

U.S. Trade Policy and the Adjustment Process

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This paper focuses on the adjustment environment in the United States as set out by the active U.S. trade remedy laws (antidumping, countervailing duties, and safeguards) and the Trade Adjustment Assistance program. We document U.S. industries' use of these various laws and relate industry use of trade policies to import competition and revealed comparative advantage. We also examine potential effects of U.S. trade policies on adjustment to shifting comparative advantage and give examples of industry outcomes. An important conclusion is that trade policies delaying industry adjustment can promote new entry into the domestic industry and thereby increase rather than alleviate the pressure on existing plants and workers. [JEL F13, F14, F15]

Adjustment to changing conditions of international trade . . . generally involves decisions in which the costs of adjustment must be weighed against the expected future benefits. . . . A principal objective of government policy should be to create an environment in which the decisions . . . lead to a socially appropriate outcome by removing the general distortions . . . that cause the privately perceived benefits or costs of adjustment to diverge from the true social benefits or costs (Mussa, 1982, p. 117).

When the political power of special interests combines with the pernicious effects of the fixed-number-of-jobs fallacy, the result will almost inevitably be some divergence from the free-trade policies that would probably best serve the broad public interest. . . . the practical question for economists working on trade policy is how to keep the damage to a minimum (Mussa, 1993, p. 374).

*The authors are professors in the Department of Economics, Brandeis University, Waltham, Massachusetts. This paper is a revised version of one presented at the International Monetary Fund conference honoring Michael Mussa, in Washington, D.C., June 4–5, 2004. Mussa was among the first trade theorists to analyze the economics of adjustment and throughout his career has been an outspoken commentator on the political economy of trade policy.

Globalization implies increased opportunities for economic gains at the national level but also increased disruption of affected industries and regions. In the United States, job losses and plant closings attributed to import competition or outsourcing have brought international trade to the forefront of national politics. With international market conditions changing rapidly and often unpredictably, the U.S. policy debate now reflects heightened tension between conflicting goals: adjusting to new conditions to capture the full potential gains from these developments versus insulating the economy from new conditions to slow or reverse their domestic sectoral and regional effects. While other nations must address the same internal conflicts, the huge size of the U.S. market and the nation's central role in international trade negotiations give U.S. policy choices disproportionate significance beyond its own borders. A U.S. decision to postpone adjustment to changing international market conditions translates into losses not only at home but also in the many nations around the world that now look to expanded trade as a means to spur their own economic growth.¹

In this paper we focus on the adjustment environment in the United States as set out by the active U.S. trade remedy laws (antidumping, countervailing duties, and safeguards) and the Trade Adjustment Assistance (TAA) program. How does the United States respond to opportunities associated with changing international market conditions? Specifically, do U.S. policies facilitate movement of resources into their most productive use, or do they tend to delay restructuring of industries with declining comparative advantage? When policies delay restructuring in a trade-impacted industry, do they have the intended effect of protecting workers in the affected industry? Our surprising conclusion is that policies delaying industry adjustment may increase, rather than alleviate, the pressure on individual plants and workers.

U.S. trade laws are concerned mainly with situations in which a domestic industry is adversely affected by a fall in the price of competing imports. However, import prices may fall for several distinct reasons: (i) unfair foreign trade practices, (ii) temporary and reversible changes in market conditions, (iii) trade liberalization, and (iv) shifting comparative advantage. The socially optimal adjustment path, appropriate policy response, and trade remedy most relevant in a particular case differ according to the reason for the fall in import price.

In the first case, a fall in import price reflects dumping by foreign firms or subsidization by foreign governments, both of which constitute unfair trade practices under U.S. and World Trade Organization (WTO) statutes. To the extent that such practices injure a competing U.S. industry, trade law permits action to reverse the price decline and thus eliminate the need for adjustment.² In the second case, a

¹In the past two decades, most developing countries have abandoned import substitution in favor of growth strategies that rely on trade expansion. Although the weight of professional opinion endorses a causal link between openness and growth, empirical efforts to document the relationship have generated as much controversy as consensus. Building on earlier research but using an updated data set and other methodological improvements, Wacziarg and Welch (2003) estimate that, over the 1950–98 period, countries that liberalized trade experienced an average increase of 1.5 percentage points in their annual growth rate relative to the pre-liberalization period.

²This policy action may not represent the socially optimal response, especially in the case of dumping. See, for example, Irwin, 2002, pp. 125–8.

fall in import price reflects a temporary and reversible change in the trade environment, such as exchange rate appreciation or a downturn in the business cycle. Firms will then make adjustment decisions on the basis of their own best assessment of future international market conditions. However, because of incomplete information and other market imperfections, there may be a potential role for active trade policy to ensure socially optimal adjustment. U.S. and WTO regulations on safeguard protection address this type of situation. In the third case, a fall in the domestic price of competing imports is the anticipated result of trade liberalization. Associated declines in industry employment, output, and profitability should likewise be anticipated. The U.S. Trade Adjustment Assistance program is intended to facilitate the necessary adjustment by assisting affected workers and firms in industries that face increased competition because of U.S. trade liberalization. Safeguard protection may also be relevant if actual injury to the domestic industry is more severe than had been anticipated at the time of the decision to liberalize trade.

Finally, and of greatest interest for this paper, a fall in import price may reflect shifting comparative advantage. Such shifts are the norm rather than the exception in today's dynamic world economy, and adjustment to these shifts constitutes a potentially important source of gains both at home and abroad. Loss of U.S. comparative advantage in a particular sector, say, steel, means that the *opportunity* cost of producing steel at home has risen relative to its opportunity cost abroad. Thus, the United States will benefit from producing more steel indirectly through trade, that is, producing other goods or services for export in exchange for increased steel imports. Comparative advantage rests on a double comparison: of one domestic sector's opportunity cost (production cost relative to those of other domestic sectors), and then of this domestic opportunity cost relative to opportunity cost in other countries. If the United States loses comparative advantage in steel, this does not imply that the American steel industry has declined in productivity, or even that its productivity has risen less rapidly than in the steel industry abroad. It implies only that the domestic steel industry has experienced a *relatively* lower productivity gain compared with other U.S. sectors than the steel industry in a partner country compared with other sectors in that country.

In contrast to the other three reasons for falling import prices, there is little explicit acknowledgment in U.S. policy or policy debate of the possibility that an established industry no longer enjoys an international comparative advantage and thus should, from the viewpoint of economic efficiency, be reduced in size or phased out. To the extent that a problem of declining comparative advantage is even recognized, the implicit policy goal is to restore comparative advantage, whether through infusions of capital, adoption of newer technology, or improved marketing, rather than to facilitate a shift of resources into other sectors. No U.S. trade policy explicitly addresses the need to adjust out of certain industries. Moreover, active trade policy designed to deal with different circumstances is often used instead to address cases in which falling import price reflects shifting comparative advantage. These policy actions almost always slow the decline of a domestic industry that is losing or has lost its comparative advantage. In addition to depriving consumers of the lower prices and greater variety available through trade, such policies also inhibit

the growth of other domestic industries that are gaining comparative advantage—the nation’s current and potential export industries.³

Our analysis below focuses mainly on adjustment—or lack of adjustment—to a downward long-term trend in the price of competing imports that reflects shifting comparative advantage. Under U.S. trade laws any fall in import price is treated primarily as a problem rather than an opportunity. Although trade laws offer a policy response to each of the other situations in which a domestic industry is harmed by a decline in import prices, no trade law is aimed directly at promoting the socially beneficial adjustment to shifting comparative advantage. Because U.S. trade laws largely ignore the very real possibility that an industry’s current difficulties are due to changing comparative advantage, their main objective is to maintain the status quo rather than promote adjustment to new market conditions.

The absence of a policy aimed squarely at promoting adjustment may reflect two important economic and political realities about the adjustment process. The first is that adjustment is costly. Achieving the new domestic resource allocation appropriate to changed conditions in international markets always entails economically significant and politically salient adjustment costs up front. Because wages and other input prices are not fully flexible, adjustment costs often include losses from unemployment. Moreover, the process entails significant domestic redistribution. Gains achieved will be distributed unequally even if adjustment is not complicated by factor-price rigidities. Both during the adjustment process and after adjustment is complete, a drop in import prices always creates domestic “losers.” It also creates potential domestic “gainers,” which include consumers and productive resources in sectors that are enabled to expand. These losses and gains far exceed the net impact on national welfare and thus generate powerful political forces that affect the country’s ability to achieve the potential benefits of adjustment.⁴

Full adjustment requires reduced production and employment in the import-competing sector; achievement of maximum gains therefore requires absorption through expansion elsewhere in the economy of productive resources released by the import-competing industry. The losers from shifting comparative advantage are readily identified; losses are typically concentrated in a specific sector and often a specific region. Although the aggregate gains to be achieved through full adjustment are larger, the impact is widely dispersed, and gainers are less likely to be

³Although sufficient additional investment can restore an industry’s comparative advantage, at least temporarily, inducing additional investment through trade policy can reduce national welfare. This approach redirects capital from the uses otherwise preferred by private investors, including owners of firms already in the industry. A case for any government policy that redirects investment toward sectors losing comparative advantage would thus have to rest on “distortions . . . that cause the privately perceived benefits or costs of adjustment to diverge from the true social benefits or costs” (Mussa, 1982, p. 117).

⁴Within a model of two sectors and two generic factors of production that move freely between them, Stolper and Samuelson (1941) demonstrate that the factor used intensively in the import-competing industry loses unambiguously. The proposition is striking in that it does not rest on the usual concerns of industry specificity or temporary unemployment. But in the short run, some factors are immobile and/or sector-specific. In a model with two industries, two industry-specific factors, and a third factor that moves freely between sectors, Mussa (1974) shows that the factor specific to the import-competing industry loses unambiguously, while the mobile third factor may lose or gain.

aware of the link to a change in international market conditions. In terms of wages and employment, gains will be spread across a number of industries, including all the industries that expand as the adjustment process unfolds. The domestic political process is thus tilted toward the interests of import-impacted domestic industries and especially their workers, and away from full adjustment.⁵

The rest of this paper examines the role of U.S. and WTO trade rules in facilitating or retarding adjustment to a drop in import prices due to shifting comparative advantage.⁶

I. U.S. and WTO Trade Laws and Adjustment

Of the various U.S. trade laws, two—safeguards and trade adjustment assistance—seem explicitly intended to promote adjustment to increased competition from imports. However, administration of these laws often envisions only an adjustment process that allows the domestic industry to reverse its decline. Several other trade laws also play an important role in encouraging or discouraging adjustment. We discuss each law in turn, considering first provisions dealing explicitly with adjustment and then provisions or discretion in how provisions are administered that may implicitly encourage or discourage adjustment. Table 1 summarizes the major U.S. trade remedy laws and programs.⁷

Safeguards

Safeguard legislation was originally intended as an escape clause that would allow temporary re-protection of an import-competing industry that suffers unforeseen damage because of trade liberalization. An escape clause in the modern sense was introduced in the U.S. Reciprocal Trade Agreements Act of 1934 (Jackson, 1997, p. 179). Recent U.S. safeguards have been initiated under Section 201 of the Trade Act of 1974. Article XIX of the General Agreement on Tariffs and Trade and the WTO Agreement on Safeguards allow countries to impose new restrictions if a domestic industry is suffering serious injury substantially caused by

⁵If policymakers and voters subscribe to a “conservative welfare function” (Corden, 1974) and thus seek to prevent losses to any group, this will reinforce the tilt away from full adjustment. In theory, an active political role of downstream industries could counter the pressure for protection. However, decades of import relief for the U.S. steel industry suggest that the cost to consuming industries is not large enough to counter domestic producers’ direct interest. Exporting nations may also take an active role domestically or via formal complaints to the WTO.

⁶Most of the discussion applies also to adjustment required by trade liberalization.

⁷While the laws discussed in this paper are concerned mainly with situations in which U.S. firms or workers are injured by competing imports, Section 301 of the U.S. Trade Act of 1974 addresses foreign practices that unfairly exclude U.S. products from export markets. In principle, Section 301 could offer a way to promote U.S. adjustment to shifting comparative advantage by ensuring that firms in emerging export sectors are able to find markets abroad. In reality, most of the industries represented in 301 cases seem improbable as reflections of emerging U.S. comparative advantage. Both the perceived need for Section 301 and its potential scope have been reduced since the WTO was established in 1995.

Table 1. Frequency of Petitions Under U.S. Trade Remedy Laws and Programs

	Years of Program Availability	Number of Petitions Initiated (through May 2004)
GENERAL TRADE REMEDY LAWS AND PROGRAMS		
Safeguards (Section 201)	1975–	73
Trade Adjustment Assistance (Department of Labor)	1972–	31,076 ¹
Antidumping (currently Section 731)	1921–	2,170
Countervailing Duties (currently Section 701)	1897–	932
SECTOR- OR COUNTRY-SPECIFIC TRADE REMEDIES		
China Safeguard (Section 421)	2002–	4
China Textile Safeguard (Department of Commerce, Office of Textiles and Apparel)	2003–	3
Textile and Clothing Transitional Safeguard (Department of Commerce, Office of Textiles and Apparel)	1995–2004	24 ²
Agriculture Special Safeguard (U.S. Notifications to the Committee on Agriculture under Article 5 of the WTO Agreement on Agriculture)	1995–	Hundreds of 10-digit HTS ³ products
Trade Adjustment Assistance for Farmers and Fishers (Department of Agriculture)	2003–	25
Trade Adjustment Assistance for Firms (Department of Commerce, Economic Development Administration)	1975–	5,435 ⁴
Services Safeguard (GATS)	Proposed	0

¹Data for 1972–1994 from Magee (2001).

²Petitions filed against WTO members only, as reported to the WTO Textiles Monitoring Body for the 1995–2001 period.

³Harmonized Tariff Schedule.

⁴Number of firms certified (source: Economic Development Administration records). No data available for 1979 or for petitioning firms not certified.

rapidly increasing imports.⁸ The explicit purpose is to allow the domestic industry time to restructure.

Under Section 201, the president, the Senate, or a domestic industry can request safeguard measures. The president is allowed (but not required) to impose safeguard measures if certain statutory requirements are met. First, the International Trade

⁸Although an escape clause essentially provides for backsliding (increased protection) under specific circumstances, some economists believe this helps to facilitate and maintain overall liberalization of trade. By providing insurance against unforeseen damage to the economy, safeguards may encourage trade negotiators to be bolder in their offers of concessions. Moreover, by offering a framework within which a country may yield to domestic political pressure to renege on certain negotiated liberalization commitments and yet preserve the integrity of the agreement, safeguards may improve the overall durability of a liberal trade regime. Hoekman and Kosteci (2001) call these the insurance and safety-valve functions of safeguards.

Commission (ITC) must determine whether the domestic industry is suffering serious injury caused by increased imports. If the finding is affirmative, the ITC recommends appropriate measures to the president, who can accept, reject, or modify the ITC's recommendations. When broader considerations of national policy appear to outweigh the potential benefits of action on behalf of the industry, the president need not impose a trade restriction, even if the ITC has found serious injury that is attributable to increased imports. Section 201 specifies the statute's objective as "positive adjustment to import competition," where this is defined as occurring either (i) when the domestic industry is able to compete successfully with imports after safeguard actions terminate, or (ii) when the domestic industry experiences an orderly transfer of resources, including dislocated workers, to other productive pursuits [§2251 (b)].

The statute requires that the representative of the industry filing the petition submit an adjustment plan describing

the specific purposes for which action is being sought, which may include facilitating the orderly transfer of resources to more productive pursuits, enhancing competitiveness, or other means of adjustment to new conditions of competition [§2252 (a)(2)(A)].

The representative of the industry can be a "trade association, firm, certified or recognized union, or group of workers." Choice of the representative may have important implications for the safeguard process because different groups may have complementary or conflicting adjustment incentives and preferences. For example, workers will not be expected to take advantage of retraining benefits under TAA if the industry receives import protection and layoffs are thus avoided. There may also be differences in the interests of firms within an industry, as with vertically integrated steel producers versus mini-mills.⁹

If the president chooses to act, the statute offers a broad range of policy alternatives [§2253 (a)(3)]:

- Import duty,
- Tariff-rate quota,
- Quantitative restriction,
- "[O]ne or more appropriate adjustment measures, including the provision of trade adjustment assistance . . . ,"
- Voluntary export restraint (VER),¹⁰
- Auctioning import licenses,
- International negotiations,
- Submitting legislative proposals to Congress,
- "[A]ny other action . . . which the President considers appropriate and feasible . . . ,"
- Any combination of the above.

⁹Durling and Prusa (2003) argue that the primary effect of the steel safeguard tariffs imposed by the United States in 2002 was distributional; the tariffs provided relatively small gains to traditional integrated producers but more substantial benefits to the newer mini-mills. Below we argue that temporary trade restrictions may encourage new investment in a declining industry even when full adjustment to changing market conditions must entail a drop in industry output and employment.

¹⁰Use of VERs has been phased out under the terms of the Uruguay Round agreement.

Section 201 allows the initial policy to be imposed for no more than four years, with a possible extension for an additional four years. But WTO rules allow negatively affected exporting countries to seek compensation in the form of retaliation if a safeguard remains in effect for longer than three years. In practice, the period of safeguard application since 1995 has been limited to three years or less.¹¹

Despite its explicit goal of promoting adjustment, Section 201 is used mainly to offer temporary relief for an import-impacted industry. However, the law's provisions do allow the president to implement measures that directly promote adjustment. These could include either measures to enhance the competitive position of the domestic industry or measures to facilitate "an orderly transfer of resources" to other industries.

Special Safeguards

In addition to the normal safeguards provided under Section 201, the most highly protected sectors of the U.S. economy also benefit from special safeguard arrangements included in specific bilateral and multilateral agreements. These safeguards are special in that they apply in situations where protection could not be obtained under Section 201, for example, by specifying a lower injury threshold for safeguards or allowing U.S. action on imports only from specific sources rather than total imports. Such arrangements include the following:

Special agricultural safeguards in the WTO

The Agreement on Agriculture that began the process of bringing policies on agricultural trade under WTO discipline included special safeguards on agricultural products.¹² Under the agreement, 39 WTO members reserved the right to use special safeguards on 2 to 539 products; for the United States, the number of products potentially subject to these safeguards is 189. The special agricultural safeguards differ from normal safeguards in that higher safeguard duties can be triggered automatically if import volumes rise above a predetermined level or prices fall below a predetermined level. More notably, safeguards can be applied without evidence of serious injury to the domestic economy. However, in keeping with their objective of facilitating progress in the area of agricultural trade, the right to apply such safeguards will lapse in the absence of agreement to continue the negotiations.

Post-Uruguay-Round WTO negotiations on agriculture began in early 2000. Agriculture is a high-priority item on the Doha Round agenda, which is focused on the trade priorities of developing countries.¹³ The 2001 Doha Declaration includes

¹¹If the imposed safeguard is found to violate WTO rules, retaliation can be imposed at the conclusion of the trade dispute (typically 18 months). This has led to withdrawal of some applied safeguards even before the end of three years. For example, U.S. safeguard tariffs on steel imports were imposed in March 2002 and withdrawn in December 2003 following a negative ruling from the WTO.

¹²WTO website http://www.wto.org/english/tratop_e/agric_e/negs_bkgnd11_ssg_e.htm (accessed May 17, 2004).

¹³Cline (2004) estimates that global free trade would raise annual incomes of the developing countries by \$200 billion, with much of that benefit going to the world's poorest people. He singles out agriculture, textiles, and apparel as the most important sectors in terms of potential gains to developing countries; about half of the total gains are projected to come from agricultural alone.

a commitment to comprehensive negotiations aimed at “substantial improvements in market access; reductions of, with a view to phasing out, all forms of export subsidies; and substantial reductions in trade-distorting domestic support.”¹⁴

Special transitional safeguards in the WTO Agreement on Textiles and Clothing

Negotiated in the Uruguay Round, the WTO Agreement on Textiles and Clothing¹⁵ was intended to terminate the global system of quotas that had severely distorted international trade in these products for decades. The agreement called for a phase-out of the Multifiber Arrangement (MFA), with all products scheduled to be brought into conformity with normal WTO rules on goods trade by 2005; all quantitative restrictions were to be eliminated by the end of 2004. Article 6 of the agreement provided for special transitional safeguards on products not yet integrated into the WTO system. Because the MFA was eliminated on schedule, problems arising in 2005 and thereafter fall under the usual WTO safeguard provisions.

Unlike normal safeguards, which must be applied on a most-favored-nation basis, these transitional safeguard measures could be applied against individual exporting countries if it could be shown that “serious damage or actual threat thereof . . . is attributed . . . on the basis of a sharp and substantial increase in imports, actual or imminent” to trade with an individual member (Article 6.4). Transitional safeguards were limited to up three years or until the product was integrated into the WTO system.

Special transitional safeguard mechanism for China’s WTO entry

The agreement setting terms for China’s entry into the WTO includes a special transitional safeguard mechanism that allows the use of safeguards when imports from China cause or threaten injury to domestic producers of other members.¹⁶ The transitional safeguards are authorized for the first 12 years of China’s WTO membership, until 2014. In contrast to the normal WTO requirement of actual or threatened “serious” injury to the domestic industry of the safeguard-imposing country, the transitional safeguards require only “material” injury, the lower injury threshold normally used in remedies for unfair trade. Also included in the agreement is a special safeguard relating exclusively to China’s participation in the Agreement on Textiles and Clothing.

A textile-specific safeguard mechanism, subject to an even lower threshold, will allow other members to apply safeguards to textile and apparel imports from China until the end of 2008. These safeguards can be applied if “a WTO Member believed that imports of Chinese origin of textiles and apparel products . . . were, due to market disruption, threatening to impede the orderly development of trade

¹⁴Doha Ministerial Declaration, adopted November 14, 2001. WTO website http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm (accessed August 24, 2004).

¹⁵WTO website http://www.wto.org/english/docs_e/legal_e/16-tex.pdf (accessed May 17, 2004).

¹⁶WTO website http://www.wto.org/english/news_e/pres01_e/pr243_e.htm (accessed May 17, 2004).

in these products” and consultation with China did not result in a satisfactory resolution. U.S. textile imports from China surged after some quantitative restrictions were removed following China’s WTO entry in 2001. On December 24, 2003, the United States imposed safeguard quotas on imports of Chinese brassieres, robes, and knit fabrics for a one-year period.¹⁷

Special safeguards in other U.S. bilateral and regional trade agreements

Most bilateral and regional agreements contain provisions for special safeguards. For example, in addition to a generous phase-in period of up to 15 years, the North American Free Trade Agreement (NAFTA) allows members to apply special agricultural safeguard protection on import-sensitive crops. Similarly, the U.S.-Jordan Free Trade Agreement includes special safeguards that allow scheduled duty reductions to be suspended or even reversed if imports from the other party “constitute a substantial cause of serious injury, or threat thereof” to the competing domestic industry.

Trade Adjustment Assistance

Several distinct justifications for TAA proceed from the unequal distribution of gains from trade liberalization. Opening to trade generates benefits for the average American that are large in the aggregate but small for most individuals. At the same time, liberalization inflicts significant costs on those whose livelihoods are directly affected by competition from imports. Providing TAA can then be explained in terms of equity, as a means to compensate losers; in terms of efficiency, as a means to reduce adjustment costs by addressing market failures; or in terms of political efficacy, as a means to reduce opposition to trade liberalization (Magee, 2001).¹⁸

The U.S. TAA program was introduced in 1962 legislation authorizing U.S. participation in the Kennedy Round of multilateral trade negotiations, as a way to obtain needed support from organized labor. The initial program offered benefits for both workers and firms: extended unemployment compensation, retraining, and other benefits for trade-impacted workers; technical assistance, loans, and loan guarantees for trade-impacted firms. However, eligibility requirements were enforced so stringently that not a single worker petition was approved until November 1969. Even when some petitions eventually gained approval, the benefits were so meager

¹⁷U.S. Commerce Department website http://www.ita.doc.gov/media/FactSheet/pdfs/JCCT_outcomes_and_signing_descriptions_042104.pdf (accessed August 24, 2004).

¹⁸Using data on 31,076 petitions for assistance filed between 1975 and 1992, Magee (2001) tests for consistency of these motives with Department of Labor certifications. He finds that lower industry wages and higher industry unemployment are associated with a higher fraction of petitions certified. Both results are consistent with the equity motive, while the second is consistent also with the efficiency motive, because reemployment prospects are worse for displaced workers in an industry with high unemployment. However, evidence that TAA facilitates trade liberalization is inconclusive. In fact, Magee’s data show that higher tariff protection of an industry is “strongly associated with an increased probability that workers will be certified” for TAA, suggesting that both types of industry assistance have the same underlying political determinants.

and the bureaucratic obstacles to obtaining them so formidable that organized labor soon came to denigrate the program as “burial insurance.”

The Trade Act of 1974 revamped the program to ease access to TAA benefits. As in 1962, TAA served as a political quid pro quo needed to gain support from organized labor for legislation authorizing U.S. participation in multilateral trade negotiations (the Tokyo Round). However, the program remained ineffective as a tool for facilitating adjustment despite its soaring budgetary cost.¹⁹ By offering extended unemployment benefits, TAA allowed import-impacted workers to remain out of work longer than workers displaced for other reasons. Workers in industries characterized by a high wage premium (steel, autos) rationally chose to wait to be recalled from layoff rather than seek work in another industry where wages were almost sure to be lower.²⁰ The NAFTA Implementation Act of 1993 added NAFTA-Transitional Adjustment Assistance to the TAA program. This special program was aimed at U.S. workers adversely affected by imports from Mexico or Canada or by a shift by U.S. firms to production in these countries.

Further changes to the TAA program were included in the Trade Act of 2002, which granted “trade promotion authority” to the president and expanded preferential trade arrangements for Andean, Caribbean and Central American, and African countries. The 2002 law integrated NAFTA-TAA into the main TAA program, expanded eligibility to additional groups of workers, increased benefits available, and added a health insurance tax credit. The program, administered by the U.S. Department of Labor in cooperation with One-Stop Career Centers in every state, was broadened to cover “trade-affected” workers, defined as those who lost their jobs because of increased imports or shifts in production out of the United States.²¹

Also included for the first time were “adversely affected secondary workers,” defined as workers at firms affected indirectly by the reduced output or exit of directly trade-impacted firms. The covered workers include those at “upstream” firms supplying components or parts to directly affected firms as well as “downstream” firms performing “additional, value-added production processes . . . including final assembly or finishing.” However, despite the change in language, the 2002 law did not extend benefits to one important group of trade-affected workers: those laid off from jobs in export industries experiencing increased competition in foreign markets. Moreover, the program does not cover service workers and thus provides no adjustment assistance to workers affected by outsourcing in the service sector.

¹⁹Annual expenditures reached \$1.6 billion by 1980. Political support for the program then waned as it became apparent that a disproportionate share of the funds was going to workers in high-wage industries. Moreover, there was little evidence that the program actually promoted adjustment. The Reagan administration cut funding and benefits in 1981 (Pearson, 2004, p. 88).

²⁰Workers displaced from their jobs even temporarily are eligible to receive benefits, and many such workers do return to the same employer. TAA has therefore been criticized for providing a subsidy to employers with cyclical demand. However, the likelihood that laid-off workers will be certified for TAA benefits may make employers less reluctant to reduce their workforce, thus perhaps promoting adjustment to changing market conditions.

²¹The 2002 law imposes restrictions on eligibility for TAA if a plant moves to a country with which the United States does not have a free trade agreement (Rosen, 2004).

The 2002 law also extended coverage to some trade-impacted farmers and fishers. TAA for farmers and fishers differs from TAA for manufacturing workers in that assistance is tied to a drop in market price rather than job loss. The program augments the earnings of farmers and fishers remaining in the trade-impacted sector, thus aiding only those who have *not* adjusted to changing conditions in international markets. TAA payments are based on total production and are equal to one-half the difference between the current market price of the trade-affected good and its average price over a base period. TAA for farmers and fishers thus has a strong anti-adjustment element.

Apart from TAA for farmers and fishers, most of the 2002 provisions expanded eligibility and eased access to benefits for unemployed workers. However, introduction of Alternative Trade Adjustment Assistance (ATAA) for older workers departed significantly from earlier TAA programs for unemployed workers by tying cash benefits to a speedy return to work. ATAA is aimed at otherwise eligible workers at least 50 years old for whom retraining may not be a suitable choice. For eligible workers who find new employment within 26 weeks of layoff, ATAA covers up to 50 percent of the full-time salary gap between the old and new job for a two-year period.²² Although it represents a significant step in the direction of promoting adjustment, ATAA is unlikely to solve the problem raised by displacements from high-wage sectors such as steel and autos. Total payments are limited to \$10,000 over two years, and workers earning more than \$50,000 in the new job are not covered.

The original TAA program also provided trade-impacted firms with loans, loan guarantees, and technical assistance. Direct financial assistance was eliminated in 1986, partly because of budget cutbacks and high default rates (Pearson, 2004). However, TAA for manufacturing firms continues in a modest program of technical assistance (maximum benefit per project is \$75,000) administered by the Department of Commerce via a network of regionally dispersed not-for-profit TAA centers. The program pays for half the cost of consultants or industry-specific experts used in projects to improve a firm's competitiveness. In contrast to TAA for workers, eligibility for firm TAA is tied only loosely to trade impact; a firm may be eligible if it experienced sales and employment declines "at least partially due to imports" over the last two years.²³ Each of the three project success stories featured on the Trade Adjustment Assistance for Firms website involves a small business that increased sales and profits by moving into a new niche within the same industry.

Antidumping and Countervailing Duties

Safeguards and TAA assist firms and workers adversely affected by imports or, in the case of TAA, the relocation abroad of U.S. plants, regardless of whether the

²²According to Kletzer (2001), two-thirds of workers displaced from import-competing industries who found new employment earned less on the new job; a quarter of those reemployed earned at least 30 percent less. Kletzer and Litan (2001) propose wage insurance covering all displaced workers, not just those in trade-impacted industries. The narrower coverage in the 2002 law reflects a balance between budgetary and political considerations.

²³Trade Adjustment Assistance for Firms website: <http://www.taacenters.org/index.html> (accessed May 18, 2004).

trade impact is associated with unfair behavior of foreign competitors. The provisions discussed above tend to offset rather than reinforce the market pressure for resources to leave a sector that experiences declining comparative advantage. However, the statutory limit on the duration of a safeguard and of TAA's provisions on retraining, relocation, job search, and wage insurance can be seen as implicit or explicit efforts to promote eventual adjustment.

In contrast, antidumping and countervailing duty laws begin from the premise that the pressure to adjust is itself unfair because competing goods are being sold in the U.S. market at less than fair value. Hence, these laws aim to eliminate the need for U.S. firms to adjust. In practice, the frequent use of antidumping by the steel industry in particular suggests that these laws strengthen the ability of industries to postpone adjustment indefinitely. The link of antidumping activity to exchange rate appreciation and cyclical downswings (Knetter and Prusa, 2003; and Irwin, 2005) may imply their use also as a means to counter reversible declines in profitability. This would have the effect of retaining resources in sectors where the average return would otherwise be inadequate to compensate for the volatility of profits.

In a competitive industry with high fixed costs and substantial volatility in demand, one would expect to see all firms selling at marginal cost and making losses (selling price below full average cost) during business downturns but earning above-average profits during upturns; average profitability over time should be sufficient to compensate for year-to-year volatility. However, this behavior pattern on the part of foreign firms exporting to the United States would trigger dumping complaints. One effect of antidumping is thus to shift more of the adjustment burden in cyclical industries to foreign suppliers.

Notwithstanding the intended role of antidumping as a means of preventing damage to the U.S. economy caused by unfair practices of foreign firms, most international economists view the law as offering domestic firms an easy alternative to adjustment. The ease of obtaining protection through this route is attributable in part to a shift in 1980 of the responsibility for determining whether imports were sold at less than fair value from the free-trade-oriented Treasury Department to the Department of Commerce. Irwin (2005) shows that Commerce was far more likely than Treasury to find evidence of dumping, a necessary condition for antidumping action to protect the domestic industry. A second reason for the relative ease of obtaining sector-specific protection through this route is that Commerce officials can choose among four calculation methods. These include a "facts available" method based on cost data supplied by the petitioners, which accounts for affirmative decisions with an average dumping margin of nearly 96 percent (Irwin, 2002, p. 115). Moreover, antidumping enforcement appears to target exporting nations that have recently gained competitiveness in the relevant industry, especially smaller countries lacking the capacity to retaliate in kind (Blonigen and Bown, 2003).

Since the intent of antidumping and countervailing duties is to neutralize the impact on domestic firms of unfair import pricing, it is not surprising that the U.S. Tariff Act of 1930 makes no explicit mention of adjustment in the import-competing sector. However, the provisions regarding "sunset reviews" implicitly address industry adjustment. Five years after an antidumping duty or countervailing duty has been imposed, the Department of Commerce and the International Trade Commission

must “conduct a review to determine . . . whether revocation of the countervailing or antidumping duty order or termination of the [suspension agreement] . . . would be likely to lead to continuation or recurrence of dumping or a countervailable subsidy (as the case may be) and of material injury” [from §1675(c)(1)(C)]. Thus, if the affected industry makes a successful adjustment by becoming competitive and so eliminates risk of future material injury from foreign competition, the industry will lose its protection through the removal of duties. This provision appears to further weaken the already weak incentives for speedy adjustment by offering continued protection only for industries that are still endangered by imports.²⁴

WTO Rules on Subsidies

The WTO limits members’ use of subsidies as well as the actions members may take in response to subsidies used by other member countries. Subsidies specifically designed to distort international trade are prohibited.²⁵ Other subsidies are permitted unless a complaining country can show that it is adversely affected. Subsidies designed to ease adjustment by facilitating movement of productive factors out of a U.S. industry that has lost comparative advantage would thus be permitted as long as they did not (i) hurt a domestic industry in an importing country, (ii) hurt exporters in another country trying to compete in the U.S. market, or (iii) hurt rival exporters from another country in competition in a third market.

Given the possible grounds for a complaint, subsidies designed to restore the comparative advantage of a declining U.S. industry would run a greater chance of being challenged by another WTO member than subsidies designed to encourage exit. If the WTO Dispute Settlement Body agrees that the U.S. subsidies have adverse effects on another member, the United States would have to withdraw its subsidies or otherwise eliminate the adverse effects. If subsidies hurt domestic producers in a country that imports the U.S.-subsidized good, the importing country could impose a countervailing duty.

II. Import Penetration, Comparative Advantage, and Industry Use of Trade Policies

We have reviewed the main U.S. trade policies that may influence the adjustment of U.S. industries to changing conditions in international markets. As already noted, there is no trade policy specifically intended to promote adjustment to shifting comparative advantage, and our review makes it clear that other policies tend to be adjustment-neutral or even to retard rather than to promote adjustment. As a rough measure of the relative importance of these laws in shaping the U.S. adjustment environment, Table 1 shows the frequency with which selected trade laws and programs have been used in recent years. In most cases, the “petitions” number

²⁴This argument applies best in an industry with relatively few firms and restricted entry, so that domestic competition is weak. We argue in Section III that protection is likely to intensify competition among existing firms in an industry with vigorous domestic competition and may also encourage new entry.

²⁵WTO website: http://www.wto.org/english/docs_e/legal_e/ursum_e.htm (accessed May 18, 2004). The Agreement on Agriculture contains separate and more lenient rules on subsidies to agricultural exports.

indicates the number of industry-wide requests for U.S. government intervention during the period indicated. However, TAA for displaced workers shows the number of petitions from individual workers, and TAA for firms shows the number of individual firms certified to receive benefits.

From the standpoint of the adjustment environment created by U.S. trade remedies, it is relevant to know whether the workers, firms, and industries that request assistance under the various programs are the ones facing the greatest pressure to adjust to changing conditions in the international market. Are frequent users of trade remedies encountering greater pressure from increased imports relative to other U.S. industries? Is their revealed comparative advantage declining relative to other U.S. industries? To address these questions, we refer to Table 2.

Table 2 provides a simple comparison of import-penetration ratios and revealed compared advantage (RCA) of petitioners versus non-petitioners for three of these programs.²⁶ Consider first the data on the mean and median industry-level import-penetration ratios for petitioning and non-petitioning industries. For each of the three programs in the table (safeguards, TAA, antidumping), we would expect petitioning industries to be associated with higher levels of import penetration than non-petitioners, as well as with larger increases in import penetration over the five-year period prior to the petition being filed. With the exception of the change in import penetration ratios for antidumping, that is exactly the qualitative pattern we observe in the first two columns. The second two columns of Table 2 provide data on the industry-level RCA variables. For each of the three programs in the table, we would expect petitioning industries to be associated with lower levels of RCA than non-petitioners, as well as with larger decreases over the five-year period prior to the petition being filed. Again, the qualitative pattern of the results (the means and medians of the data for petitioning versus non-petitioning industries) is consistent with that hypothesis.

We conclude from this rough empirical exercise that the industries that face, or should face, adjustment to changing global market conditions are more likely than other industries to seek help under the trade remedies discussed above. Thus, the adjustment environment created by these laws may play a significant role in determining the speed of adjustment and also the cost of adjustment.

III. Trade Remedies and Adjustment

In this section we consider within-industry developments in three cases of adjustment shaped by U.S. protection: the U.S. auto industry under the voluntary export restraints that limited U.S. imports from Japan, the steel industry under a succession of protective devices, and the textile and apparel industries under the Multifiber Arrangement. All have benefited from import relief under one or more of the laws

²⁶Import penetration ratio is defined as $(\text{imports}) / (\text{imports} + \text{shipments} - \text{exports})$, where all data are at the four-digit Standard Industrial Classification (SIC) level. Following Richardson and Zhang (1999), we define RCA as $[(\text{U.S. exports of industry } i) / (\text{U.S. total exports})] / [(\text{World exports of industry } i) / (\text{World total exports})]$, where industry i 's data are defined at the four-digit Standard International Trade Classification (SITC) level.

Table 2. Shifting Comparative Advantage and Industry Use of U.S. Trade Remedy Laws and Programs

	Industry Import Penetration Ratio in Year t	Change in Industry Import Penetration Ratio Between $t - 5$ and t	Industry Revealed Comparative Advantage (RCA) Measure in t	Change in Industry RCA Measure Between $t - 5$ and t
Safeguards (1975–1994)				
Industries petitioning under Section 201 in year t	0.189 [0.156]	0.367 [0.329]	1.110 [0.679]	-0.220 [-0.164]
Industries <i>not</i> petitioning under Section 201 in years $t - 5$ through t	0.124 [0.072]	0.288 [0.288]	1.596 [0.897]	-0.016 [-0.031]
Trade Adjustment Assistance (1972–1994)				
Industries petitioning under TAA in year t	0.158 [0.112]	0.325 [0.313]	1.524 [0.909]	-0.086 [-0.094]
Industries <i>not</i> petitioning under TAA in $t - 5$ through t	0.067 [0.031]	0.264 [0.272]	1.591 [0.836]	0.053 [0.067]
Antidumping (1980–1994)				
Industries petitioning under antidumping laws in year t	0.179 [0.147]	0.280 [0.243]	1.307 [0.848]	-0.083 [-0.102]
Industries <i>not</i> petitioning under antidumping laws in years $t - 5$ through t	0.135 [0.080]	0.306 [0.300]	1.509 [0.824]	-0.050 [-0.083]

Notes:

1. Table entries are sample means; sample medians are shown in brackets. Time t indicates year.
2. Import penetration ratio is defined as (imports) / (imports + shipments - exports), where all data are at the four-digit SIC level.
3. RCA is defined as [(U.S. exports of industry i) / (U.S. total exports)] / [(World total exports of industry i) / (World total exports)], where industry i 's data are at the four-digit SITC level.

discussed above. A common feature in the three cases is that protection created a profitable opportunity for new entry into the domestic industry. Although industry decline was slowed, new entry increased pressure on firms and workers already in the industry.

With the exception of TAA, the policies discussed in Sections I and II are intended to afford some degree of protection of the domestic industry from competing imports. Even when acknowledging the costs of protection to consumers and downstream industries, proponents of trade remedies justify their use in terms of anticipated favorable effects on domestic output, employment, earnings, and income distribution. There is often the hope that increased profitability may encourage firms in a protected industry to make investments required to adopt new technologies. Yet the actual effects on firms and workers in protected industries are complex, and policies are often ineffective in attaining their stated goals.

Baldwin (1982 and 1985) catalogs a number of now-familiar reasons why protection of an industry may cause a smaller reduction in imports and a smaller associated increase in domestic output and employment than anticipated. Country-specific trade remedies such as antidumping measures and countervailing duties encourage diversion of trade to as-yet unrestricted alternative import sources, a response documented for products ranging from textiles and apparel to automobiles.²⁷ Trade may also be diverted to related products or product forms not covered by the restriction. Consumers faced with higher prices may shift their demand to now-cheaper substitutes. Downstream users can sometimes shift production offshore to avoid higher domestic prices, as in the case of laptop producers affected by U.S. antidumping duties on flat-panel displays (Irwin, 2002, p. 80). U.S. industrial users of highly protected sugar shifted to alternative sweeteners; under NAFTA some candy manufacturers moved production to Canada and Mexico. When protected by a quantitative restriction on imports, a domestic supplier with market power may find it profitable to produce less rather than more output and thus may reduce rather than increase employment. Faced with quantitative trade restrictions or specific rather than ad valorem tariffs in the U.S. market, foreign suppliers often find it profitable to upgrade the quality of their exports, a response documented for Korean footwear as well as Japanese autos.

Even more important in the longer term are induced changes in the structure of the domestic industry. By limiting imports, trade restrictions raise the output price and thus rate of return in the protected industry. With fixed domestic capacity, this would translate into higher output and higher employment for existing firms, slowing down their exit from the industry. But protection may also make new entry (or expansion by existing firms) attractive. One such response is foreign direct investment (FDI) by companies that had previously served the market through exports. Whatever its source, expanded capacity increases competitive pressure within the domestic industry.

²⁷Dinopoulos and Kreinin (1988) estimate that unrestricted European producers were major beneficiaries of the auto VER; the limit on Japanese sales in the United States allowed European exporters to raise their prices by one-third.

Autos

The VER limiting Japanese auto exports to the United States played a key role in accelerating FDI by Japanese firms during the 1980s. Contradicting the widespread belief that Japanese success relied on country-specific conditions not likely to be replicated in U.S. factories, Japanese “transplants” claimed an increasing share of the domestic market; other foreign companies later followed suit. Struggling to compete, U.S. producers gradually introduced some of the same managerial and technological approaches believed to account for Japanese success. The United Auto Workers were forced to accept contract terms that allowed the traditional “Big Three” American auto producers to compete more effectively with the nonunion Japanese-owned assembly plants.

While foreign-controlled U.S. plants augmented total domestic auto production and employment compared with a situation in which the same autos were supplied through imports, protection-jumping FDI also brought about significant changes within the industry that are not apparent from aggregate performance measures. The most fundamental change is a continuing decline in the market share of the Big Three and their unions—protection has helped the domestic industry much more than it has helped the United Auto Workers and the firms that asked for protection.²⁸ For the 2003 fiscal year, Toyota’s earnings were more than the Big Three U.S. companies combined.²⁹ The newer plants are mostly far from Detroit, and their workers are not unionized. All U.S. producers now import a larger share of intermediate inputs used in assembling autos. And, as in U.S. manufacturing overall, industry employment has been falling relative to output, thus raising output per worker.³⁰

Steel

For decades American steel producers have been protected from competing imports by an arsenal of special trade restrictions including voluntary restraint agreements, the trigger-price mechanism, and the recent safeguard tariffs. Iron and steel products accounted for 41 percent of all U.S. antidumping duties in effect as of June 2000 (Irwin, 2002, p. 117). As in autos, protection stimulated U.S. direct investment by foreign companies with superior technologies. Much of this investment took the form of mergers and acquisitions involving domestic integrated mills. But in steel, additional

²⁸Ironically, the United Auto Workers, then headed by Doug Fraser, favored an auto VER precisely because of the belief that it would stimulate Japanese FDI. However, Fraser also believed that the Japanese advantage could not be duplicated under U.S. production conditions.

²⁹Danny Hakim, “The Big Three Fear That Toyota Is Becoming the Big One,” *The New York Times*, May 20, 2004, p. C1.

³⁰Krueger (2004) comments that U.S. protection in autos “simply postponed the restructuring of the industry. . . . This resulted in thousands of jobs lost—the jobs the protection had been intended to save.” In fact, protection may actually speed the loss of existing jobs by increasing the profitability of new entry. To the extent that protection induces investment in new capacity or equipment, the net change in employment at the industry level understates the degree of labor-market dislocation and associated adverse effects on communities. In the auto industry, new capacity and new jobs in Japanese transplants were located far from the homes of the workers displaced from Big Three plants.

new competition in the domestic market came from the growth of nonunion mini-mills. With the combined benefits of lower labor costs, lower capital requirements, and higher productivity, mini-mills had captured about 40 percent of U.S. domestic production by 1994, up from less than 10 percent in the 1960s (Tornell, 1997). As in autos, protection could maintain the industry's output level but could not preserve jobs, especially jobs in the integrated mills. Overall, the number of American steel jobs plummeted. Although unions managed to keep wages in the integrated mills rising faster than manufacturing wages overall, nonunion mini-mill workers captured an ever-increasing share of the jobs in the industry.

Textiles and Apparel

Even when FDI is not an important factor, trade remedies may induce substantial changes within the domestic industry. The extent of induced change within a declining but protected sector is well illustrated by the case of textiles and apparel. Textile imports from Japan had already begun to threaten the U.S. industry before World War II. A 1956 VER on Japanese exports of cotton textiles to the United States paved the way for entry by other exporters and other fibers. Efforts to control trade diversion eventually produced the Multifiber Arrangement, "the single most important barrier to developing country exports of manufactures" (Pearson, 2004, p. 61), which was finally terminated in 2005. Yet despite escalating protection at rising cost to domestic consumers,³¹ imports continued their inexorable rise. Between 1972 and 1997, the real value of textile imports nearly tripled, while apparel imports soared by a factor of 10 (Levinsohn and Petropoulos, 2001, Table 1).

Not surprisingly, the number of U.S. plants and industry employment fell over the same period. But even within the context of overall decline, new plants opened at nearly the same rate that established plants closed. From 1987 to 1992, the average gross rate of exit of plants in textiles was 31 percent, while the average gross rate of plant entry was 28 percent; the corresponding numbers over the same period for apparel were 46 percent and 49 percent (Levinsohn and Petropoulos, 2001, Table 3). These large gross rates reflect relocation within the United States, as textile producers all but abandoned high-cost locations in New England in favor of southern and border states. Apparel manufacturing likewise shifted from its traditional eastern base in New England and New York to the south, Texas, and California, as immigrants from Asia and Latin America replaced the immigrants from Europe who were once the mainstay of the labor force in the apparel industry.

Levinsohn and Petropoulos conclude that "in a probabilistic sense, inefficient firms die." After controlling for size of plant, wages paid, capital stock per worker, and measures of outsourcing, firms with lower productivity are more likely to exit. "Those who worry that the crazy-quilt of protection afforded by the MFA allows inefficient plants to prosper while protecting them from the realities of the world

³¹Hufbauer and Elliott (1994) estimate the 1990 cost to consumers at \$24 billion, or around \$1 million per "job saved" in the industries. Yet even this figure may be too low, as the calculation is based on net industry employment. Given the huge rates of gross job loss reported by Levinsohn and Petropoulos (2001), the cost per worker not displaced from current employment would be far higher.

marketplace should find some solace in this result.” Yet substantial continuing investment and new hires in these secularly shrinking industries raise other concerns. The “creative destruction” in the protected domestic textile and apparel industries illustrates the pernicious effect of protection for highly competitive industries that are losing comparative advantage. As expected, protection raises prices and profitability in the domestic industries. Higher profitability can promote new investment, thus retarding the pace of adjustment at the industry level. However, the induced increase in competition within the domestic market can actually accelerate the forced exit of current plants and workers—the latter attributable both to plant closings and to adoption of new capital-intensive and skill-intensive technologies that raise output per worker. Thus, protection intended to offset the adjustment pressure on domestic firms and workers may have exactly the opposite effect.

IV. Conclusions

Our purpose in this paper is to highlight the role of U.S. trade policies in facilitating or retarding adjustment to changing conditions in international markets. Given that the main rationale for most trade policy is to afford protection of particular industrial sectors under specific circumstances, it is perhaps not surprising to find that these statutes contain few provisions that are even neutral with respect to adjustment, let alone ones likely to facilitate or encourage adjustment. Likewise, given that action under trade laws is usually contingent on evidence of injury that can be linked to imports, it is not surprising to find that the U.S. industries most likely to seek help under these laws are the industries faced with the greatest challenge from international competition and thus the ones most in need of adjustment. There is scant evidence that these policies help to facilitate adjustment by correcting market distortions, while in many instances they are the cause of additional market distortions.

Together, these findings underscore a critical gap in U.S. trade laws and procedures. The trade statutes contain no acknowledgement that the most common reason for injury due to import competition is shifting comparative advantage, and no U.S. trade policy is specifically aimed at promoting adjustment to such shifts. Indeed, the federal agencies charged with the responsibility for providing relief to industries facing injury from foreign competition seem to lack any significant accompanying role in promoting adjustment out of these industries.

Moreover, industry-specific protection is likely to induce changes at the firm level that prolong the adjustment process and increase total adjustment costs. By raising the rate of return on invested capital, protection can draw new capital and workers into a secularly shrinking industry. This induced entry adds to the pressure on existing plants and workers while at the same time creating a new set of future “losers” to oppose future liberalization. Through familiar general-equilibrium linkages, the same process discourages growth of the nation’s comparative-advantage sectors. Moreover, by limiting access to the huge American market, U.S. protection inhibits the growth of corresponding industries abroad. Failure to adjust to shifting comparative advantage is thus costly not only to the United States, but also to its current and future trading partners and especially to developing countries.

The missing U.S. trade policy instrument is one that does nothing but encourage speedy exit from industries that have lost their comparative advantage. Free trade would have exactly this effect, but political considerations make some divergence from “the free-trade policies that would probably best serve the broad public interest” almost inevitable (Mussa, 1993, p. 374). How then to design a politically acceptable policy instrument that will “keep the damage to a minimum” by promoting adjustment to changing conditions rather than discouraging it? And how, in the absence of unfettered trade, to identify appropriate targets for adjustment? This may be a difficult issue to settle generically, but the policy could begin by identifying industries that owe their survival to perennial import relief. Such industries have become increasingly evident, thanks to successive rounds of multilateral liberalization and rapid improvements in communications and transportation.

Finally, although this paper has focused on U.S. trade policy, the problem of sluggish adjustment is hardly unique to the United States; the industrial countries as a group have been slow to adjust to shifting comparative advantage. The Uruguay Round laid ground for future progress on collective adjustment by bringing apparel, textiles, and agriculture, all areas of strong comparative advantage for developing countries, into the WTO. Likewise, the Doha Round has centered on the needs of developing countries for increased market access. Yet so far the WTO has offered little in the way of guidance regarding the necessary companion agenda of adjustment out of the same industries in the industrial countries.

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