

US Trade Remedies and the Adjustment Process

Chad P. Bown[†] and Rachel McCulloch[‡]

Brandeis University

21 May 2004

Abstract

Michael Mussa (1974, 1978, 1982) was among the first theorists to analyze the economics of adjustment to changing conditions of international trade, and throughout his career he has also been an outspoken commentator on the political economy of trade policy. This paper focuses on the “adjustment environment” in the United States as set out by the active US trade remedy laws (antidumping, countervailing duties and safeguards) as well as the Trade Adjustment Assistance program. We document US industries’ use of these various laws and relate trade-remedy use by industry to revealed comparative advantage. We also examine potential effects of trade remedies in promoting or retarding industry adjustment and give examples of industry outcomes.

This paper was prepared for presentation at the IMF conference in honor of Michael Mussa, International Monetary Fund, Washington DC, June 4-5, 2004. Please do not quote without authors’ permission.

[†] Bown : Department of Economics, MS 021, PO Box 549110, Brandeis University, Waltham, MA 02454-9110, tel: (781) 736-4823, fax: (781) 736-2269, email: crown@brandeis.edu, web: <http://www.brandeis.edu/~crown/>.

[‡] McCulloch (corresponding author): Department of Economics, MS 021, PO Box 549110, Brandeis University, Waltham, MA 02454-9110, tel: (781) 736-2245, fax: (781) 736-2269, email: mcculloch@brandeis.edu.

US Trade Remedies and the Adjustment Process

Chad P. Bown and Rachel McCulloch

Brandeis University

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, 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, 374).

1 Introduction

With international market conditions changing rapidly and often unpredictably, US policies toward trade reflect a perennial tension between capturing the full potential gains from these developments and responding to political demands for measures to slow or reverse their effects on the domestic economy. How well does the United States respond to opportunities associated with changing international market conditions? In this paper we focus on the “adjustment environment” in the United States as set out by the active US trade remedy laws (antidumping, countervailing duties and safeguards) as well as the Trade Adjustment Assistance program.

The trade remedy laws are concerned mainly with situations in which a US industry is adversely affected by a fall in the price of competing imports. However, import prices may fall for several distinct reasons, including unfair foreign trade practices, temporary and reversible market conditions, trade liberalization, and 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, which constitute “unfair” trade practices under US and WTO statutes. To the extent that such practices injure a competing US industry, trade law permits action to reverse the price decline,¹ thus eliminating the need for adjustment. In the second case, a fall in import price reflects temporary and reversible changes in the trade environment such as exchange-rate appreciation or a downturn in the business cycle. Firms will then make adjustment decisions based on their own best assessment of future international market conditions. However, because of capital-market imperfections or incomplete information, there may be a potential role for active trade policy to ensure socially optimal adjustment. US and WTO regulations on safeguard protection address this type of situation. In the third case, a decline in the price of competing imports is the fully anticipated result of trade liberalization. Associated declines in industry employment, output, and profitability should likewise be anticipated. The US Trade Adjustment Assistance program is intended to facilitate the necessary adjustment by assisting affected workers and firms in industries that face increased competition due to US trade liberalization. Safeguard protection may also be relevant to the extent that the declines are greater than anticipated.

Active trade policy is often used in the fourth case, where falling import prices reflect shifting comparative advantage. Moreover, these policy actions almost always work to slow the decline of a domestic industry that is losing or has lost its comparative advantage. Our discussion of adjustment therefore focuses mainly on the case of a downward long-term trend in

¹ This policy action may not represent the socially optimal response, especially in the case of dumping.

the price of competing imports due to shifting comparative advantage. In this case the fall in import price represents an improvement in US terms of trade and thus an opportunity for national gains. Yet under US trade laws a fall in import price is always treated more as a problem than an opportunity; the laws assume at least implicitly that a domestic industry's current difficulties are never due to changing comparative advantage. Moreover, there is no trade law aimed directly at promoting the socially beneficial adjustment to shifting comparative advantage. This gap may reflect two important economic and political realities. First, achieving a new domestic resource allocation appropriate to changed conditions in international markets entails economically significant and politically salient adjustment costs. Because wages and other factor prices are not fully flexible, adjustment costs may include losses from unemployment. Second, 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 creates identifiable "losers" as well as "gainers." These losses and gains, which far exceed the net impact on national welfare, generate powerful political forces that affect a country's ability to achieve potential gains.²

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. While the losers from shifting comparative advantage are readily identified, the eventual gainers may be widely dispersed across a number of industries, i.e., the industries that will eventually

² Within a model of two sectors and two generic factors 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 (1984) shows that the factor specific to the import-competing industry loses unambiguously while the mobile third factor may lose or gain.

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.³

This paper examines the role of US and WTO trade rules in facilitating or retarding adjustment to a drop in import prices due to shifting comparative advantage.⁴ Section 2 reviews the various trade laws that address problems associated with increased import competition and also relevant aspects of Section 301. We look both at provisions explicitly aimed at influencing the adjustment process and those implicitly affecting adjustment. Section 3 examines the link between industry use of trade remedies and revealed comparative advantage. Section 4 discusses potential changes at the industry level that may result from protection and evaluates the role played by US policy in several specific cases. Section 5 concludes.

2 US and WTO Trade Laws and Adjustment

Of the various US trade laws, only two--safeguards and trade adjustment assistance--are explicitly intended to promote adjustment to increased competition from imports, and even in applications of these laws the envisioned "adjustment" process is usually one that allows the domestic industry to reverse its decline. However, several other trade laws play an important role in encouraging or discouraging adjustment. We discuss each law in turn, considering first those provisions dealing explicitly with adjustment and then provisions or discretion in how

³ If policy makers and voters subscribe to a "conservative welfare function" (Corden 1974), i.e., 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 US 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 at the WTO.

⁴ Most of the discussion applies also to adjustment required by trade liberalization.

provisions are administered that may implicitly encourage or discourage adjustment. Table 1 summarizes the major US trade remedy laws and programs.

2.1 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 due to trade liberalization. An escape clause in the modern sense was introduced in the US Reciprocal Trade Agreements Act of 1934 (Jackson 1997, 179). Recent US safeguards have been initiated under Section 201 of the Trade Act of 1974. Article XIX of the GATT and the WTO Agreement on Safeguards allow countries to impose new restrictions if a domestic industry is suffering serious injury substantially caused by rapidly increasing imports.⁵ 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 Commission (ITC) must determine whether the domestic industry is suffering serious injury caused by increased imports. If the ITC finding is affirmative, it then makes a recommendation to the President regarding appropriate measures. However, the President can accept, reject, or modify the ITC’s recommendations. If the potential benefits of action on behalf of the industry appear to be

⁵ Although 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 their 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 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 Kostecki (2001) call these the insurance and safety-valve functions of safeguards.

outweighed by broader considerations of national policy, the President may apply no trade restriction even if the ITC has found serious injury due to increased imports. Section 201 specifies the statute's objectives as "positive adjustment to import competition":

§2251 (b) "Positive adjustment to import competition" is defined as occurring when

(A) the domestic industry

- (i) is able to compete successfully with imports after actions [...] terminate
- (ii) the domestic industry experiences an orderly transfer of resources to other productive pursuits; and

(B) dislocated workers in the industry experience an orderly transition to productive pursuits.

The statute also 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" [from §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.⁶

⁶ Durling and Prusa (2003) argue that the primary effect of the safeguard tariffs imposed by the United States in 2002 was distributional; the tariffs provided relatively small gains to traditional integrated producers but more

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)⁷
- Auctioning import licences
- International negotiations
- Submit to Congress legislative proposals
- “[A]ny other action [...] which the President considers appropriate and feasible...”
- Any combination of the above

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.⁸

substantial benefits to the newer minimills. 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.

⁷ Use of VERs has been phased out under the terms of the Uruguay Round agreement.

⁸ If 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, US safeguard tariffs on steel imports were imposed in March 2002 and withdrawn in December 2003 following a negative ruling from the WTO.

Despite its explicit goal of promoting adjustment, the provisions of Section 201 mainly offer temporary relief for an import-impacted industry. However, the language of the law does 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 to facilitate “an orderly transfer of resources” to other industries.

2.2 Special Safeguards

In addition to the normal safeguards provided under Section 201, the most highly protected sectors of the US 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, e.g., by specifying a lower injury threshold for safeguards and/or allowing the US to act on imports only from specific sources rather than total imports. Such arrangements include:

2.2.1 Special Agricultural Safeguards in the WTO

The Agriculture Agreement that began the process of bringing policies on agricultural trade under WTO discipline included special safeguards on agricultural products (WTO website: Agriculture). Under the agreement, thirty-nine WTO members reserved the right to use special safeguards on two to 539 products; for the US, 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 negotiations on agriculture began in early 2000 and are a high-priority item on the Doha Round agenda. The 2001 Doha Declaration includes 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” (WTO website: Doha Ministerial Declaration).

2.2.2 Special Transitional Safeguards in the WTO Agreement on Textiles and Clothing.

Negotiated in the Uruguay Round, the WTO Agreement on Textiles and Clothing is intended to end the global system of quotas that has severely distorted international trade in these products for decades. The agreement calls for a phase-out of the Multifiber Arrangement, with all products scheduled to be brought into conformity with normal WTO rules on goods trade by 2005, i.e., all quantitative restrictions are due to be eliminated by the end of 2004. Article 6 of the agreement provides for special transitional safeguards that apply to products not yet integrated into the WTO system. Thus, if the MFA is indeed eliminated on schedule, problems that arise in 2005 and thereafter would fall under the usual WTO safeguard provisions.

Unlike normal safeguards, which must be applied on a most-favored-nation (MFN) basis, these transitional safeguard measures can be applied against individual exporting countries if it can 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” from an individual member (WTO Agreement on Textiles and Clothing, Article 6.4). Transitional safeguards are limited to up three years or until the product is integrated into the WTO system.

2.2.3 Special Transitional Safeguard Mechanism for China's WTO Entry

The agreement setting terms for China's entry into the WTO included 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. The transitional safeguards are authorized for the first twelve years of China's WTO membership. 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, i.e., the lower injury threshold normally used in remedies for unfair trade. Also included in the agreement is a special safeguard relating specifically 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 in these products" and consultation with China did not result in a satisfactory resolution. US textile imports from China surged after some quantitative restrictions were removed following China's WTO entry in 2001. On December 24, 2003, the US imposed safeguard quotas on imports of Chinese brassieres, robes, and knit fabric for a one-year period (U.S.-China Joint Commission on Commerce and Trade 2004).

2.2.4 Special Safeguards in Other US 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, NAFTA allows members to apply special agricultural safeguard protection on import-sensitive crops. The US-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.

2.3 Trade Adjustment Assistance

Several distinct justifications for trade adjustment assistance (TAA) all proceed from the observation that liberal trade policies create large but diffuse benefits for most Americans but inflict significant costs on those whose livelihoods are directly affected by competition from imports. Providing TAA may 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).⁹

The US TAA program was introduced in 1962 legislation authorizing US participation in the Kennedy Round, in order to obtain needed support from organized labor. The initial program offered benefits for both workers and firms: extended unemployment compensation, retraining,

⁹ Using 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 also consistent also with the efficiency motive since re-employment 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, which suggests that both types of industry assistance have the same underlying political determinants.

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 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 US participation in multilateral trade negotiations (the Tokyo Round). However, the program remained ineffective as a tool for facilitating adjustment despite its soaring budgetary cost. By offering extended unemployment benefits, TAA permitted 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 seeking work in another industry where wages were almost sure to be lower.¹⁰ The NAFTA Implementation Act of 1993 added NAFTA-Transitional Adjustment Assistance to the TAA program. This special program was aimed at US workers adversely affected by imports from Mexico or Canada or by a shift by US firms to production in these countries.

The most recent 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 new law

¹⁰ Worker displaced from their jobs even temporarily are eligible to receive benefits, and many such workers do return to the same employer. TAA has been criticized for providing a subsidy to employers with cyclical demand.

integrates NAFTA-TAA into the main TAA program, expands eligibility to additional groups of workers, increases benefits available, and adds a health insurance tax credit. The program, administered by the US Department of Labor in cooperation with One-Stop Career Centers in every state, is now aimed at “trade-affected” workers, defined as those who have lost their jobs due to increased imports or shifts in production out of the United States.¹¹ Also included for the first time are “adversely affected secondary workers.” These are 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 that perform “additional, value-added production processes... including final assembly or finishing.” In addition, the 2002 law adds coverage for some farmers and fishermen.¹² However, despite the new name, TAA still does not extend benefits to one important group of trade-affected workers, namely those laid off from jobs in export industries that have experienced increased competition in foreign markets. Moreover, the current program does not cover service workers and thus provides no adjustment assistance to workers affected by the recent trend toward outsourcing of services ranging from call centers to software design.

Most of the 2002 changes expand eligibility and ease access to benefits for unemployed workers. However, Alternative Trade Adjustment Assistance (ATAA) for older workers is

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.

¹¹ The current 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).

¹² Unlike TAA for manufacturing workers, the TAA program for farmers and fishermen provides cash payments to those still working in the trade-impacted sector. Payments are based on total production and are equal to one-half the difference between the current market price of the trade-affected and the average price over a base period. Thus, the program has a stronger anti-adjustment element than TAA for manufacturing workers.

unique among TAA programs for unemployed workers in 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 per cent of the full-time salary gap between the old and new job for a two-year period.¹³ 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 due to 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 only loosely tied 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 (Department of Commerce website: Trade Adjustment for Firms). Each of the three project success stories featured on the Trade Adjustment Assistance for Firms web site involves a small business that increased sales and profits by moving into a new niche within the same industry.

¹³ According 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 re-employed earned at least 30 per cent less. Kletzer and Litan (2001) propose wage insurance covering all displaced workers, not just those in trade-impacted industries. The narrower coverage reflects a balance between budgetary and political considerations.

2.4 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 US plants, regardless of whether the trade impact is associated with “unfair” behavior of foreign competitors. The provisions discussed above mostly 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 TAA’s provisions on retraining, relocation, job search, and wage insurance can be seen as implicit or explicit efforts to promote adjustment.

In contrast, antidumping and countervailing duty laws begin from the premise that the pressure to adjust is itself unfair, i.e., that competing goods are being sold in the US market at “less than fair value.” Hence, the intent of these laws is to eliminate the need for US 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, Irwin 2004) may imply their use also as a means to counter reversible declines in profitability and thus retain resources in sectors where the average return would not otherwise be adequate 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, thus making losses (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. Thus, one effect of antidumping is 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 US economy due to 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 of determining whether imports were sold at “less than fair value” from the free-trade-oriented Treasury Department to the Department of Commerce. Irwin (2004) shows that Commerce was far more likely 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 can choose among four calculation methods, including “facts available” method based on the petitioners’ data that accounts for affirmative decisions with an average dumping margin of nearly 96 per cent (Irwin 2002). Moreover, antidumping enforcement appears to target exporting nations that have recently gained competitiveness in the relevant industry, and especially smaller countries lacking the capacity to retaliate in kind (Blonigen and Bown 2003).

Given the intent of antidumping and countervailing duties to neutralize the impact on domestic firms of “unfair” import pricing, it is not surprising that the US 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 AD/CVD has been imposed, the DOC and the ITC 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.” If the affected industry does make a successful “adjustment” by becoming competitive and thus 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.¹⁴

2.5 WTO Rules on Subsidies

The WTO limits members' use of subsidies and also actions that members can take in response to subsidies used by other member countries. Subsidies specifically designed to distort international trade are prohibited (WTO website).¹⁵ Other subsidies are permitted unless a complaining country can show that it is adversely affected. Specifically, subsidies designed to ease adjustment by facilitating movement of productive factors out of a US industry that has lost comparative advantage would thus be permitted as long as they did not (a) hurt a domestic industry in an importing country, (b) hurt exporters in another country trying to compete in the US market, or (c) hurt rival exporters from another country in competition in a third market. Given these grounds for a complaint, subsidies designed to restore the comparative advantage of a declining US 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 US subsidies have adverse effects on another member, the US would have to withdraw its subsidies or otherwise eliminate the adverse effects. In the case of subsidies that hurt domestic producers in another country, that country could impose a countervailing duty.

¹⁴ This argument applies best in an industry with relatively few firms, imperfect competition, and restricted entry, such as steel. In section 4 we argue that protection is likely to promote competition among existing firms in an industry with vigorous domestic competition and could even encourage new entry.

¹⁵ The Agreement on Agriculture contains separate and more lenient rules on the use of subsidies on agricultural exports. A "peace clause" permitting export subsidies for agricultural products was originally due to expire at the end of 2003.

2.6 Section 301

While the provisions discussed above are concerned mainly with situations in which a US firm is injured by competing imports, Section 301 of the US Trade Act of 1974 addresses foreign practices that unfairly exclude US products from export markets. At least in principle it offers a way to promote US adjustment to shifting comparative advantage by ensuring that firms in emerging export sectors are able to find markets abroad. In fact, most of the industries represented in 301 cases seem improbable as reflections of emerging US comparative advantage. The statute requires imposition of trade sanctions¹⁶ when the US Trade Representative determines that a foreign country has violated or denied US rights under trade agreements, or has engaged in “unjustifiable, unreasonable or discriminatory acts, policies, or practices that burden or restrict U.S. commerce.” Under some other circumstances, retaliation is discretionary.

In the case of foreign “targeting,” governments may provide subsidies to exporters competing with US exporters in their own domestic market or in third markets. In this case, the US cannot respond with a countervailing duty. Under Section 301, the USTR is directed to “establish an advisory panel to recommend measures which will promote the competitiveness of the domestic industry affected by the export targeting” [§ 2415 (b) (1) (A)].

While no other areas of the statute have as clear a potential link to adjustment, there are certainly ways of structuring actions taken under Section 301 that would either encourage adjustment out of the domestic industry or facilitate its expansion. For example, although it is not politically likely, USTR could choose to retaliate over imported inputs needed by the petitioning domestic industry and thus encourage a shift out of this activity. Alternatively,

USTR could encourage expansion of the domestic industry by choosing retaliation targets that benefits the domestic industry. For example, in the Beef-Hormones 301 case, USTR chose to retaliate over imports of EU bovine and swine meat.

Both the perceived need for Section 301 and its potential scope have been reduced since the WTO was established in 1995. However, a 1999 WTO panel rejected EU claims that Section 301 procedures were not consistent with US WTO obligations.

3 Import Penetration, Comparative Advantage, and Industry Use of Trade Remedies

Table 1 describes the frequency with which many of the US trade remedy laws and programs have been used in recent years. In most cases, the “petitions” number indicates the number of industry-wide requests for US government intervention during the period indicated. However, TAA for displaced workers shows the number of petitions from individual workers, while TAA for Firms shows the number of firms certified to receive benefits.

From the standpoint of the adjustment environment created by US 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. Also, relative to other US industries, is the revealed comparative advantage of “frequent users” of trade remedies declining over time? To address these questions, we refer to Table 2.

Table 2 provides a simple comparison of measures by industry of import-penetration ratios and revealed compared advantage (RCA) for users versus non-users of some of these

¹⁶ There are significant exceptions to mandatory retaliation, including situations in which a WTO dispute settlement panel finds no violation of US rights, where the foreign country is taking steps to comply, and where compensation is provided (Grier 2001).

programs.¹⁷ 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 larger increases in import penetration over the last five years prior to the petition being filed. With the exception of the change in import penetration ratios for antidumping, that is exactly the qualitative pattern of results that 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 larger decreases over the last five years prior to the petition being filed. Again, the qualitative pattern of the results, i.e., the means and median of the data for petitioning and non-petitioning industries are consistent with that hypothesis.¹⁸

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 various 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. In the next section we consider the case of textiles and apparel, a major recipient of import relief under several of these laws.

¹⁷ Import penetration ratio is defined as $(\text{imports}) / (\text{imports} + \text{shipments} - \text{exports})$, where all data is at the 4-digit SIC level. For the RCA measure, we follow an approach used by Richardson and Zhang (1999) and define it as $[(\text{US exports of industry } i) / (\text{US total exports})] / [(\text{World exports of industry } i) / (\text{World total exports})]$, where industry i 's data is defined at the 4-digit SITC level.

¹⁸ Surprisingly, we have found few instances in the research literature of papers that examine the relationship between an industry's application for relief under a trade remedy law and the industry's RCA or its competition from imports. One exception is Magee (2001), who finds a positive relationship between TAA petitions and increased import competition. In the political science literature, Hansen (1990) looks at determinants of which 4-digit SIC industries choose to file AD cases, but she finds no evidence of an influence of import competition on AD filings for the 1975-1984 period.

4 Trade Remedies and Adjustment

With the exception of TAA, most of the policies discussed above offer some degree of protection of the domestic industry from competing imports. Even when acknowledging costs associated with protection, i.e., higher prices to consumers and downstream industries, proponents of trade remedies usually justify their use in terms of 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 effects on firms and workers in protected industries are complex, and policies are often ineffective in attaining their stated goals.

Baldwin (1982, 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 than anticipated. Country-specific trade remedies such as antidumping measures or 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.¹⁹ 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 may also shift production off-shore to avoid higher domestic prices, as in the case of laptop producers affected by US antidumping duties on flat-panel displays (Irwin 2002, 80). Industrial users of highly protected sugar shifted to alternative sweeteners; under NAFTA some candy manufacturers shifted 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.

¹⁹ Dinopoulos and Kreinin (1988) estimate that unrestricted European producers were major beneficiaries of the auto VER; the limit on Japanese sales in the US allowed European exporters to raise prices by one-third.

When faced with quantitative trade restrictions or specific tariffs in the US market, foreign suppliers often find it profitable to upgrade the quality of their exports, a response documented in Korean footwear as well as Japanese autos.

Even more important in the longer term are induced changes in the structure of the domestic industry. One such response is foreign direct investment (FDI). Although Volkswagen's ultimately unsuccessful US investment preceded Japan's voluntary export restraint, the VER played a key role in accelerating FDI in the US by Japanese firms. Contrary to the widespread belief that Japanese success relied on country-specific conditions that could not be replicated in US factories, Japanese "transplants" claimed an increasing share of the domestic market; other foreign companies followed suit. Struggling to compete, US producers have gradually introduced some of the managerial and technological approaches believed to account for Japanese success.

While foreign-controlled US plants certainly augmented domestic production and employment compared to a situation in which the same autos were imported, it has 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 traditional "big three" – i.e., protection has helped the domestic industry much more than it has helped the United Auto Workers and the firms that asked for protection.²⁰ In its last fiscal year, Toyota's earnings were more than the three US companies combined (New York Times, 20 May 2004). Moreover, the newer plants are mostly far from Detroit, and their workers are not

²⁰ Ironically, 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 US production conditions.

unionized. And, typical of most US manufacturing, output per workers has been rising for all firms, i.e., employment has been falling relative to output.

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 US industry before World War II. A 1956 VER on Japanese exports of cotton textiles to the US paved the way for entry by other exporter and fibers. Efforts to control trade diversion eventually produced the Multifiber Agreement, “the single most important barrier to developing country exports of manufactures” (Pearson 2004, 61), though scheduled for termination by 2005. Yet despite escalating protection at rising cost to domestic consumers,²¹ 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 ten (Levinsohn and Petropoulos 2001, Table 1).

Not surprisingly, the number of US 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 %, while the average gross rate of plant entry was 28%; the corresponding numbers over the same period for apparel were 46% and 49% (Levinsohn and Petropoulos 2001, Table 3). These large rates reflect relocation within the United States, as textile producers have all but abandoned high-cost locations in New England in favor of southern states. Apparel manufacturing has shifted from its traditional eastern base in New England and New York to the

²¹ Hufbauer 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.

south and California, as immigrants from Europe, once the mainstay of the labor force in the apparel industry, have been replaced by immigrants from Asia and Latin America.

Levinsohn and Petropoulos conclude that “in a probabilistic sense, inefficient firms die,” i.e., 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 marketplace should find some solace in this result.” Yet substantial continuing investment and new hires in these secularly shrinking industries raises other concerns.

The “creative destruction” in the highly 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 domestic prices and profitability. However, higher profitability can promote new investment in an industry with a shrinking domestic market, thus forcing out current plants and workers (the latter due both to plant closings and to adoption of new capital-intensive and skill-intensive technologies that raise output per worker). The creative-destruction process is the domestic counterpart of trade diversion, with demand diverted from the most efficient foreign producers to the least inefficient domestic producers. Rather than easing the adjustment burden of existing plants and workers, protection in these industries may actually add to the distress of adjustment while retarding its progress.

5 Conclusions

Our purpose in this paper is to highlight the role of US trade remedies in facilitating or retarding adjustment to changing conditions in international markets. Given that the main

rationale of most trade remedies 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 (i.e., market-friendly), let alone ones likely to facilitate or encourage adjustment. There is also 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. Likewise, given that action under trade remedy laws is usually contingent on evidence of injury that can be linked to imports, it is not surprising to find that the US industries most likely to seek help under these laws are the industries faced with the greatest challenge from international competition, i.e., the ones most in need of adjustment.

Together, these findings underscore a critical gap in US trade remedy laws and procedures. The trade remedy statutes contain no acknowledgement that the most common reason for injury due to import competition is shifting comparative advantage, and no policy is specifically aimed at promoting adjustment to such shifts. Indeed, the federal agencies charged with the responsibility of 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 tend to prolong the adjustment process and increase total adjustment costs by drawing new capital and workers into a secularly shrinking industry. Through familiar general-equilibrium linkages, the same process discourages growth of the nation's comparative-advantage sectors. The missing trade policy instrument is one that does nothing but encourage speedy exit from industries that have lost their comparative advantage. Obviously, implementing such a policy requires an objective criterion for determining loss of comparative advantage. This may be a

difficult issue to settle generically, but the policy could begin by identifying industries that owe their survival to continuing import relief.

Table 1. Frequency of US Trade Remedy Laws and Programs

| | Years of Program Availability | Number of Petitions Initiated |
|---|--|--|
| General Trade Remedy Laws and Programs | | |
| Safeguards (Section 201) | 1975- | 73 |
| Trade Adjustment Assistance (Department of Labor) | 1972- | 31076 ^a |
| Antidumping (currently Section 731) | 1921- | 2170 |
| Countervailing Duties (currently Section 701) | 1897- | 932 |
| Section 301 (USTR) | 1975- | 121 |
| Sector or Country-Specific Trade Remedies | | |
| China Safeguard (Section 421) | 2002- | 4 |
| China Textile Safeguard (Department of Commerce, OTEXA) | 2003- | 3 |
| Textile and Clothing Transitional Safeguard (Department of Commerce, OTEXA) | 1995- | 24 ^b |
| Agriculture Special Safeguard (US Notifications to the Committee on Agriculture under Article 5 of the WTO's Agreement on Agriculture) | 1995- | Hundreds of 10-digit HTS products |
| Trade Adjustment Assistance for Farmers and Fishermen (Department of Agriculture) | 2003- | 25 |
| Trade Adjustment Assistance for Firms (Department of Commerce, Economic Development Administration) | 1975- | 5435 ^c |
| Services Safeguard (GATS) | Proposed | NA |

^a Data from 1972-1994 from Magee (2001).

^b Petitions filed against WTO members only, as reported to the WTO Textiles Monitoring Body for the 1995-2001 period.

^c Firms certified; data for all firms petitioning were not available. Also missing 1979 data (Source: EDA records).

**Table 2. Shifting Comparative Advantage and Industry Use
of US Trade Remedy Laws and Programs**

| | Industry Import Penetration Ratio in year <i>t</i> | Change in Industry Import Penetration Ratio between <i>t-5</i> and <i>t</i> | Industry Revealed Comparative Advantage (RCA) Measure in <i>t</i> | Change in Industry RCA Measure between <i>t-5</i> and <i>t</i> |
|---|--|--|--|---|
| Safeguards (1975-1994) | | | | |
| Industries petitioning under Section 201 in year <i>t</i> | 0.189 [0.156] | 0.367 [0.329] | 1.110 [0.679] | -0.220 [-0.164] |
| Industries <u>not</u> petitioning under Section 201 in <i>t-5</i> through <i>t</i> | 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 <i>t</i> | 0.158 [0.112] | 0.325 [0.313] | 1.524 [0.909] | -0.086 [-0.094] |
| Industries <u>not</u> petitioning under TAA in <i>t-5</i> through <i>t</i> | 0.067 [0.031] | 0.264 [0.272] | 1.591 [0.836] | 0.053 [0.067] |
| Antidumping (1980-1994) | | | | |
| Industries petitioning under AD laws in year <i>t</i> | 0.179 [0.147] | 0.280 [0.243] | 1.307 [0.848] | -0.083 [-0.102] |
| Industries <u>not</u> petitioning under AD laws in <i>t-5</i> through <i>t</i> | 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 4-digit SIC level.
- (3) RCA is defined as [(US exports of industry *i*)/(US total exports)] / [(World exports of industry *i*)/(World total exports)], where industry *i*'s data is defined at the 4-digit SITC level.

References

- Blonigen, Bruce, and Chad P. Bown (2003) "Antidumping and Retaliation Threats," *Journal of International Economics* 60(2): 249-273.
- Corden, W. Max (1974) *Trade Policy and Economic Welfare* (Oxford: Oxford University Press).
- Dinopoulos, Elias, and Mordechai E. Kreinin (1988) "Effects on the U.S.-Japan Auto VER on European Prices and on U.S. Welfare," *Review of Economics and Statistics* 70(3): 484-91.
- Durling, James P. and Thomas J. Prusa. (2003) "Using safeguard protection to raise domestic rivals' costs," *Japan and the World Economy*, 15(1): 47-68.
- Grier, Jean Heilman (2001) "Section 301 of the 1974 Trade Act." US Department of Commerce. <http://www.osec.doc.gov/ogc/occic/301.html> (accessed 17 May 2004).
- Hansen, Wendy. (1990). "The International Trade Commission and the Politics of Protectionism." *American Political Science Review* 84: 21-46.
- Hoekman, Bernard M. and Michael M. Kostecki (2001) *The Political Economy of the World Trading System: The WTO and Beyond*. (2nd edition) New York: Oxford University Press.
- Hufbauer, Gary Clyde, and Kimberly Ann Elliott (1994) *Measuring the Costs of Protection in the United States* (Washington, D.C.: Institute for International Economics).
- Irwin, Douglas A. (2004) "Explaining the Rise in U.S. Antidumping Activity," Dartmouth College, March 5.
- Irwin, Douglas A. (2002) *Free Trade under Fire* (Princeton: Princeton University Press).
- Jackson, John H. (1997) *The World Trading System: Law and Policy of International Economic Relations*, 2nd edition (Cambridge, MA: MIT Press).

- Kletzer, Lori G. (2001) *Job Loss from Imports: Measuring the Costs* (Washington, D.C.: Institute for International Economics).
- Knetter, Michael M., and Thomas J. Prusa (2003) “Macroeconomic Factors and Antidumping Filings: Evidence from Four Countries,” *Journal of International Economics* 61: 1-18.
- Levinsohn, Jim, and Wendy Petropoulos (2001) “Creative Destruction or Just Plain Destruction? The U.S. Textile and Apparel Industries Since 1972.” NBER Working Paper 8348.
- Magee, Christopher (2001) “Administered protection for workers: an analysis of the trade adjustment assistance program,” *Journal of International Economics* 53: 105-125.
- Mussa, Michael (1974) “Tariffs and the distribution of income: The importance of factor specificity, substitutability, and intensity in the short and long run,” *Journal of Political Economy* 86(5): 775-91.
- Mussa, Michael (1982) “Government Policy and the Adjustment Process,” in Jagdish N. Bhagwati (ed.), *Import Competition and Response* (Chicago, University of Chicago Press), 73-120.
- Mussa, Michael (1993) “Making the Practical Case for Freer Trade,” *American Economic Review Papers and Proceedings* 83: 372-376.
- Pearson, Charles S. (2004) *United States Trade Policy: A Work in Progress* (John Wiley and Sons).
- Rosen, Howard (2004) “Trade Adjustment Assistance and Offshore Sourcing,” <http://www.newamerica.net/index.cfm?pg=article&pubID=1486> (4/9/2004).
- Richardson, J. David, and Chi Zhang (1999) “Revealing Comparative Advantage: Chaotic or Coherent Patterns Across Time and Sector and US Trading Partner?” NBER Working Paper 7212.