would reduce the initial productivity level necessary to enter the export market. Reduced barriers will induce more firms to export. Increased exports in turn would generate an increased demand for labor and, therefore, higher wages. Low-productivity non-exporting firms would be forced to exit the industry, and both capital and labor would be reallocated from the less productive non-export firms to the more productive exporting firms, increasing average productivity. Because the reallocation of productive factors is found to occur both within and across industries, this process creates aggregate productivity gains.

The productivity facts relating to exporting firms suggest an important role for trade liberalization in improving the aggregate productivity of the economy. Productivity gains stemming from trade liberalization allow for increases in output and income. Recent research indicates that the payoff to the United States of liberalization of trade and international investment has been quite large.<sup>6</sup> Based on several different statistical approaches, the estimated payoff ranged from 7.3 percent to 13.2 percent of U.S. GDP in 2003. Using 2006 dollars, these estimates suggest a higher per capita income in the United States ranging from \$3,000 to \$5,436. These are not small effects.

The preceding reasoning, supported by empirical estimates, implies that negotiations that reduce trade barriers can be very beneficial.<sup>7</sup> Conversely, legislation that imposes trade barriers will likely be harmful. To my disappointment, as I survey the current state of trade negotiations and numerous legislative proposals, I am troubled that the direction of trade policy in the immediate future may not be the right one. Let me give you four examples that create my concern.

First, fast-track negotiating authority expired on June 30. This authority allows the president to negotiate trade agreements that Congress can

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<sup>6</sup> See Bradford, Grieco, and Hufbauer (2006).

<sup>7</sup> Bradford, Grieco, and Hufbauer (2006) conservatively estimate that global free trade would produce higher per capita income ranging from \$1,540 to \$2,069 using 2003 dollars or from \$1,635 to \$2,255 using 2006 dollars.



either accept or reject, but cannot amend or filibuster. The lack of fast-track authority matters because trading partners are extremely reluctant to negotiate with the United States when experience indicates, unfortunately, that agreements may be substantially altered during the legislative process.

Second, the Doha Development Agenda multilateral trade negotiations are on the verge of collapse. A collapse of the Doha round would raise doubts about the future effectiveness of the World Trade Organization, which is the key international organization for negotiating, implementing and enforcing multilateral trade agreements.

Third, many in the United States seem to favor a more confrontational approach with the Chinese.<sup>8</sup> China is an increasingly frequent target for anti-dumping actions. In international trade law, “dumping” is said to occur when a firm sells a product at a higher price in its home market than the price it charges when it exports the same product to another country. If U.S. manufacturers can establish that they are being harmed by dumping on this definition, then duties (i.e., import taxes) are imposed to counteract the calculated extent of the dumping. The illogic of anti-dumping laws is clear: Would we prefer that U.S. consumers pay higher prices than charged abroad? Would U.S. consumers be harmed in the most extreme possible “dumping” scenario in which they received goods from abroad for free?

Currently, the Chinese share of anti-dumping actions is nearly double its share of U.S. imports. Moreover, in March 2007, the Commerce Department began applying anti-subsidy laws to China. This action reversed 23 years of policy and led to filings that China has illegally subsidized exports of tires, paper bags, steel pipes and steel nails. These legal actions are anti-consumer.

The U.S. is also pursuing complaints against China within the World Trade Organization. The U.S. trade representative has initiated four cases against China, which is more than against any other country at this time. The charges include

illegally high Chinese tariffs on automobile parts imported from the United States. U.S. pressure to reduce barriers for U.S. exports should ideally encourage a more open world trading system; however, the prospects for successful negotiations dim when, simultaneously, the United States is itself imposing import barriers.

Some U.S. legislative proposals seem to be based on a presumption that trade retaliation is an effective strategy; however, economic history suggests otherwise. Rather than passive compliance with trade restrictions, the targeted country tends to retaliate. Successive rounds of retaliation can spiral into a trade war. Actually, the process should be called “an anti-trade war.” Restriction of a country’s exports forces it to reorient its economy toward alternative suppliers and markets. Such a reorientation is facilitated by the fact that a trade retaliation policy tends to expand the role of government in the targeted country. In the present case, U.S. interests are likely best served by an increasing role for individual consumers and firms in a more market-oriented Chinese economy.

A tragic episode from economic history provides additional reasons for my concerns about the future course of trade policy. The Great Depression was a global catastrophe. Most researchers agree that the Smoot-Hawley tariffs of 1930 precipitated retaliation and likely worsened the effects of the Great Depression by contributing to the collapse of trade throughout the world in the early 1930s. An all-out trade war seems unlikely today but a series of smaller barriers inflicting economic costs on a trading partner has the possibility of inflicting harm far beyond the original target. I am very uncomfortable with the numerous actions and proposed legislation that not only are unlikely to affect the large U.S. trade deficit but also are increasing the chances of escalating trade frictions.

There is a role, of course, for protecting U.S. consumers from unsafe products but this role should not depend on whether goods are produced in the United States or abroad. A key

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<sup>8</sup> See Weisman (2007).

principle is that identical standards that address genuine safety issues be applied to a good regardless of where it is produced. One unfortunate possibility is that product safety issues become part of a trade war. For example, recently the United States suspended some Chinese seafood imports after finding traces of cancer-causing chemicals. Shortly thereafter, the Chinese suspended imports of chicken feet, pig ears and other animal products from seven U.S. companies, one of which was Tyson Foods.<sup>9</sup> The Chinese justification for their action was that the products contained bacteria as well as residues of drugs and pesticides. There is no reason why the two countries should not work cooperatively on a food inspection program to serve their common interests in high-quality food.

Somewhat ironically, the recent problems involving defective Chinese goods, produced for Chinese as well as foreign consumers, highlight an important fact. Rather than being overtaken by production sourced in China, it is clear that in numerous industries U.S. firms are substantially ahead of Chinese firms. Moreover, significant parts of the services sector as well as high-tech manufacturing have yet to appear in China. Undoubtedly, given China's environmental problems, U.S. firms with environmentally friendly technology as well as firms involved in clean-up operations should prosper. Assuming a trading environment relatively free of barriers, U.S. firms will have an opportunity to use their advantages to serve the Chinese market.

## CONCLUDING COMMENTS

U.S. exporters are formidable competitors in international markets and can become even more formidable competitors in an international trading environment as free as possible of governmentally imposed barriers. The increasing involvement in markets globally serves the best interests of U.S. residents, both as consumers and as workers. In terms of income, the payoffs from prior liberal-

izations of trade and investment flows have been quite large. I am certain that actions hindering entry of U.S. innovators and entrepreneurs in global markets will ultimately prove harmful to economic well-being in Arkansas and the United States generally. Thus, we should all be concerned about the current lack of progress in liberalizing trade flows and the increasing threat of legislation tending toward economic isolation. Such actions, if they occur, will depress exports in the future from Arkansas and the United States as a whole. More importantly, governmental actions that depress exports will ultimately harm U.S. income prospects by inhibiting productivity and income growth.

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<sup>9</sup> See Irvin (2007).

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