



The Economic Impact of U.S. Trade Sanctions on Imports of Paper Products

A Research and Analysis Report by Dr. Robert Shapiro
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Executive Summary

- In September 2009, three, large U.S.-based paper companies (NewPage Corporation, Appleton Coated and Sappi-North America) and the United Steelworkers Union (USW), filed complaints of unfair trade practices by Chinese and Indonesian coated paper producers with the International Trade Commission (ITC) of the U.S. Department of Commerce. This study examines the economic impact of the anti-dumping and countervailing duties ultimately imposed on those imports by the ITC.
- This conflict between U.S. and foreign paper producers ignores the most basic features of the global paper market: nations expand their capacity to produce paper products primarily to meet domestic demand. As a result, the global market share claimed by paper producers in the United States and other major paper producing nations closely tracks each country's share of global paper consumption.
- The duties directly raise the U.S. domestic prices for the targeted products produced not only by the Chinese and Indonesian companies, but also by their U.S. and European competitors in the American market. Yet, these duties do not produce net benefits for U.S. producers and their workers. The primary reason: the U.S. duties directly reduce the flow of Chinese and Indonesian coated paper products to America, and thereby indirectly increase the supply of those Chinese and Indonesian products to third country markets, where they also compete with U.S.-made coated paper. We estimate that the U.S. duties will lower the prices of Chinese and Indonesian exports to those third-country markets by, respectively, 7 percent and almost 19 percent.
- U.S. exporters of coated paper products, therefore, now face more intense price competition from Chinese and Indonesia coated paper producers in the rest of the world, which will quickly reduce their foreign market shares.
- These duties also increase the risk of retaliatory measures by China and Indonesia, which would reduce the exports of U.S. coated paper products to those countries.
- Economic analysis has established that antidumping and countervailing duties do not ultimately protect domestic producers and promote national welfare. These duties not only increase U.S. domestic prices. As documented in other industries, including textiles and steel, these duties reduce the market pressures and incentives for U.S. producers to respond to foreign competitors, here and abroad, through technological innovation and the development of high-value added products.

The Economic Impact of U.S. Trade Sanctions on the Asian and American Paper Industries¹

by Robert J. Shapiro and Nam D. Pham

I. Introduction

Globalization has fundamentally changed the economic landscape for everyone, presenting new challenges for American businesses, workers and policymakers. One challenge which has received great public attention and concern is the increased competition that many long-established American industries now feel from producers in fast-modernizing developing nations, especially China and Indonesia benefitting from large-scale transfers of advanced technologies and business methods.

In response, some U.S. industries have received trade protection from the U.S. International Trade Commission under the U.S. antidumping and countervailing duty programs. This study examines the challenges for American coated paper businesses and their workers coming from competition with Chinese and Indonesian paper producers, and the economic consequences likely to flow from recently-approved antidumping and countervailing duties.

In September 2009, three American paper companies – NewPage Corporation, Appleton Coated and Sappi-North America – along with the United Steelworkers (USW), filed ‘unfair trade cases’ with the U.S.

Department of Commerce and the U.S. International Trade Commission against Chinese and Indonesian coated paper imports. The filings alleged that certain coated paper originating from China and Indonesia had been dumped and subsidized, undermining the viability of domestic producers of coated paper. The USW, representing 6,000 workers among the three companies who filed, also expressed concern for American jobs, citing the need to protect employment.

The growth of paper and pulp production in both advanced and developing economies follows a clear pattern: A country’s capacity to produce paper and pulp products, as a share of the global industry, expands and contracts with its share of worldwide consumption of the products. For example, from 1970 to 2009, U.S. consumption of paper products, measured in tons or volume, fell from more than 41 percent of worldwide paper consumption to 19.4 percent; and over the same period, U.S. production of those products fell from just over 40 percent of worldwide production to 20.5 percent. The same pattern is evident in major developing nations. For example, as China and Indonesia’s combined share of worldwide consumption of paper products rose from 2.1 percent in 1970 to 25.3 percent in 2009, their combined share of worldwide production of those

As China and Indonesia’s combined share of worldwide consumption of paper products rose from 2.1 percent in 1970 to 25.3 percent in 2009, their combined share of worldwide production of those products increased from 1.7 percent to 25.6 percent.

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products increased from 1.7 percent to 25.6 percent.

This industry also is characterized by extensive and complex trade flows: While the United States produces more paper products than it consumes, it also accounts for 8.4 percent of worldwide imports of paper products and 11.7 percent of worldwide exports of those products, both measured in dollars. Some of these trade flows reflect a division of labor across the global paper industry, with advanced economies more focused on relatively higher value-added products which they export while importing relatively lower value-added products. However, the extensive global trade in these products also reflects the rapid modernization of paper production in many developing nations, driven by both fast-rising domestic demand and large foreign direct investments. These investments enable developing nations to produce higher value-added paper in demand in both their own economies and in advanced nations.

The United States remains one of the two dominant producers in the global pulp and paper products. Measured by tons or volume, American companies account for nearly one-quarter of worldwide pulp production, a substantially larger share than any other country, and for more than one-fifth of worldwide paper production. However, a new competitive landscape in the industry is evident in China's newly-achieved prominence as the world's second largest producer of pulp products and number one producer of paper products. This competition also is evident in the industry's coated paper segment. From 2007 to 2009, while Americans consumed about \$2.56 billion per-year in coated paper products, American companies produced \$1.62 billion of those products annually, for an annual trade deficit in these products averaging \$0.95 billion. This has occurred even as the overall U.S. paper industry has more than held its own in global markets. From 2000 to 2009, while U.S. imports as a share of worldwide imports of all paper products declined from 14.5 percent to 8.4 percent, measured in dollars, U.S. exports of paper products remained steady at about 11.7 percent of worldwide exports of the products.

The major sources of U.S. imports of these products also have changed. From 2007 to 2009, while the value of U.S. imports of coated paper products declined by nearly 35 percent, coated paper products from China

American business and workers cannot avoid the increasing competition from businesses in fast growing-developing countries that can combine lower costs and the use of advanced technologies and business methods provided through foreign direct investment.

and Indonesian producers displaced products from producers in other countries: The share of U.S. imports of coated paper products from China increased from 29 percent to more than 41 percent and the share of those imports from Indonesia grew from about 4 percent to 7 percent, while the share from all other countries fell from 67 percent to 51.5 percent.

A survey by the International Trade Commission (ITC) of U.S. business purchasers of coated paper products provides an explanation for these developments. Lower prices are the major factor behind the increased use of Chinese and Indonesian coated paper products. In fact, price was the only factor which U.S. purchasers judged U.S. producers to be inferior to Chinese and Indonesian alternatives. Among the other factors that U.S. customers consider important in their purchasing decisions, Chinese and Indonesian coated paper products were found to be comparable to their American competition in terms of their quality meeting industry standards, product consistency, and credit provisions. However, U.S. products beat their Chinese and Indonesian competitors on availability and reliability of supply, and delivery time and terms. For certain segments of the U.S. market, therefore, price was determinative given the comparability of U.S. and Chinese or Indonesian products on quality, consistency and credit. For other American customers, U.S. producers' ability to ensure reliable and available supplies of the products and to deliver them on time trumps the price advantage of their foreign competitors.

The recent U.S. trade deficits in coated paper products arise from the underlying fact that American production of these products falls short of American demand for them, and Chinese and Indonesian imports have displaced imports from other countries.

Nevertheless, the ITC approved antidumping and countervailing duties of many of these Chinese and Indonesian imports.

These effects reflect, first and foremost, the price differences: In 2009, the U.S. price of American-made coated paper products was 15 percent higher than the U.S. price for the same products imported from China and 14 percent higher than the U.S. price for these products imported from Indonesia. However, the U.S. price for these products made in America is 4 percent less than the average U.S. price for those products imported from other countries. In fact, Chinese and Indonesian producers have a price advantage compared to other non-U.S. producers of 15 percent to 17 percent, which explains why Chinese and Indonesian products have displaced imports from other countries.

According to Steve Rupe, owner of Bethlehem Printing Company in Connecticut, the duties “will jeopardize the competitiveness of U.S. printers as higher costs force many publishers to seek cheaper foreign printing solutions or use other media.”

The duties applied by the United States to these Chinese and Indonesian imports will directly raise U.S. domestic prices for these products, without producing net benefits to U.S. producers and their workers. To begin, the duties will indirectly lower the prices of Chinese and Indonesian imports to third countries by, respectively, 7 percent and almost 19 percent, because lower imports to the United States will increase the supply of Chinese and coated paper available for export to other countries. As a result, U.S. exports of these products will become less competitive in those third-country markets.

On balance, Chinese and Indonesian producers will likely be unaffected, since their lower exports to the United States will be offset by higher exports to third countries. Overall, U.S. producers and their workers also should be largely unaffected: Less competition from Chinese and Indonesian imports at home will be offset by more intense competition from Chinese and

Indonesian producers in third-country markets. In addition, the new duties may trigger retaliatory sanctions by China and Indonesia targeting U.S. exports of these same products to their own markets, as has occurred in other instances of U.S. antidumping duties. Such retaliation could have significant adverse effects for U.S. paper companies and workers, since China is the third largest market for U.S. coated paper exports, just behind Mexico and Canada.

These trade dynamics also will entail adverse effects for U.S. businesses and consumers, who will end up paying more for coated paper products. This effect goes beyond the direct substitution of higher-priced American-made coated paper for some Chinese and Indonesian imports and higher prices for the Chinese and Indonesian coated-paper products that continue to come into the United States. In addition, weaker competition from Chinese and Indonesian imports here will allow both U.S. producers and exporters from other countries to raise their prices in the United States. Furthermore, some 33,000 U.S. businesses use coated paper in their own production and employ almost 704,000 American workers. The higher prices which these downstream businesses will have to pay will reduce demand for their products and consequently put downward pressure on their employment. And even as the higher domestic prices and increased market share at home for U.S. producers will help them and their workers, all or some of these benefits will be offset by lower U.S. exports of these products to other countries.

American business and workers cannot avoid the increasing competition from businesses in fast growing-developing countries that can combine lower costs and the use of advanced technologies and business methods provided through foreign direct investment.

U.S. -based printing companies also expressed serious concerns about the new duties. According to Steve Rupe, owner of Bethlehem Printing Company in Connecticut, the duties “will jeopardize the competitiveness of U.S. printers as higher costs force many publishers to seek cheaper foreign printing solutions or use other media.” Our analysis of the U.S. pulp and paper market supports these concerns and demonstrates that they will not satisfy the concerns of pulp and paper producers (and their workers) about jobs and market share.

Other U.S. industries such as textiles and steel have faced the same challenge and adapted in ways which may provide guidance for U.S. coated paper businesses. In both of those cases, the industries received decades of trade protections in various forms which failed to preserve the industry in its pre-competitive form. Both industries experienced large job reductions over the long-term, but most of those losses were driven not by import competition but by technological modernization. In effect, intense competition from imports may accelerate for import-sensitive industries broader developments affecting of the economy. In particular, many industries, especially in manufacturing, have increased their capital investment in new production technologies and IT-based business networks over the last two decades. As a result, those industries' total workforces often declined while employment of more highly-skilled workers rose. In addition, their production focused more on higher valued-added products, and their productivity gains increased. In firms concentrating on higher-end products, overall employment often increased. Moreover, this pattern is evident not only in textiles and steel, but across much of U.S. manufacturing. The capacity to innovate, both technologically and organizationally, is the hallmark of successful companies across the American economy. Those capacities will well serve American paper makers facing tough competition from producers in lower-cost countries.

Further, if Asian paper producers continue to upgrade their technologies and organizations while American producers depend upon duties to make their products more price-competitive in the United States, the ultimate result will be a growing share of the world market for Asian producers and a shrinking share for U.S. companies.

The attempts to circumvent these dynamics by winning anti-dumping and countervailing duties will not succeed. The artificial reduction in the share of the

U.S. market served by Chinese and Indonesian paper producers will increase the supplies of their goods available for sale in third-country markets, reducing the price of their exports and making them more competitive there with U.S. producers. Further, if Asian paper producers continue to upgrade their technologies and organizations while American producers depend upon duties to make their products more price-competitive in the United States, the ultimate result will be a growing share of the world market for Asian producers and a shrinking share for U.S. companies.

II. Industry Background

The pulp and paper industries in the United States and throughout the world exhibit the characteristic features of a mature, commodity business. In such industries, developing nations have a comparative advantage when international competition focuses on the production costs of technologically-standardized products, from basic steel to call-center services.² The scientific knowledge embodied in the production process is easily transferable, and differences in labor and other costs become more important. In some industries such as textiles and steel, the production of lower value-added products has shifted significantly to cost-competitive developing countries. The focus of such industries in advanced economies such as the United States generally shifts to higher-value-added products, such as designer textiles and specialty steel, or to new production arrangements such as steel mini-mills. While the U.S. paper and pulp industries remain much larger players in their global industries than U.S. steel or textile producers, a similar adaptive process is evident in the paper and pulp sectors.

Paper production is capital intensive wherever it occurs. Since the 1970s, many developing countries including China and Indonesia have undertaken large-scale investments in new paper machinery and large paper mills with state-of-the-art technologies, supported by government subsidies and the rapid growth of domestic demand for their products. These investments enable many developing nation producers to lower their production costs by taking advantage of technologies from advanced countries that increase their firms' productivity, raise their energy efficiency, and make better use of their domestic resources.³ For example, Indonesian producers have applied modern machinery to reduce energy and other costs in pulp production. Combined with low labor costs and a large production base, these imported innovations have enabled Indonesian mills to sharply cut their per-unit variable costs.⁴

In addition to technology transfers, rapidly-expanding demand for paper products in developing countries also has supported the development of highly-competitive paper production.⁵ In fact, increases (and

Table 1

Consumption and Production of Paper Products, in Tons, by Region, As Shares of Worldwide Consumption and Production (%), 1970-2009⁶

Year	Africa	US	Canada	Latin America	Europe	Japan	China	Indonesia	Rest of Asia	Oceania
Consumption										
1970	1.30	41.27	2.80	4.37	33.89	10.70	1.97	0.09	2.15	1.47
1980	1.55	37.30	2.43	6.23	31.93	11.36	3.66	0.25	3.80	1.48
1990	1.66	32.38	2.28	5.27	30.92	11.61	8.52	0.57	5.47	1.32
2000	1.62	28.68	2.81	6.18	26.93	9.46	13.60	1.50	7.87	1.34
2009	1.61	19.40	1.60	7.49	25.39	6.53	23.78	1.49	11.76	0.94
Production										
1970	0.71	40.18	6.98	3.13	33.77	11.03	1.70	0.01	1.22	1.27
1980	1.08	36.57	6.37	5.00	32.51	11.23	3.11	0.13	2.70	1.31
1990	1.20	31.33	5.39	4.84	31.75	11.55	7.81	0.59	4.36	1.18
2000	1.35	28.02	5.17	4.73	29.62	9.51	11.79	2.09	6.55	1.18
2009	1.00	20.54	2.79	5.68	27.78	6.52	23.55	2.03	9.24	0.87

Note: Paper products include newsprint, paper and paperboard, printing and writing paper, wrapping and packaging paper and board, and household sanitary paper.

² Van Dijk (2003).

³ Pulp and Paper Industry Strategy Group (2010).

⁴ *Ibid.*

⁵ *Ibid.*

⁶ FAO STAT, Forestry, Food and Agricultural Organization of the United Nations.

decreases) in a nation's paper production generally track increases (and decreases) in its domestic paper consumption. From 1970 to 2009, Asia's share of worldwide paper consumption (excluding Japan) increased almost nine-fold, from 4.2 percent to 37.0 percent. (Table 1) In China and Indonesia, the shares of worldwide consumption grew even faster: China's share expanded 12 times from 2.0 percent to 23.8 percent, and Indonesia's share jumped 16.5 times from 0.09 percent to 1.5 percent. Over the same period, China's share of global production of these products grew from 1.7 percent to 23.6 percent, measured in tons or volume, and Indonesia's share of global production of those products rose from 0.01 percent to 2.013 percent. Similarly, from 1970 to 2009, the U.S. share of worldwide consumption of paper products fell from 41.3 percent to 19.4 percent, measured by tons or volume. Over the same period, its share of worldwide production of these goods declined from 40.2 percent to 20.5 percent. These same patterns are in all advanced economies: The share of worldwide paper consumption of paper products accounted for by the U.S., Canada, Europe and Japan fell from 88.7 percent to 52.9 percent; and their share of worldwide paper production declined from 92.0 percent to 57.5 percent over the same period. While there is substantial world trade in these products, these relationships suggest that nations expand their capacity to produce paper products to meet rising domestic demand for those products.

The same patterns are generally evident for pulp and pulp products. As the advanced countries' share of worldwide consumption of pulp and pulp products has declined, and the share claimed by developing nations has risen, the advanced countries' share of worldwide production of pulp and pulp products has declined with it, and the share met by developing nations has expanded. The data for this relationship over the period 1970-2009, by nation and region, is provided in Appendix. Table A-1. Moreover, these developments pose no economic threat to the United States. We should expect U.S. paper producers to increasingly focus on higher value-added specialty paper and pulp products, as developing nations expand their lower-cost production of more basic pulp and paper products, especially those countries with large natural fiber resources. Moreover, the United States continues to be the world's largest producer of pulp and pulp products, and the second largest producer of paper and

paper products. For further discussion of these dynamics, see Appendix, Table A-2 and Table A-3, and accompanying discussion.

The worldwide industry also is broadly characterized by certain divisions of labor and production, with developing nations tending to produce lower-end pulp and paper while advanced nations tend to produce higher-end goods. As a result, while each region accounts for generally comparable shares of global consumption and production of all pulp and paper products by weight, the country and regional shares of global imports and exports of each class exhibit a different pattern. In 2009, for example, the U.S., Canada, and Europe exported considerably more paper products than they imported (measured in tons) — especially the United States and Canada — while China, the rest of non-Japan Asia, Latin America, and Africa all imported much greater shares of these products than they exported. (See Appendix, Table A-4)

...developing nations have a comparative advantage when international competition focuses on the production costs of technologically-standardized products, from basic steel to call-center services.

More subtle shifts in the U.S. and worldwide paper industry are evident when we measure the industry's trade by value rather than volume. Here, we see that even as the production of paper products in developing countries has expanded sharply, and the U.S. share of the value of all worldwide imports of paper products fell by nearly half from 1970 to 2009, the U.S. share of the total value of worldwide exports of paper products declined much less, by 22 percent. (Table 6) Among the developing nations, their share of the total value of both worldwide imports and exports of paper products rose even faster. While those levels remain less than the United States, the expansion and modernization of paper producers, especially in China and Indonesia, could enable them to challenge U.S. and other advanced country producers as worldwide exporters in the future.

Imports and Exports of Paper Products, by Value, by Nation and Region, As Shares of Worldwide Imports and Exports of These Products (%), 1970-2009⁷

Table 2

Year	Africa	US	Canada	Latin America	Europe	Japan	China	Indonesia	Rest of Asia	Oceania
Consumption										
1970	5.06	16.14	1.22	8.08	57.73	0.75	1.993	0.58	6.20	2.25
1980	3.81	12.29	1.13	8.33	58.74	2.85	3.622	0.49	6.57	2.17
1990	3.48	13.77	2.13	3.31	60.81	2.27	5.216	0.42	6.84	1.75
2000	1.87	14.47	3.55	6.98	50.10	2.24	9.489	0.38	9.03	1.89
2009	3.73	8.40	2.69	9.77	52.54	1.75	5.402	0.60	13.35	1.75
Production										
1970	0.28	14.98	20.73	0.53	58.98	3.21	0.43	0.00	0.28	0.59
1980	0.40	12.86	14.68	1.35	64.81	3.60	0.66	0.00	0.83	0.82
1990	0.16	9.56	11.92	1.51	67.75	3.96	2.28	0.24	2.03	0.58
2000	0.43	11.84	11.67	1.46	61.97	2.90	3.74	2.01	3.22	0.75
2009	0.91	11.68	6.30	3.86	63.46	2.18	3.82	2.59	4.23	0.97

Note: Paper products include newsprint, paper and paperboard, printing and writing paper, wrapping and packaging paper and board, and household sanitary paper.

As Table 2, shows, from 1970 to 2009, the U.S. share of worldwide imports of paper products, measured by value, fell from 16.1 percent to 8.4 percent while its share of worldwide exports of those products fell from 15.0 percent to 11.7 percent. Over the same period, China and Indonesia's combined share of worldwide imports of paper products rose from 2.6 percent to 6.0 percent, and their combined share of worldwide exports of those products rose from 0.43 percent to 6.4 percent.

These same developments are also evident in pulp and pulp products. For those data and discussion, see Appendix, Table 5-A, and accompanying analysis.

The Rise of Anti-Dumping Duties

Even as the underlying growth of the Chinese and Indonesian coated paper industries has followed the same pattern seen in other countries — with domestic production expanding with domestic consumption, and segmenting into domestic and export markets —

the recent inroads of Chinese and Indonesian paper imports in the American market have been met by demands for protection by U.S. domestic producers. As noted earlier, the anti-dumping cases before the ITC were brought by three large U.S. paper producers and the United Steel Workers union, representing coated-paper workers in unionized facilities. This should not be surprising: A considerable body of research by economists and political scientists has established that politically well-organized industries and labor unions often succeed in winning such protection.

One recent study, for example, found that politically-active industries, as measured by their lobbying efforts and political contributions, were more likely to secure anti-dumping duty relief, and higher rates for those duties, than industries that are less active politically.⁸ The impact of such political activism is also evident at the congressional level: Economic researchers have also found that industries located in the districts or states of members who serve on the House and Senate appropriations subcommittees with control over the ITC's budget fare better at the ITC than industries

⁷ FAO STAT, Forestry, Food and Agricultural Organization of the United Nations.

⁸ Evans and Sherlud (2008); also, see Grossman and Helpman (1994).

located elsewhere, especially when those industries contributed to the political action committees (PACs) of those appropriating members.⁹

The use of anti-dumping duties by U.S. industries was relatively rare until the late 1970s. With the conclusion of the Tokyo Round in 1979, however, the United States and other countries counter-balanced the Round's reductions in tariffs and quotas by broadening the scope of their anti-dumping statutes. Under the new rules, the number of anti-dumping cases worldwide doubled from the 1970s to the 1980s.¹⁰ In the United States, at least, it did not help much: Economists found that U.S. industries receiving anti-dumping protection in the 1980s continued to significantly underperform other American manufacturing industries.¹¹

Adverse economic conditions also have driven increases in anti-dumping complaints by politically-connected industries.

Nevertheless, Congress continued to expand the scope of the anti-dumping statutes. In 1984, for example, Congress directed the ITC to measure dumping-related injuries on the basis of the total combined imports of a particular good from all countries, instead of using a country-by-country basis. Researchers later estimated that this one change increased affirmative determinations of anti-dumping injury by 50 percent, for cases decided from 1985 to 1988.¹² Studies also found that the use of anti-dumping duties by the United States increased again with the establishment of the World Trade Organization, in response to the new WTO strict restrictions on other forms of protection.¹³

Adverse economic conditions also have driven increases in anti-dumping complaints by politically-connected industries. Researchers from the World

Bank, for example, noted a significant increase in anti-dumping during by the United States and the European Union as the financial crisis and subsequent deep recession unfolded in 2008 and 2009.¹⁴ Other countries also increased many of their tariffs. Still, the expanded use of antidumping duties by the United States in 2009 is estimated to have reduced U.S. trade in that year by \$24 billion, or more than half of the total reduction in world trade traced to increased protectionism in 2008 and 2009.¹⁵

9 Hansen and Prusa (1996, 1997).

10 *Ibid.*

11 Hansen and Prusa (1993).

12 Hansen and Prusa (1996).

13 Blonigern and Prusa (NBER).

14 Kee, Neagu and Nicitya (2010).

15 *Ibid.*

III. Trade Issues

Recent trading dynamics in the U.S. paper industry would not lead most objective observers to expect a strong push by politically well-connected companies for new anti-dumping duties on foreign paper imports. Measured by value, the U.S. shares of worldwide imports of both paper and pulp products have declined steadily since 1970, falling particularly sharply since 2000. By contrast, the U.S. share of worldwide exports of pulp products has remained steady at about 20 percent, and the U.S. share of worldwide exports of paper products has declined only modestly. (Table 2 and Table 5-A, Appendix) Nevertheless, the U.S. paper industry pressed the ITC for trade sanctions against Chinese and Indonesian exporters; and the Department of Commerce issued antidumping and countervailing duty orders in November 2010 covering certain imports of coated paper and paperboard products from China and Indonesia. The antidumping duties were applied on the basis of the ITC's finding that the Chinese and Indonesian imports were sold in the United States for less than "normal value," and the countervailing duties were applied to on the basis of the ITC's view that China and Indonesia had subsidized their coated-paper exports to the United States and thereby injured U.S. producers.

Economists found that U.S. industries receiving anti-dumping protection in the 1980s continued to significantly underperform other American manufacturing industries.

The focus of the November 2010 rulings, coated paper and paperboard, are produced from bleached chemi-thermo-mechanical pulp. This type of coated paper is often used for multi-colored graphics in books,

catalogues, magazines, envelopes, labels and wraps, greeting cards, and other commercial printing that require high-quality print graphics. Coated paperboard is heavier, thicker and more rigid than coated paper, and is often used to make folding cartons.¹⁶ The "Harmonized Tariff System" (HTS) codes for the products subject to the recent orders and the antidumping and countervailing duty rates applied to particular Chinese and Indonesian exporters and producers can be found in the Appendix, Table 1-A.

The debate over the anti-dumping and countervailing duties applied to Chinese and Indonesian coated paper products also has included discussions of various special subsidies available to the paper industries in the three countries. Particular attention has focused on the Alternative Fuel Mixture Credit, popularly referred to as the "black liquor tax credit," used by U.S. paper companies in 2009 and 2010. "Black liquor" is a by-product of paper production which the industry has reused for fuel since the 1930s. In 2007, however, Congress extended the use of the existing tax credit to non-mobile uses of alternative fuels. In 2009, eight of the U.S. paper companies who began using the credit, claimed \$1.67 billion in tax credits for use of black liquor fuel in the first half of the year.¹⁷ While Congress subsequently withdrew the use of the credit for black liquor, its value to the paper industry in 2009 and 2010 while the ITC was considering the anti-dumping case actually exceeded the value of all U.S. coated paper production in that year. (See Table 3)

From the other side, U.S. paper producers have long claimed that China and Indonesia broadly subsidize their coated-paper industries. Claims of such subsidization provided much of the basis for the industry's filings for anti-dumping and countervailing duty relief. To be sure, the ITC as well as the European Union have found that such subsidization exists, especially for Chinese paper producers. However, the evidence provided has been largely indirect, with the industry noting that "after controlling for the poor quality of domestically sourced raw materials, the price

¹⁶ The DOC orders specifically defined certain coated paper and paperboard in the investigation are those in sheets suitable for high quality print graphics using sheet-fed presses; coated on one or both sides with kaolin, calcium carbonate, titanium dioxide, and/or other inorganic substances; with or without binder; having a General Electric (GE) brightness level of 80 or higher; weighing not more than 340 grams per square meter; whether gloss grade, satin grade, matte grade, dull grade, or any other grade of finish; whether or not surface-colored, surface-decorated, printed, embossed, or perforated; and, irrespective of dimension. Notices, Federal Register, Vol. 75, No. 221, November 17, 2010.

¹⁷ International Paper, \$624 million; Smurfit, \$276 million; Domtar, \$172 million, Verso Paper, \$142 million; New Page, \$120 million; Abitibi Bowater, \$118 million; Mead Westvaco, \$112 million; Weyerhaeuser, \$107 million. See Gateway Packaging Company (2010).

differentials [between Chinese and U.S. paper products] are difficult to explain without subsidies.¹⁸ This study, however, focuses not on the nature or extent of such subsidies in China, Indonesia or the United States. Rather, we evaluate the economic effects of the anti-dumping and countervailing duty decisions for the U.S. paper industry, its workers and American consumers.

The Coated Paper Market in the United States

Regardless of subsidies on either side, the data shows that U.S. coated paper producers actually expanded their domestic U.S. market share in the years leading up to the ITC decisions. Table 3, below, summarizes the U.S. market for these coated paper products. From the economic downturn of 2007 to 2009, U.S. total demand for these products declined by 21.3 percent as measured in tons and by 23.6 percent measured in

dollars (including a unit price decline of about 3 percent). Yet, U.S. domestic production of coated paper products, which is largely concentrated in eleven companies,¹⁹ fell less sharply: U.S. domestic production fell by only 15 percent as measured by quantity and by 16.5 percent as measured by value or revenues. Furthermore, the U.S. market share of American producers increased from about 61 percent in 2007 to about 66 percent in 2009, even though U.S. domestic producers charged more than their Chinese and Indonesian counterparts.²⁰ In fact, the unit production cost of these products declined by 1.8 percent for U.S. producers compared to a 5.5 percent drop for foreign producers. Finally, all told, U.S. coated paper imports fell by 31 percent over this period, as measured by quantity, and by 34.7 percent as measured by value.

While overall imports of coated paper products

Table 3

The U.S. Market for Coated Paper Products, 2007-2009²¹

	2007	2008	2009	Change
Domestic Consumption				
Quantity in tons	2,862,837	2,642,844	2,254,299	-21.3%
Value	\$2,820,192,000	\$2,712,759,000	\$2,153,830,000	-23.6%
Unit Value, per-ton	\$985.10	\$1,026.45	\$955.43	-3.0%
Domestic Production				
Quantity in tons	1,737,222	1,648,972	1,477,233	-15.0%
Share of US Consumption	60.7%	62.4%	65.5%	+ 7.9%
Value	\$1,719,332,000	\$1,694,553,000	\$1,435,314,000	-16.5%
Share of US Consumption	61.0%	62.5%	66.6%	+ 9.2%
Unit Value, per-ton	\$989.70	\$1,027.64	\$971.62	-1.8%
Total Imports				
Quantity in tons	1,125,615	993,872	777,066	-31.0%
Share of US Consumption	39.3%	37.6%	34.5%	-12.2%
Value	\$1,100,860,000	\$1,018,206,000	\$718,516,000	-34.7%
Share of US Consumption	39.0%	37.5%	33.4%	-14.4%
Unit Value, per-ton	\$978.01	\$1,024.48	\$924.65	-5.5%

18 Haley (2010).

19 Appleton, Cascades Boxboard Group, Clearwater Paper Co., International Paper, Georgia-Pacific, MeadWestvaco Corp., Mohawk Fine Papers, Inc., NewPage, Rock-Tenn Co., Sappi, and Smart Papers, Inc.

20 The market share of domestic producers for U.S. consumption increased from 60.7 percent to 65.5 percent when measured by quantity, and from 61.0 to 66.6 percent when measured in value.

21 U.S. International Trade Commission (2010).

declined over the past three years, imports from China and Indonesia increased by 3.8 percent, as measured by quantity, growing from 398.3 tons in 2007 to 413.6 tons in 2009. By 2009, Chinese and Indonesian imports of coated paper products accounted for about half of the quantity and value of all coated paper imports into the United States. These imports accounted for 18.3 percent of U.S. consumption of these products, measured by quantity, and 16.2 percent

measured by value. However, since the unit cost of these imports from China and Indonesia fell by 7.3 percent, from \$913 per-ton in 2007 to \$846 per-ton in 2009, their total value also declined, by 3.8 percent from \$363.6 million in 2007 to \$350 million in 2009. (Table 4, below)

While industry and government analysts often lump together Chinese and Indonesian paper producers, the

Table 4

U.S. Imports of Certain Coated Paper Products From China, Indonesia, and Other Nations, 2007-2009²²

	2007	2008	2009	Change
Domestic Consumption				
Quantity (tons)	1,125,615	993,872	777,066	-31.0%
Value (\$)	\$1,100,860,000	\$1,018,206,000	\$718,516,000	-34.7%
Unit value (\$)	\$978.01	\$1,024.48	\$924.65	-5.5%
China				
Quantity (tons)	345,786	329,307	352,555	2.0%
Share of US Imports	30.8%	33.2%	45.2%	46.9%
Share of US Consumption	12.1%	12.5%	15.6%	28.9%
Value (\$)	\$318,066,000	\$319,306,000	\$297,527,000	-6.5%
Share of US Imports	29.0%	31.5%	41.3%	42.6%
Share of US Consumption	11.3%	11.8%	13.8%	22.1%
Unit value (\$)	\$919.83	\$969.63	\$843.92	-8.3%
Indonesia				
Quantity (tons)	52,541	52,938	61,039	16.2%
Share of US imports	4.6%	5.3%	7.8%	70.9%
Share of US Consumption	1.8%	2.0%	2.7%	50.0%
Value (\$)	\$45,543,000	\$48,765,000	\$52,384,000	15.0%
Share of US Imports	4.1%	4.8%	7.2%	75.1%
Share of US Consumption	1.6%	1.8%	2.4%	50.0%
Unit value (\$)	\$866.81	\$921.17	\$858.21	-1.0%
Others				
Quantity (tons)	727,288	611,627	363,472	-50.0%
Share of US Imports	64.6%	61.4%	47.0%	-27.3%
Share of US Consumption	25.4%	23.1%	16.2%	-36.2%
Value (\$)	\$737,251,000	\$650,135,000	\$368,605,000	-50.0%
Share of US Imports	66.9%	63.7%	51.5%	-23.1%
Share of US Consumption	26.1%	23.9%	17.2%	-34.1%
Unit value (\$)	\$1,013.70	\$1,062.96	\$1,014.12	0.0%

22 U.S. International Trade Commission (2010).

two countries' U.S. market presence is actually quite different. From 2007 to 2009, U.S. imports of coated paper products from China increased by 2 percent, as measured in quantity, from 345,786 tons in 2007 to 352,555 tons in 2009. However, their share of all U.S. imports of those products increased much more sharply, from 30.8 percent in 2007 to 45.2 percent in 2009. These imports accounted for 15.6 percent of U.S. consumption of those products in 2009, up from 12.1 percent in 2007, even as their value fell from \$318 million in 2007 to \$297.5 million in 2009. By contrast, Indonesia's exports of coated paper products to the United States are less than one-fifth the size of China's: In 2009, imports of these coated paper products from Indonesia totaled 61,039 tons at a value of \$52.4 million, amounting to about 8 percent of all U.S. imports of these products and less than 3 percent of U.S. consumption of those products. Within Indonesia's modest U.S. market niche, these exports to the U.S. increased by 16.2 percent over this period, and their value rose by 15 percent. (Table 4) Therefore, the price of Indonesian coated paper exports to the United States fell little in recent years, compared to the 8 percent price decline of comparable Chinese exports to the United States.

Unsurprisingly, given that the U.S. industry's domestic market share rose in this period, the increases in the imports from China (in quantity) and Indonesia (in both quantity and value) were more than offset by a 50 percent declines in both the quantity and value of coated paper imports from other countries. By 2009, the quantity of coated paper imports from all other countries roughly equaled the quantity of these imports from China alone; and their value roughly equaled the value of these imports from China and Indonesia.

Do Chinese and Indonesian Exports of Coated Paper Products Substitute for U.S. Products?

The essential economic issue presented by these data is not whether Americans are consuming more foreign-produced coated paper products, but the extent to which those foreign imports use unfair means to squeeze out American-made coated paper. Right off, the evidence suggests that Chinese and Indonesian coated paper products are reasonable substitutes for U.S. produced coated paper in certain respects, but not in others. Based on responses to ITC questionnaires, Americans purchasers of coated paper products

Table 5

U.S. Purchasers' Views on Coated Paper Products From China, Indonesia, and the United States²³

	US Product Superior	US Product Comparable	US Product Inferior	US Product Superior	US Product Comparable	US Product Inferior
Availability	20	3	0	12	1	0
Delivery time	20	2	0	12	1	0
Technical support	18	4	0	11	2	0
Reliability of supply	16	6	0	10	3	0
Delivery terms	15	6	2	11	2	0
Min. quantity requirements	14	8	0	10	2	0
Product range	12	9	1	7	6	0
Quality up to industry std.	2	19	1	2	11	1
Quality exceeds industry std.	2	18	2	1	11	1
Product consistency	3	17	2	1	11	1
Packaging	5	15	2	4	8	1
Discount offered	5	14	3	5	7	1
Extension of credit	5	13	4	3	8	2
Lower U.S. transport. costs	9	12	1	4	9	0
Lower price	2	8	11	1	3	9

²³ U.S. International Trade Commission (2010).

reported that they find U.S. producers superior to Chinese and Indonesian imports in terms of the range and availability of product, reliability of supply, minimum quantity requirements, delivery time and delivery terms, and technical support. The respondents also find that Chinese and Indonesian coated paper products are comparable to U.S. coated paper products in terms of their quality, product consistency, packaging, discounts, extensions of credit, and even transportation costs. On only one ground — price — do U.S. purchasers of coated paper products find Chinese and Indonesian producers superior to their American counterparts.

Table 5 summarizes these responses, with the numbers in each category showing the number of respondents. For example, 20 of 23 purchasers said that U.S. coated paper is superior to Chinese products in terms of availability, while 3 purchasers believed that the U.S. and Chinese products are comparable in this respect. The majority response in each case is in bold.

These responses suggest that U.S., Chinese and Indonesian paper producers meet different market needs. American producers are preferred by customers

who have to count on their coated paper provider for a reliable supply of the product they want, a range of coated-paper products that will be available quickly, and delivered on time at favorable terms with minimum quantity requirements. Other customers prefer the foreign-produced products, because they are less expensive and still up to industry standards in terms of quality, consistency, packaging; and comparable to U.S. products in terms of discounts, credit provisions and transportation costs. The respondents to the ITC survey identified as the three most important factors, the quality, price, and availability of the products. On these three factors, U.S. coated paper producers are superior in terms of availability, comparable in quality to Chinese and Indonesian producers, and inferior in price. The respondents also identified five other factors which they considered important to their purchasing decisions, if not the most important – reliability of supply, delivery time, delivery terms, product consistency, and the availability of credit. They judged U.S. producers superior with respect to three of these additional factors, and comparable to Chinese and Indonesian producers on the other two. (Table 6)

Table 6

Survey of Factors in Purchasing Decisions of Coated Paper Products, U.S. Producers Compared to Chinese and Indonesian Producers

	U.S. Producers, Compared to Chinese and Indonesian Producers	Important Factor in Purchasing Decision	
Availability	Superior	Very	
Delivery time	Superior	Very	
Technical support	Superior		Somewhat
Reliability of supply	Superior	Very	
Delivery terms	Superior	Very	
Min. quantity requirements	Superior		Somewhat
Product range	Superior		Somewhat
Quality meets industry standard	Comparable	Very	
Quality exceeds industry standard	Comparable		Somewhat
Product consistency	Comparable	Very	
Packaging	Comparable		Somewhat
Discount offered	Comparable		Somewhat
Extension of credit	Comparable	Very	
Lower U.S. transport. costs	Comparable		Somewhat
Lower price	Inferior	Very	

These responses show that price alone does not explain the success of Chinese and Indonesian coated paper producers in the American market. Moreover, the responses are consistent with actual distribution of the U.S. market, with American producers claiming fully two-thirds of that market in 2009, Chinese and Indonesian producers claiming 16 percent, and exporters from the rest of the world accounting for the remaining 17 percent. The responses also suggest how the anti-dumping duties could upset the natural segmentation of the market. In particular, the duties will disadvantage purchasers who depend on low price to be competitive while being relatively indifferent to the aspects in which U.S. producers are considered superior, such as delivery time and terms, technical support, and product range.

Regardless of subsidies on either side, the data shows that U.S. coated paper producers actually expanded their domestic U.S. market share in the years leading up to the ITC decisions.

IV. The Economic Effects of the Antidumping and Countervailing Duties

As the United States struggles to recover fully from the 2007-2008 financial crisis and subsequent deep recession, pressures to protect domestic industries from import competition have increased. The numbers of antidumping investigations and subsequent antidumping duties have both surged since 2007. The United States is not alone in this respect: The European Union has been a leading user of antidumping laws, and the approach also has become more common in developing nations in recent years. According to the World Bank, a majority of antidumping investigations and duties since 2007 have occurred in developing countries.²⁴

Despite increasing use of these duties, economists have long found that they rarely benefit the countries imposing them. Theoretical and empirical analysis have shown, for example, that when country A (such as the United States) imposes antidumping and other trade sanctions against country B (such as China or

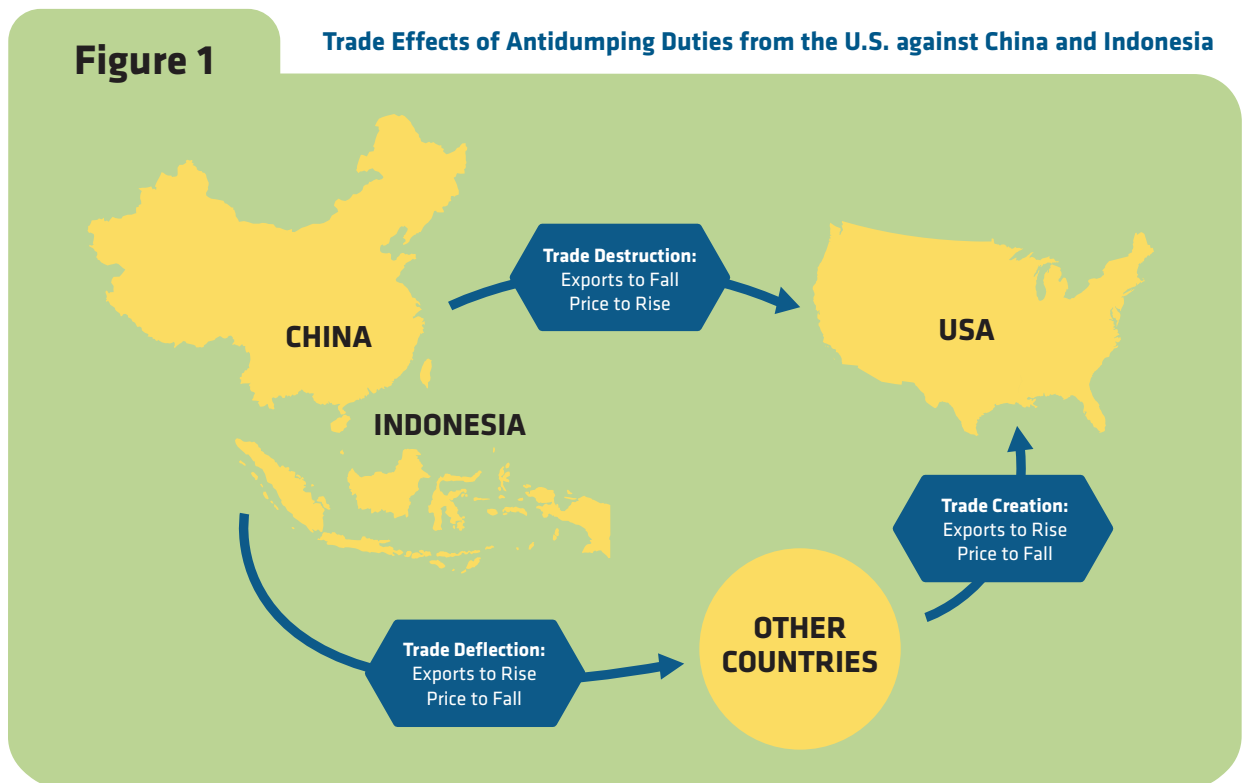
Indonesia), the results usually include not only the expected decline in exports from Country B to Country A (“trade destruction”), but also offsetting increases in exports from the rest of the world to Country A (“trade creation”), and increases in exports from Country B to the rest of the world (“trade deflection”). (Figure 1, below) This political re-routing of trade flows has other consequences. When the United States imposes antidumping and countervailing duties, it also raises domestic prices in several ways, including the direct effect of the duties and the substitution of the reduced supply of goods from the targeted country by higher-priced goods produced in the U.S. and other countries. The higher prices may even result in increased imports, as measured in dollars, from the targeted country to the United States.

The Price Effects of Antidumping and Countervailing Duties

These dynamics suggest that over time, the antidumping duties applied to Indonesian and Chinese coated paper imports will impose additional costs on

Figure 1

Trade Effects of Antidumping Duties from the U.S. against China and Indonesia



²⁴ Gamberoni and Newfarmer (2009).

Table 7**Price Differentials on Coated Paper Products, United States, China, Indonesia, and the Rest of the World, 2007-2009²⁵**

	2007	2008	2009	Change
US/China	1.076	1.060	1.151	7.0%
US/Indonesia	1.142	1.116	1.132	-0.8%
US/Others	0.976	0.967	0.958	-1.9%
China/Others	0.907	0.912	0.832	-8.3%
Indonesia/Others	0.855	0.867	0.846	-1.0%

American businesses and consumers. As noted in the ITC survey, price is one of the three most important factors affecting the substitutability of imports for U.S.-produced goods. The price differential for coated paper products between the United States and China has widened in recent years, from 1.076 in 2007 to 1.151 in 2009: This means that in 2009, the U.S. price for American-made coated paper products was 15.1 percent higher than the U.S. price for the same products produced in China, compared to 7.6 percent higher two years earlier. (Table 7, above) Over the same period, the price differentials for the same products between the United States and Indonesia actually narrowed from 14.2 percent in 2007 to 13.2 percent in 2009. Moreover, both the United States and Indonesia have price advantages with respect to the average of all other coated-paper-producing countries, with Indonesia's price advantage the greater one.

Chinese, Indonesian and American coated paper producers also compete to export their products to the rest of the world. The recent antidumping duties and countervailing duties imposed by the United States on exporters of coated paper products from China and Indonesia, therefore, will not only raise U.S. domestic prices for those products. The trade sanctions also will lower the prices of Chinese and Indonesian exports of those goods to the rest of the world, because the supply available for other countries will expand as U.S. purchases decline. This will make the same U.S. producers who pressed for the U.S. duties less price-competitive when they try to export their products to those third-country markets. In this respect, the new U.S. duties should ultimately work to the advantage of Indonesian and Chinese producers, and against the

interest of U.S. producers and their workers in those other markets. As Table 7, above, shows, the prices of coated paper products imported by third countries from Indonesia in 2009 were already 15.4 percent lower than the prices of U.S. products in those countries ($1.0 - 0.846 = 0.154$), and the prices of coated paper products from China in those countries were 16.8 percent lower than U.S. products.

These negative effects from U.S. antidumping duties have been documented for a number of industries. For example, one recent study using data from 1992 to 2001 found that a one percent U.S. duty on Japanese exports to the United States was associated with a 0.616 percentage-point reduction in Japanese export prices to the EU in the same time period and a 0.924 percentage-point price reduction one period later.²⁶ Applying this finding to the current 7.62 percent antidumping duty rates on coated paper imported from China, we estimate that the prices of Chinese exports of those products to third-country markets could decline by at least 7 percentage points ($7.62 \text{ percent} \times 0.924 \text{ percentage points}$) in the medium-term.

Similarly, the United States has imposed a 20.13 percent duty rate on imports of certain coated paper products from Indonesia, suggesting that prices of those Indonesian products exported to third-country markets will fall by 18.6 percentage points ($20.13 \text{ percent} \times 0.924 \text{ percentage points}$). As a result, U.S. exporters of those coated paper products will face much more intense price competition from Chinese and Indonesia coated paper producers in the rest of the world. With the U.S. industry's high capacity utilization rates, American manufacturers of those products

²⁵ U.S. International Trade Commission (2010).

²⁶ Bown, and Crowley (2006).

almost certainly will see their exports slow and have to divert more sales to the U.S. market, which may well entail cutting their prices here.

The Impact of Antidumping and Countervailing Duties on U.S. Exports

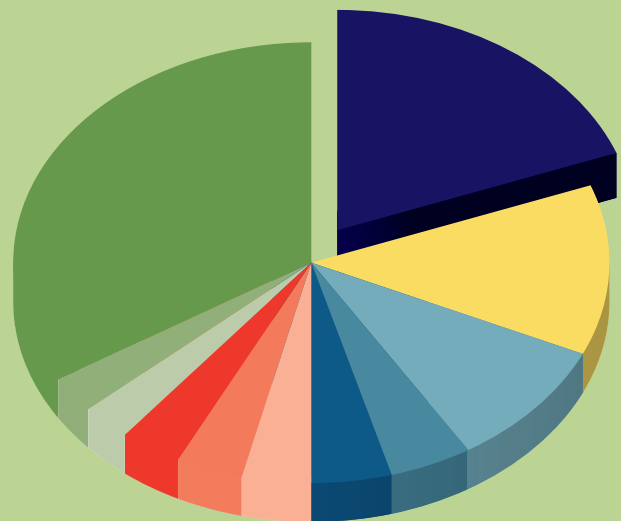
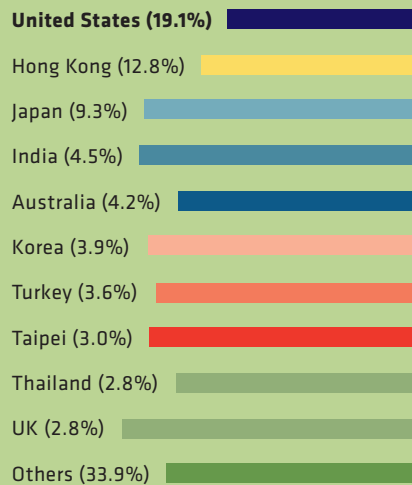
These adverse effects are not negligible. One study of 350 U.S. antidumping orders from 1981 to 1996 found that every one percent increase in prices from antidumping duties reduced the volume of the imports by 0.9 percent — imports which then were diverted to third country markets.²⁷ The study cited earlier of Japanese exports from 1992 to 2001 used data on nearly 4,800 Japanese product exports to 37 countries to estimate the trade effects from U.S. antidumping duties and other trade sanctions. Over that recent period, the United States imposed antidumping duties on 157 distinct products from Japan. The authors found strong evidence of “trade deflection” arising from the U.S. measures against Japan: Every one percent U.S.

duty rate on Japanese exports to the United States was associated with a 0.322 percentage-point increase in the volume of Japanese exports to the EU in the same period and an additional 0.507 percentage-point increase in those volumes two periods later.²⁸ A third study used a panel of U.S. industry-level imports and U.S. antidumping measures over the period from 1980 to 1994 to also examine import substitutions from a targeted country to other markets. This analysis found that not only did exports from the targeted country to the United States decline, and exports from the targeted country to other countries increase, but also that other countries exported more of the same products to the United States.²⁹

At the current antidumping duty rates of 7.62 percent and 135.84 percent on imports of certain coated paper products from China, we should expect Chinese producers to increase their exports to other countries by between 3.87 percentage points (7.62 percent duty rate x 0.507 percentage points) and 63.6 percentage

Figure 2

The Distribution of Chinese Exports of Coated Paper and Paperboard Coated with Kaolin or Other Inorganic Substances, 2005–2009³⁰



²⁷ Nye (2006); see also, Krupp and Skeath (2002).

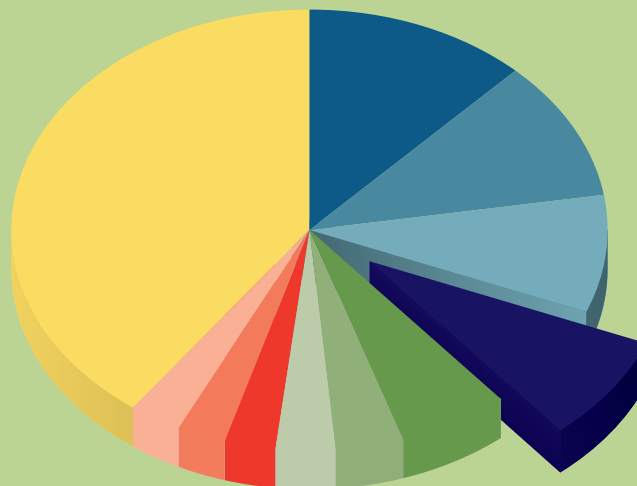
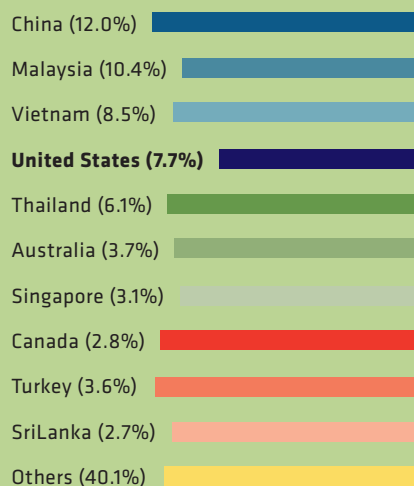
²⁸ Bown and Crowley (2007). The magnitude of this trade deflection varied across the third-country markets and across the products, with larger effects on non-steel products than on steel products.

²⁹ Prusa, (2001); Prusa (1997).

³⁰ United Nations Commodity Trade Statistics Database.

The Distribution of Indonesian Exports of Coated Paper and Paperboard Coated with Kaolin or Other Inorganic Substances, 2005–2009³¹

Figure 3



points in the near-term (135.84 percent duty rate x 0.507 percentage points). (Figure 2)

The U.S. antidumping sanctions against Indonesia similarly will reduce Indonesian exports of coated paper products to the United States and increase their exports to third countries. Over the period from 2005 to 2009, an average of 7.7 percent of Indonesian exports of coated paper products went to the United States, and 92.3 percent went to other countries. The application of the 20.13 percent antidumping duty rate on Indonesian coated paper exports to the United States will be expected to increase Indonesian exports of these products to third-country markets by 10.2 percentage points in the near-term (20.13 percent duty rate x 0.507 percentage points). (Figure 3)

Trade Retaliation and Global Trade Flows under U.S. Trade Sanctions

In addition to the decline in U.S. imports of targeted products, antidumping duties reduce bilateral trade in other ways. One recent study found that when a country adopts antidumping laws, spillover effects

depress both bilateral flows of many commodities from all of the country's trading partners. Using data from 1980 to 2000, the researchers found that these negative effects on import volumes vary in magnitude across sectors and countries. For countries that recently have adopted antidumping legislation, such as Mexico and India, these dampening effects have offset much of the increases in trade volumes associated with recent worldwide trade liberalization.³² A principal mechanism by which antidumping duties reduce trade flows is retaliation. Using data from the years 1995 to 2003, researchers found that U.S. trading partners are 1.7 percent more likely, on average, to file an antidumping petition against a U.S. industry if the United States targeted that trading partner's industries for antidumping relief in the previous year.³³ Over this period, America's trading partners initiated 138 antidumping cases against U.S. exporters, accounting for 6.5 percent of all antidumping sanctions initiated by other countries. Those actions made the United States the third largest target of antidumping sanctions, following China and Korea. Over the same period, U.S. firms filed 302 antidumping cases with the U.S. ITC against foreign firms. The leading targets of those U.S.

31 United Nations Commodity Trade Statistics Database.

32 Vandebussche and Zanardi (2010).

33 Feinberg and Reynolds (2006).

cases were China (17 percent), Japan and the EU-15 (10 percent each), and Korea (7 percent); while the leading sources of antidumping action against U.S. exporters were Mexico (17 percent), India (14 percent), Brazil (13 percent), Canada (9 percent) and China (8 percent).³⁴

The recent antidumping and countervailing duties imposed on Chinese exports of coated paper products to the United States increase the risk of trade retaliation that would adversely affect U.S. exports to China. From 2005 to 2009, U.S. coated paper exports averaged nearly \$1.5 billion goods per-year. (Table 8, below) China is the third largest customer for these U.S. exports, just behind Mexico and Canada, purchasing some \$117 million of these products per-year from U.S. producers, nearly 8 percent of all U.S. exports of those goods. China also has been a fast-growing market for these U.S. exports: From 2005 to 2009, American exports of coated paper products to China increased 33.1 percent, compared to gains of 19.3 percent in all exports by the U.S. coated paper industry. The application of antidumping and countervailing duties on Chinese producers could reduce future U.S. exports of coated paper products to China.

Additional Adverse Effects of Trade Sanctions on U.S. National Welfare

Antidumping and countervailing duties are widely considered a weak mechanism for protecting domestic producers and promoting national welfare. As noted earlier, the imposition of these duties raises domestic prices of both the foreign products subject to the sanctions and their domestically-produced competition. These higher prices benefit U.S. producers competing with the sanctioned imports, but they harm both direct U.S. consumers and downstream producers who use the sanctioned products as intermediate inputs, along with their consumers. Further, the higher prices reduce demand for the sanctioned product, and the combination of higher prices and lower demand reduces production and employment, especially by downstream producers. Eventually, these dynamics can reduce demand for those producers which the sanctions are designed to help — the domestic producers competing with the sanctioned foreign exporters. In 2009, U.S. industries that use coated paper employed 703,704 workers in 32,730 establishments, of which nearly 80 percent were small businesses with less than 20 employees. (Table 9) The value of the shipments by these downstream industries totaled \$132.2 billion, including more than \$75 billion in value added.

Table 8

The Ten Largest Markets for U.S. Coated Paper Exports, 2005-2009³⁵

	Average Annual Exports, 2005-2009 (\$ millions)	Share of Total	Change, 2005-2009
Canada	454.1	30.9%	-8.6%
Mexico	220.9	15.0%	174.9%
China	116.6	7.9%	33.1%
Japan	89.9	6.1%	57.0%
Netherlands	71.7	4.9%	-1.6%
Germany	57.9	3.9%	85.3%
Australia	39.6	2.7%	-33.9%
Korea	39.3	2.7%	59.4%
France	36.0	2.5%	-38.6%
United Kingdom	33.3	2.3%	19.2%
Total	\$1,468.1	100.0%	19.3%

³⁴ *Ibid.*

³⁵ U.S. International Trade Commission (2010).

Table 9**Downstream Industries Using Coated Paper Products, 2009³⁶**

	Employees	Shipments (\$ 000)	Value-Added (\$ 000)
Setup paperboard box manufacturing	3,557	533,245	248,709
Fiber can, tube, drum & similar products mfg	7,600	2,327,229	939,592
Non-folding sanitary food container mfg	11,001	3,653,173	1,662,061
Coated and laminated packaging paper mfg	4,937	1,493,624	583,475
Coated and laminated paper mfg	34,097	14,260,011	6,974,108
Coated paper bag and pouch mfg	3,183	784,805	348,752
Folding paperboard box mfg	43,132	11,315,208	5,000,648
Commercial lithographic printing	314,819	53,451,955	32,272,327
Commercial gravure printing	17,131	4,074,069	2,090,602
Commercial flexographic printing	34,362	7,303,050	3,923,506
Commercial screen printing	70,429	8,627,726	5,176,316
Quick printing	34,040	3,245,993	2,268,548
Digital printing	42,009	6,437,410	4,528,326
Manifold business forms printing	22,591	5,419,597	3,280,830
TOTAL	703,704	\$132,196,344	\$75,207,100

For these and other reasons, U.S. antidumping and countervailing duties are generally seen by economists as a highly-costly way to address low-cost import competition, as measured by the net effect on the nation's economic welfare.³⁷ For example, the U.S. antidumping regime often creates a perverse incentive for foreign exporters to increase their U.S. prices. Researchers have estimated that 306 antidumping and countervailing duty orders in place in 1993, affecting \$332.5 billion of U.S. imports in that year, produced a net cost to U.S. producers and consumers of some \$4 billion.³⁸

Antidumping and countervailing duties also may affect U.S. exports to producers whose U.S. imports are subject to the sanctions. In 2009, for example, U.S. companies exported nearly \$135 million in intermediate products related to the production of coated paper in China and Indonesia, accounting for more than 10 percent of all U.S. exports of these products to all countries. (Table 10) These U.S. exports were equivalent to 38.5 percent of the \$350 million in U.S. imports of coated paper products from China and Indonesia. The sanctions against these imports put at

risk U.S. exports of the intermediate products used to produce them.

³⁶ U.S. Census Bureau.

³⁷ Gallaway, Blonigen and Flynn (1999).

³⁸ *Ibid.*

U.S. Exports to China and Indonesia of Intermediate Products Related to the Production of Coated Paper in China and Indonesia, 2009 (\$ thousands)³⁹

Table 10

	U.S. Exports to China and Indonesia	Share of All U.S. Exports of These Products	Total U.S. Exports of These Products
Kaolin, and other kaolinic clays	\$65,622.9	10.5%	\$626,326.0
Sodium hydroxide (caustic soda) solid	57.5	0.5%	12,051.0
Anthraquinone	55.8	2.8%	1,992.0
Finishing agents used in the paper industry	24,883.9	11.6%	214,746.0
Dryers for wood, paper pulp, paper and paperboard	1,630.7	14.3%	11,409.0
Machinery for producing pulp	20,618.1	97.7%	21,099.0
Machinery for producing paper or paperboard	2,500.0	13.4%	18,645.0
Machinery for finishing paper or paperboard	1,366.9	4.8%	28,672.0
Machine parts for producing pulp	5,450.9	4.9%	111,470.0
Cutting machines for pulp, paper and paperboard	2,919.4	5.5%	53,386.0
Machines for molding paper	287.5	1.8%	16,376.0
Machinery for coated paper production	4,491.1	13.5%	33,328.0
Machine parts for coated paper production	4,322.9	3.3%	129,647.0
Planing/milling or molding machinery	556.9	1.3%	43,140.0
TOTAL	\$134,764.4	10.2%	\$1,322,287.0

Downstream Industries Using Coated Paper Products, 2009⁴⁰

Table 11

	Employees	Shipments (\$ 000)	Value-Added (\$ 000)
Setup paperboard box manufacturing	3,557	\$533,245	\$248,709
Fiber can, tube, drum & similar products mfg	7,600	2,327,229	939,592
Non-folding sanitary food container mfg	11,001	3,653,173	1,662,061
Coated and laminated packaging paper mfg	4,937	1,493,624	583,475
Coated and laminated paper mfg	34,097	14,260,011	6,974,108
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Commercial gravure printing	17,131	4,074,069	2,090,602
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Commercial screen printing	70,429	8,627,726	5,176,316
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Digital printing	42,009	6,437,410	4,528,326
Manifold business forms printing	22,591	5,419,597	3,280,830
TOTAL	703,704	\$132,196,344	\$75,207,100

39 United Nations Commodity Trade Statistics Database.

40 U.S. Census Bureau.

V. Lessons for the U.S. Paper Industry: Case Studies of Other U.S. Industries Facing Lower-Cost Foreign Competition

Textiles

Other American industries facing strong competitive pressures from lower-cost foreign producers, including textiles and steel, have adapted by focusing on higher value-added products. Textiles achieved this shift only very gradually while relying on extensive trade protections which prolonged the process and imposed large costs on American consumers. American steel producers refocused on higher value-added specialty steels and production processes with somewhat less government protection and consequently lower additional costs to U.S. consumers and businesses. In neither case could trade protections preserve the parts of the two industries that competed most directly with much lower-cost foreign producers.

Much like textiles, U.S. steel companies also gained considerable trade protection which could preserve significant American production of the basic steel products also produced in lower-cost countries.

For more than a half-century, the U.S. government maintained trade protection for domestic textile and garment producers. Under the most recent iteration of the Multifibre Agreement (MFA), in place from 1974 to 1994, the government applied national quotas to U.S. imports of textiles and garments.⁴¹ According to one credible analysis, these arrangements increased the cost of textiles and garments paid by American consumers by more than \$20 billion per-year.⁴² The MFA was superseded in 1995 by the WTO's Agreement

on Textiles and Clothing (ATC), which gradually reduced and finally eliminated quotas on WTO-member nations.⁴³ However, when the ATC expired in January 2005, the United States and other textile-importing nations were free to apply antidumping and countervailing duties. In fact, China's Accession to the WTO in 2005 included provisions establishing quotas on 10 classes of Chinese textile and apparel imports to the United States, and many of those quotas remain in place today.

In short, import competition was not the main cause of the industry's contracting employment — technology was.

Throughout this half-century of protection, U.S. employment in the textile sector has declined steadily from its peak level of some 1.3 million jobs in 1948, beginning before large imports created strong industry demands for protection.⁴⁴ From 1970 to 1988, for example, industry employment fell by 25 percent as imports' share of total U.S. consumption of textiles increased by only 4.6 percent, to 6.8 percent.⁴⁵ In short, import competition was not the main cause of the industry's contracting employment — technology was. The application of new technologies and business methods to the industry produced productivity gains averaging 3.9 percent per year from 1949 to 1991, or more than 50 percent faster than all U.S. manufacturing. Naturally, these productivity gains also put downward pressure on the industry's employment.⁴⁶ Figure 4, shows that these trends have continued since 1991.

Economic researchers have found that in addition to these strong productivity gains, the industry has also seen substantial new business creation and new plants being built, as well as the more often-reported firm and

41 Sun and Ke (2008); WTO, "Textiles Monitoring Body (TMB): The Agreement on Textiles and Clothing."; US Customs and Border Protection. "China Textile MOU"

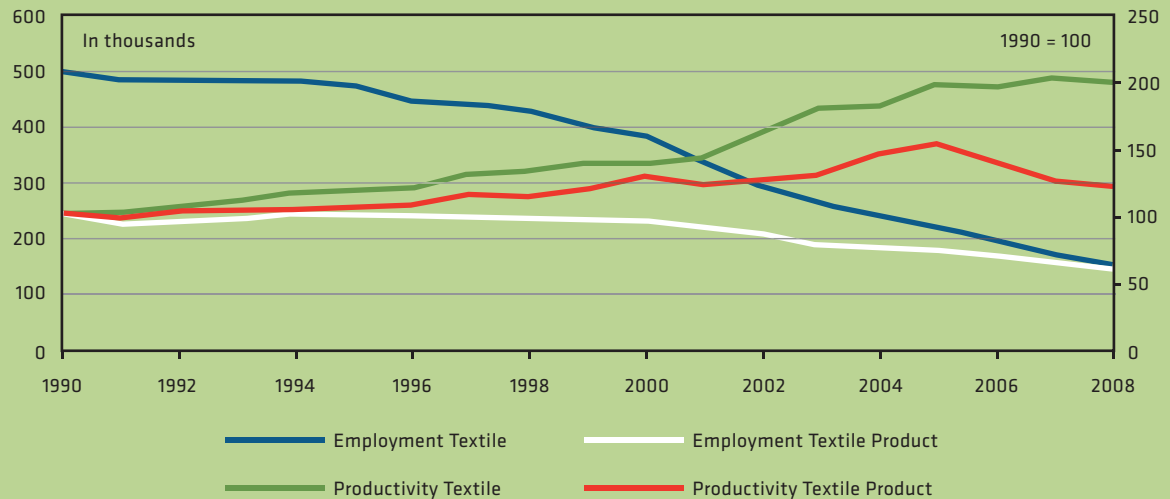
42 Stokes, Bruce (2007) "Protectionism and Politics." *eJournal USA: Economic Perspectives*, 7-10.
<http://guangzhou.usembassy-china.org.cn/uploads/images/80v19pgJ9Vnho-mJQGUPcQ/ijee0107.pdf>.

43 Martin (2007).

44 Murray (1995).

45 *Ibid.*

46 *Ibid.*

Figure 4**U.S. Textile Employment and Productivity Trends, 1990–2008⁴⁷**

plant closings.⁴⁸ Most of the new establishments and facilities represent the industry's adaptation to its new competition, producing high-end products that do not compete with the low value-added imports, including new products such as Polartec and Gor-Tex.⁴⁹ As a result, some U.S. textile companies have *expanded* production and employment. Using high-speed automated equipment, they produce highly-engineered and specialized fabrics and products that cannot be easily copied by low-cost foreign producers. For example, Glen Raven mills shifted its focus to specialized fabrics designed to stand up without fading to prolonged exposure to sunshine or bleach, and are now used widely for awnings, convertible automobile roofs, and patio furniture.⁵⁰ Research has shown that the United States now has a significant competitive advantage in producing such sophisticated industrial textiles.⁵¹

The result is that U.S. exports of such advanced textiles expanded by 52 percent from 1997 to 2007 while imports increased only 18 percent, producing trade surpluses in the textile mill subsector exceeding \$1 billion per year, every year since 2006. (Table 12)

Lower-cost foreign producers focus on more basic textile and garment products such T-shirts and sheets; and over the same period, this area produced a large U.S. trade deficit. Overall, foreign producers' total share of textiles and textile products has remained about one-third. Since U.S. exports of basic textiles are less than one-fifth of U.S. imports of the same products, the overall textile industry has run trade deficits of \$10 billion or more every year since 2005.

Steel

Much like textiles, U.S. steel companies also gained considerable trade protection which could preserve significant American production of the basic steel products also produced in lower-cost countries. The United States was an important or even dominant player in world steel markets from the 1920s through the 1950s, and first became a net steel importer only in 1959. A decade later, a series of trade protections were in place; but they could not stop a deteriorating trade position in basic steel. (Figure 2)

47 Bureau of Labor Statistics.
 48 Levinsohn and Petropoulos (2002).
 49 *Ibid.*
 50 Malone (2010).
 51 Chi et al (2005).

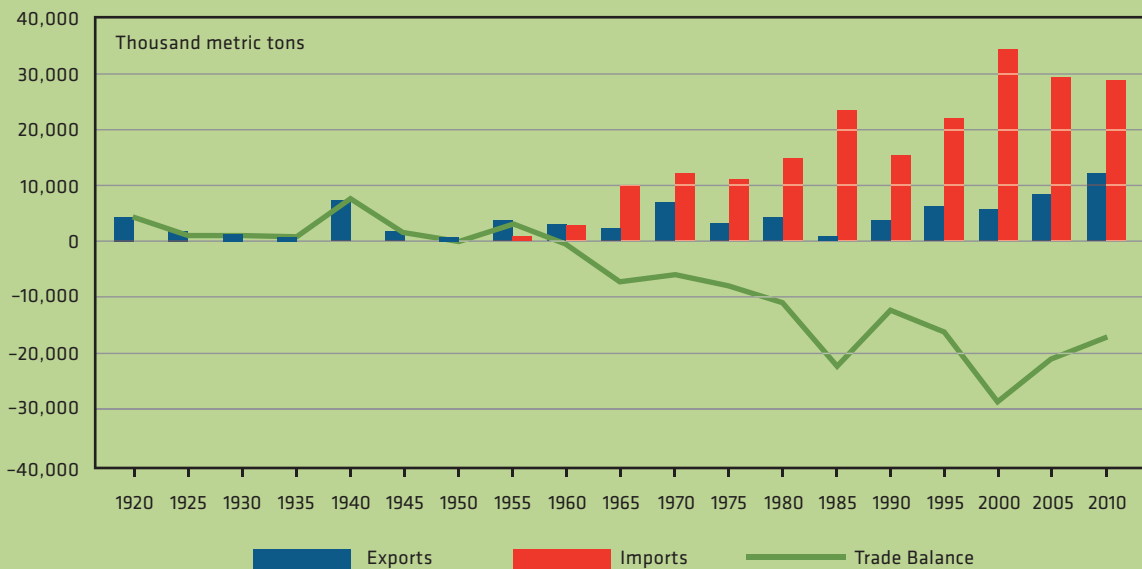
Table 12

U.S. Textile Trade, 1997-2009 (\$ million)⁵²

Year	Textile Mill			Textile Mill Products			Total		Net Exports
	Exports	Imports	Net Exports	Exports	Imports	Net Exports	Exports	Imports	
1997	5,587	6,343	-756	2,197	4,780	-2,583	7,784	11,123	-3,339
1998	5,672	6,473	-801	2,218	5,599	-3,381	7,890	12,072	4,182
1999	6,055	6,443	-388	2,211	6,350	-4,139	8,266	12,793	-4,527
2000	7,284	7,042	242	2,333	7,347	-5,014	9,617	14,389	-4,772
2001	7,365	6,336	1,029	2,083	7,580	-5,497	9,448	13,916	-4,468
2002	7,642	6,778	864	1,982	8,643	-6,661	9,624	15,421	-5,797
2003	7,805	6,791	1,014	2,004	9,857	-7,853	9,809	16,648	-6,839
2004	8,626	7,387	1,239	2,225	11,707	-9,482	10,851	19,094	-8,243
2005	8,756	7,453	1,303	2,546	13,508	-10,962	11,302	20,961	-9,659
2006	8,781	7,361	1,420	2,784	14,680	-11,896	11,565	22,041	-10,476
2007	8,479	7,456	1,023	2,872	15,412	-12,540	11,351	22,868	-11,517
2008	8,471	6,943	1,528	2,873	14,985	-12,112	11,344	21,928	-10,584
2009	6,682	5,287	1,395	2,547	13,229	-10,682	9,229	18,516	-9,287

Figure 5

U.S. Steel Trade, 1920-2008⁵³



From 1969 to 1974, the United States applied effective quotas to steel imports under Voluntary Restraint Agreements (VRAs) with Japan and the European

Community (EC). These VRAs were succeeded in 1977 by a Trigger Price Mechanism (TPM) covering all steel imports, under which imports could not cost less than

⁵² U.S. Census Bureau.
⁵³ U.S. Geological Survey.

Japanese production costs, plus an 8 percent profit. When the TPM expired in 1981, domestic producers filed hundreds of antidumping and countervailing duty cases, first against EC producers and later against steelmakers in developing countries. These filings slowed only when comprehensive VRAs were reinstated from 1984 to 1992. Case filings increased again when those VRAs expired; and by one measure, steel accounted for at least one-third of all antidumping and countervailing duty cases filed from 1980 to 2000.⁵⁴ Finally, in 2002, new tariffs were applied briefly to steel imports and then rolled back in early 2004, when the WTO held that they violated its rules and standards.⁵⁵

Most studies have found that these steel protections provided little if any benefit to domestic steel makers.⁵⁶ Instead, the strong competition from lower value-added steel imports, along with technological advances in the production of higher value-added specialty steels, provided the basis for the industry's adjustment. Steel making today is divided into two classes: The integrated mills which used to dominate the industry, producing raw steel and steel products by smelting iron ore in basic oxygen furnaces; and the new "mini-mills" that use electric arc furnaces to melt down recycled steel scrap, usually to produce specialty steels.⁵⁷ The old integrated mills are highly energy-intensive, use iron ore and coal that are costly to ship, and require large economies of scale. By contrast, the mini-mills require less capital investment because the plants are smaller; their electric furnaces consume only 10 percent of the energy of a oxygen furnace; they use scrap steel which is less expensive to ship than iron ore; and they can be located close to their markets, reducing transportation expenses. The U.S. mini-mills also need fewer workers to produce a ton of steel. All told, the labor productivity of the mini-mills is seven times that of the integrated mills.⁵⁸

The first mini-mills appeared in the 1960s, and from 1970 to 2008, their share of total U.S. steel production rose from 15 percent to 57 percent. Moreover, the mini-mills' gains in industry production were far greater than the increases in the share of U.S. steel consumption accounted for by imports, which merely grew from 14 percent in 1970 to 28 percent in 2008. The most recent data on U.S. steel imports reflects the domestic industry's shift away from lower-end products produced by large integrated mills.⁵⁹ Today, U.S. steel producers focus on higher value-added products such as flat products, particularly specialty sheet steels;⁶⁰ and in 2008, these flat products accounted for four of the top five U.S. steel products and 63 percent of total U.S. steel production. Moreover, the largest import categories, semi-finished steel and hot-rolled sheets and coil, are used to produce higher-end products by U.S. mini-mills.⁶¹

These case studies of the U.S. textile and steel industries provide important lessons for the American coated paper and other industries. Most economies have certain comparative advantages, and industries prosper when they make effective use of those advantages. As steel, textiles and many other industries demonstrate, America's greatest comparative advantages lie in its capacity to innovate, in its low barriers to the formation of new firms which produce or adopt innovations, and in its large and discriminating market. In the face of competition from producers in countries whose comparative advantages lie mainly in their lower factor costs, trade protection for U.S. producers has consistently failed to preserve the market shares and jobs of those trying to compete directly with lower-cost foreign producers. Instead, such protection prolongs the transition to a more competitive position based on America's comparative advantages.

⁵⁴ Blonigen et al. (2007).

⁵⁵ *Ibid.*

⁵⁶ *Ibid.* The exception was the VRAs of the late-1980s, which briefly allowed U.S. producers to price their products above their marginal cost. That capacity, however, imposed disproportionate costs on American consumers: The ITC found in 2002 that these protections cost U.S. consumers \$600 million per-year while boosting earnings by U.S. steel makers by less than \$70 million. Noreen and DeFilippo (2003). Similarly, another study found that the announcement of new steel protections was followed by both large declines in the stocks of domestic steel-using companies and gains for the stocks of domestic steel makers. See Liebman and Tomlin (2007).

⁵⁷ Blonigen et al. (2007).

⁵⁸ Ikenson (2002).

⁵⁹ Madar (2009).

⁶⁰ *Ibid.*

⁶¹ *Ibid.*

VI. Conclusion

Globalization has changed and accelerated the process of modernization in many developing nations. For the last generation, one of the hallmarks of globalization has been large-scale foreign direct investments which transfer advanced technologies, business methods and entire business organizations to developing economies. These transfers integrate the subsidiaries or affiliates in developing economies into the global networks of the multinational companies responsible for the FDI. They also can produce powerful spillover effects that accelerate the broader modernization of these economies. Moreover, in recent years, this process has produced a new stage of globalization, in which entrepreneurs in developing countries create domestic competitors for the foreign-owned, FDI-based subsidiaries that began this process. In most cases, these domestic competitors compete with the subsidiaries or affiliates in their domestic market, to meet growing demand created by the prosperity which the FDI process triggers.

Paper production in China and Indonesia are examples of this process. The two countries' share of worldwide consumption of these products, measured in tons or volume, increased from just over 2 percent in 1970 to more than 25 percent in 2009; and over the same period, their share of worldwide production of these products rose from just under 2 percent to nearly 26 percent. The same relationship is also evident in many advanced economies: U.S. consumption of paper products fell over this period from more than 41 percent of worldwide consumption to just over 19 percent while U.S. production of paper products also fell from just over 40 percent to 20.5 percent.

At the same time, the world's major producers and consumers of paper products, in both developing and advanced economies, engage in large volumes of trade in these products. As the domestic industry takes hold in a developing economy, this trade is broadly characterized by the expected division of labor in which producers in advanced countries export higher value-added paper products and producers in developing countries export lower value-added products. However, globalization accelerates the modernization of these industries, and in recent years producers in place such as China and Indonesia also are producing and exporting higher value-added products. And in the American market for those

products, China and Indonesia have substantially displaced imports from other countries.

The United States has run significant trade deficits in paper products in recent years, and in response to applications by U.S. producers, the ITC recently applied sanctions to Chinese and Indonesia coated paper producers. We do not analyze here the merits of these cases. However, it is clear that a U.S. trade deficit in these products is inescapable regardless of the practices of foreign producers, because U.S. production of these products falls short of U.S. consumption or demand for them. Further, while the ITC found that lower prices are an important factor in decisions by U.S. businesses to import Chinese and Indonesian coated-paper products, the ITC also reported that those foreign producers are considered comparable to their American competitors on quality, product consistency, and the provision of credit. U.S. producers were found superior on the availability and reliability of supplies and on delivery time and terms. Moreover, Chinese and Indonesian coated-paper products have about the same price advantage over other foreign producers in the U.S. market as they have over U.S. producers. Given that the quality of these products meets U.S. standards, this explains why Chinese and Indonesian coated-paper imports have largely displaced imports from other countries.

The United States cannot avoid increasing competition from developing economies that combine lower costs with the use of advanced technologies and business methods provided through foreign direct investment.

These Asian and American producers of coated paper compete not only in the United States, but in markets around the world. As a result, the duties applied to these U.S. imports will likely impose significant costs on U.S. businesses and consumers without strengthening the U.S. industry. By reducing U.S. imports, the duties will increase the supply available for export to third-country markets, reducing the price of Chinese and Indonesian products in those countries

where they also compete with U.S. exports. In effect, the sanctions trade a piece of the share of the U.S. market for a piece of the share of foreign markets. The sanctions also may trigger retaliation which could harm U.S. coated-paper companies and their workers, as China is the third largest foreign market for U.S. coated-paper products. Further, the sanctions will increase not only the price of Chinese and Indonesian coated-paper products in the United States; the weaker competition from these foreign producers also will allow U.S. producers and exporters from other countries to raise their prices in the United States. Those higher prices may dampen demand and consequently put pressure on the jobs of U.S. coated paper workers. In short, the policy is unlikely to produce net benefits for American workers and businesses, including the U.S. coated paper industry.

The United States cannot avoid increasing competition from developing economies that combine lower costs with the use of advanced technologies and business methods provided through foreign direct investment. Moreover, the use of sanctions will not strengthen the U.S. industry, especially if it focuses on standard products which can now be produced almost anywhere in the world. Based on the record of other industries that faced these issues in earlier decades, including textiles and steel, trade protection also cannot stop large workforce reductions in these industries. Much of these job losses reflect a natural response to lower-cost foreign competition, as U.S. producers increase their productivity and margins by focusing new capital investments on the production of high-end products beyond the capacity of domestic producers in developing economies. This strategy combining investment and innovation provides the best response to the increasing competition from coated paper producers in developing countries.

Appendix – Industry Background

As noted in the text, there is a general relationship between a nation's global market share of pulp production and pulp consumption.

Table A-1

Consumption and Production of Pulp Products, in Tons, By Nation or Region, As Shares of Worldwide Consumption and Production (%), 1970-2009⁶²

Year	Africa	US	Canada	Latin America	Europe	Japan	China	Indonesia	Rest of Asia	Oceania
Consumption										
1970	0.71	35.63	8.88	2.95	35.49	10.52	3.11	0.02	1.43	1.26
1980	1.03	33.36	7.73	4.66	33.91	11.03	4.01	0.18	2.85	1.24
1990	1.16	29.81	6.66	4.42	31.93	11.35	8.80	0.63	4.22	1.02
2000	1.04	27.95	5.68	4.96	28.90	9.78	11.80	2.09	6.69	1.12
2009	1.11	18.75	3.59	6.62	25.55	7.78	24.68	1.88	8.80	1.23
Production										
1970	0.91	35.58	12.50	2.47	33.53	9.76	3.07	0.01	1.08	1.09
1980	1.17	34.47	11.36	4.60	31.58	9.74	3.69	0.10	1.96	1.33
1990	1.27	33.02	9.58	4.30	29.57	9.97	8.01	0.38	2.68	1.21
2000	1.28	30.98	8.62	5.67	27.94	8.98	9.24	1.49	4.46	1.33
2009	1.22	24.38	5.54	8.33	27.76	8.18	15.01	1.74	6.11	1.72

The symmetry between production and consumption is even closer in the paper segment of the industry. Among the world's top 20 producers and consumers of

paper and paper products in 2009, 12 nations have generally comparable shares of worldwide production and consumption, measured in tons or volume. They

⁶² FAO STAT, Forestry, Food and Agricultural Organization of the United Nations.

Note: Paper products include newsprint, paper and paperboard, printing and writing paper, wrapping and packaging paper and board, and household sanitary paper.

Table A-2

Global Pulp Industry Production and Consumption, By Volume and Nation, 2009⁶³

	Top 20 Producers			Top 20 Producers	
	Million Tons	Share		Million Tons	Share
U.S.	90.10	24.38%	China	90.85	24.68%
China	55.45	15.01%	U.S.	69.03	18.75%
Japan	30.24	8.18%	Japan	28.64	7.78%
Canada	20.47	5.54%	Germany	21.31	5.79%
Germany	18.40	4.98%	Canada	13.21	3.59%
Brazil	17.59	4.76%	Korea	11.88	3.23%
Sweden	13.46	3.64%	Sweden	11.08	3.01%
Finland	9.74	2.64%	Brazil	10.73	2.92%
Russia	9.05	2.45%	Finland	8.51	2.31%
U.K.	8.43	2.28%	Spain	7.74	2.10%
Korea	8.37	2.26%	Mexico	7.50	2.04%
France	8.02	2.17%	India	7.40	2.01%
Spain	7.90	2.14%	France	7.28	1.98%
Indonesia	6.45	1.74%	Russia	7.18	1.95%
Chile	5.41	1.46%	Indonesia	6.93	1.88%
Italy	5.34	1.45%	Italy	6.87	1.87%
India	5.15	1.395	U.K.	5.47	1.49%
Australia	4.61	1.25%	Thailand	4.62	1.25%
Mexico	3.39	0.92%	Austria	4.44	1.21%
Austria	3.37	0.91%	Australia	3.81	1.03%
World	369.50	100.00%	World	368.08	100.00%

include both advanced and developing nations, including the world’s four largest economies — China, the United States, Japan, and Germany — as well as

Korea, Brazil, France, Italy, Indonesia, Russia, Spain, and Turkey.

63 FAO STAT, Forestry, Food and Agricultural Organization of the United Nations.

Table A-3

Global Pulp Industry Production and Consumption, By Volume and Nation, 2009⁶⁴

Top 20 Producers			Top 20 Producers		
	Million Tons	Share		Million Tons	Share
China	142.6	23.5%	China	144.0	23.8%
U.S.	124.4	20.5%	U.S.	117.5	19.4%
Japan	39.5	6.5%	Japan	39.5	6.5%
Germany	35.0	5.8%	Germany	30.8	5.1%
Sweden	17.6	2.9%	France	16.2	2.7%
Finland	17.5	2.9%	Italy	16.1	2.7%
Canada	16.9	2.8%	U.K.	16.0	2.6%
Korea	16.5	2.7%	Korea	14.7	2.4%
Brazil	16.0	2.6%	Mexico	14.7	2.45%
France	14.9	2.5%	Brazil	14.0	2.3%
Italy	14.1	2.3%	India	13.0	2.1%
Indonesia	12.3	2.0%	Spain	12.8	2.1%
Russia	12.3	2.0%	Turkey	11.2	1.9%
India	11.6	1.9%	Russia	10.3	1.7%
Spain	11.2	1.8%	Canada	9.7	1.6%
Mexico	8.9	1.5%	Indonesia	9.0	1.5%
Turkey	8.4	1.4%	Poland	7.0	1.2%
U.K.	7.8	1.35%	Thailand	6.5	1.1%
Thailand	7.0	1.2%	Netherlands	5.6	0.9%
Austria	6.7	1.1%	Finland	5.5	0.9%
World	605.4	100.0%	World	605.5	100.0%

Fast-growing demand for paper goods in emerging markets has led both domestic and foreign producers to search for cheaper sources of fiber in those markets.⁶⁵ China lacks the natural resources for large-scale paper production and depends on imports of wood pulp, recovered paper, and wood chips. Other developing nation producers including Indonesia, Vietnam, Russia, Brazil, and Chile have become large exporters of wood raw materials to China and other nations, as well as producers of their own pulp and paper products.

While labor plays a modest role in the total costs of pulp and paper production, the lower labor costs in developing economies still have an impact on their competitiveness. For example, waste collection for

paper production based on recycling is more labor-intensive than production using non-recycled inputs.⁶⁶ Approximately 61 percent of all global exports of recycled paper go to China, where they account for more than half of the total production costs of the country's paper industry.⁶⁷

Imports and exports of paper products, by volume or tons, displays a different pattern than the close relationship noted earlier between domestic production and domestic consumption of these products. Generally, advanced nations export more than they import, and developing nations import more than they export. This largely reflects certain comparative legacy advantages in advanced production still retained by advanced economies.

⁶⁴ FAO STAT, Forestry, Food and Agricultural Organization of the United Nations.

⁶⁵ Honnold (2009).

⁶⁶ Berglund and S derholm (2003).

⁶⁷ Haley (2010).

Table A-4**Imports and Exports of Paper Products, in Tons, by Nation or Region, As Shares of Worldwide Imports and Exports of These Products (%), 1970-2009⁶⁸**

Year	Africa	US	Canada	Latin America	Europe	Japan	China	Indonesia	Rest of Asia	Oceania
Imports										
1970	3.91	20.74	0.96	8.25	55.12	0.45	2.12	0.48	6.01	1.98
1980	2.96	18.41	0.83	7.55	54.88	2.46	3.46	0.69	6.69	2.07
1990	2.36	17.38	1.86	4.26	56.16	2.34	6.62	0.24	7.20	1.57
2000	1.79	14.10	4.77	7.07	48.92	1.60	11.24	0.29	8.54	1.68
2009	3.50	8.50	2.77	11.07	50.54	1.42	5.44	0.46	14.56	1.74
Exports										
1970	0.22	14.37	26.85	0.49	54.03	2.61	0.46	0.00	0.23	0.74
1980	0.45	15.78	21.38	1.06	56.41	2.35	0.62	0.01	0.78	1.15
1990	0.19	12.45	16.56	2.20	60.07	2.07	3.25	0.32	1.97	0.92
2000	0.79	11.59	13.44	1.75	58.88	1.75	4.57	2.45	3.66	1.12
2009	1.09	12.97	7.42	3.96	59.95	1.38	4.52	2.61	4.63	1.45

U.S. imports of pulp and pulp products as a share of worldwide imports, measured by value, fell from 17.5 percent in 1970 to 6.3 percent in 2009; but U.S. exports of pulp and pulp products as a share of worldwide exports actually increased, from 19.1 percent to 20.0 percent. The same dynamic did not occur in Canada, where pulp exports accounted for 12.2 percent of worldwide pulp exports in 2009 compared to 28.9 percent in 1970, nor in Europe where its share of worldwide pulp exports fell from

47.9 percent to 33.6 percent. These differences may reflect the more successful application of advanced technologies to pulp production in the United States than in Canada or Europe. More important, while exports of pulp and pulp products rose sharply in some developing nations, especially Latin America and Indonesia, China has become the world's largest importer of pulp and pulp products. This reflects China's need to import these products as inputs for its paper production.

68 FAO STAT, Forestry, Food and Agricultural Organization of the United Nations.

Table A-5

Imports and Exports of Pulp and Its Products, by Value, By Nation and Region, As Shares of Worldwide Imports and Exports of These Products (%), 1970-2009⁶⁹

Year	Africa	US	Canada	Latin America	Europe	Japan	China	Indonesia	Rest of Asia	Oceania
Imports										
1970	1.08	17.52	0.47	4.48	64.88	6.12	0.78	0.02	3.05	1.60
1980	1.46	15.81	1.23	4.18	57.72	10.51	2.21	0.54	5.34	1.02
1990	0.81	15.25	1.42	3.40	53.99	10.51	4.01	1.36	8.27	0.99
2000	0.62	12.57	1.79	4.56	44.79	7.40	12.19	3.93	11.42	0.74
2009	0.97	6.31	0.65	5.48	31.99	4.01	33.25	3.82	12.97	0.55
Exports										
1970	2.18	19.07	28.92	0.97	47.94	0.09	0.39	0.00	0.06	0.38
1980	2.14	19.60	31.99	5.48	38.35	0.50	0.54	0.00	0.14	1.26
1990	1.85	23.07	30.15	5.71	36.13	0.07	0.64	0.40	0.45	1.52
2000	2.04	18.89	27.71	12.04	32.52	0.52	0.29	2.99	1.62	1.37
2009	2.04	20.03	12.23	21.59	33.56	2.54	0.44	4.56	1.11	1.90

69 FAO STAT, Forestry, Food and Agricultural Organization of the United Nations.

Appendix – U.S. Duties on Chinese and Indonesian Coated Paper Products

Table A-6

**Antidumping and Countervailing Duties
On Imports of Certain Coated Paper from China and Indonesia⁷⁰**

HTS Code	Country	Remedy	Exporter/Producer	Duty Rate		
4810.14.11, 4810.14.1900, 4810.14.2010, 4810.14.2090, 4810.14.5000, 4810.14.6000, 4810.14.70, 4810.19.1100, 4810.19.1900, 4810.19.2010, 4810.19.2090, 4810.22.1000, 4810.22.50, 4810.22.6000, 4810.22.70, 4810.29.1000, 4810.29.5000, 4810.29.6000,	China	Anti-Dumping Duties	Gold East Paper (Jiangsu) Co., Ltd., Gold Huasheng Paper Co., Ningbo Zhonghua Paper Co., Ltd., Ningbo Asia Pulp and Paper Co., Ltd., Gold East (Hong Kong) Trading Co., Ltd. and Shandong Chenming Paper Holdings Ltd.	7.62%		
			PRC-Wide Entity (Shandong Sun Paper Industry Joint Stock Co., Ltd., Yanzhou Tianzhang Paper Industry Co., Ltd., Shandong International Paper and Sun Coated Paperboard Co., Ltd., International Paper and Sun Cartonboard Co., Ltd.)	135.84%		
		Counter-vailing Duties	Gold East Paper (Jiangsu) Co., Ltd., Gold Huasheng Paper Co., Ltd., Gold East Trading (Hong Kong) Company Ltd., Ningbo Zhonghua Paper Co., Ltd., and Ningbo Asia Pulp & Paper Co., Ltd.	19.46%		
			Shandong Sun Paper Industry Joint Stock Co., Ltd., and Yanzhou Tianzhang Paper Industry Co., Ltd.	202.84%		
			All Others	19.46%		
		4810.29.70, 4810.32, 4810.39, 4810.92.	Indonesia	Anti-Dumping Duties	PT. Pabrik Kertas Tjiwi Kimia Tbk./PT. Pindo Deli Pulp, and Paper Mills/PT. Indah Kiat Pulp and Paper Tbk.	20.13%
					All Others	20.13%
				Counter-vailing Duties	PT Pabrik Kertas Tjiwi Kimia, Tbk, PT Pindo Deli Pulp and Paper Mills, PT Indah Kiat Pulp and Paper, Tbk (i.e., APP/SMG)	17.94%
					All others	17.94%

⁷⁰ Notices, *Federal Register*, Vol. 75, No. 221, November 17, 2010.

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