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PROTECTION AND RETALIATION:
CHANGING THE RULES OF THE GAME

by

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Abstract

An examination of the macroeconomic, political, and institutional environment of the 1930s and the 1980s suggests a set of stylized facts associated with periods of trade tension and incidents of trade retaliation. Periods of macroeconomic stress precipitate changes in the conduct of and implementation of U.S. trade policy, which then can lead to escalating trade tension, protectionist measures, and perhaps retaliation. Macroeconomic stress, especially when linked to external events, decreases the political benefits of following a liberal trade policy and changes the economic consequences of following a particular trade strategy. As a result, it may be difficult for trading partners to predict the conduct of U.S. trade policy. Moreover, in reexamining its commitment to free trade, the United States may change its response to policies abroad. Finally, the United States may not only deviate from its established behavioral norms, but may also stray from the consensual international code of trade conduct.

These stylized relationships between macroeconomic environment and political and institutional pressures are applied to a simple game-theory paradigm. Changes in the environment and balance of political power change the elements of a payoff matrix. The policy implications of the model are that the United States should, subject to the constraints of a democracy, make clear both the direction of its trade policy and the magnitudes of any penalties. Much of the tit-for-tat trade retaliation observed in recent months may represent just such a communications effort.

Protection and Retaliation:
Changing the Rules of the Game

by

Catherine L. Mann¹

A quick perusal of the daily paper suggests that trade is the hotbed of economic policy. There are flareups between many countries, but the United States seems to be involved in more than its share. Canada and the United States are skirmishing over stumpage fees for lumber and support prices for corn. The European Community and the United States recently reached a truce in their disagreement over grains and luxury edibles. But, they are now arguing about airplanes and oilseeds. The United States and Japan are circling in round two of their semiconductor match. Germany and Switzerland refuse to restrain voluntarily their exports of machine tools to the United States. U.S. soybean producers demand a countervailing duty on Argentine soybean products because, they charge, Argentina's differential export tax encourages soybean production. Do these trade problems have a common foundation? Do the specific disputes threaten to escalate into broader-based conflicts with more products or more countries involved? Can the historical record enlighten us as to the causes and consequences of such trade arguments?

1. The author is a staff economist in the International Finance Division. This paper represents the views of the author and should not be interpreted as reflecting the views of the Board of Governors of the Federal Reserve System or other members of its staff. Many thanks to Eric Fisher and Charles Thomas. But, they should not be held responsible for my eclectic approach to game theory. Thanks also to Ralph Tryon, Dale Henderson, Ellen Meade, Charles Siegman, and Peter Hooper. None of the above are responsible for errors. This paper was presented as part of the Symposium on Trade Policy at the Brookings Panel on Economic Activity, April 2 and 3, 1987.

This paper suggests that periods of macroeconomic stress precipitate changes in the conduct of and implementation of U.S. trade policy, which then can lead to escalating trade tensions, protectionist measures and perhaps retaliation. The focus is on changes in the conduct of U.S. policy primarily because the consequences of a change in the conduct of the largest trading nation are probably greater than the consequences of any other trading nation changing the conduct of its external policy. Moreover, in the past two years, the United States arguably has changed its approach to trade policy to a relatively greater degree than have other countries. Macroeconomic stress characterizes both the period around the passage of the Smoot-Hawley bill in 1930 and the present day. Examining the Smoot-Hawley period from 1929 to 1931 may provide some historical perspective for present day trade problems. In addition, a simple game theory model of trade policy will be presented that focuses on several key variables that might be important in determining trade policy strategy. In addition, the model suggests that uncertainty may play a role in trade policy strategy.

Similarities between the Smoot-Hawley era and the present day include (1) severe macroeconomic imbalances, (2) a Congress (with its regional constituency) relatively more aggressive on trade issues as compared to the Presidency (with its national constituency), and (3) policy-makers who incorrectly ascribe to trade policy the ability to ameliorate the consequences of macroeconomic disequilibria. These three factors working together produced the Smoot-Hawley Act of 1930. Tariffs were increased on thousands of products, with the average tariff rate on dutiable imports rising from 40 percent in 1929 to 53 percent in 1931, an increase of 32.5 percent. Between 1980 and 1986, these three factors

contributed to a more than doubling of the number of countervailing duty and antidumping cases (93 cases were filed in 1980, 197 cases in 1985, and 79 cases filed between January and April this year). Under Section 301 of the 1974 Trade Act, as amended in 1984 ("unfair" foreign trade practices), the caseload increased from 11 in 1980 to 42 in 1986 to 11 thus far in 1987.

However, there have been other historical periods characterized by these three economic and political factors without the apparent breakdown of international consensus about the conduct of trade policy that produces retaliation. In 1922, the Fordney-McCumber Act raised average tariff levels 9 percentage points to 38 percent. Yet, there was not the degree of retaliation for this tariff hike that is attributed to the Smoot-Hawley tariff. In the 1960s and 70s, the United States and the European Community (EC) skirmished over steel and chickens, citrus and pasta, without the specter of Smoot-Hawley appearing in the diplomatic and popular press alike.

Therefore we need a critical fourth characteristic common to the Smoot-Hawley period and today: in both periods, our trading partners considered U.S. actions to be either unjustified under some notion of "proper" international behavior, or unexpected given the past behavior of the United States in international trade negotiations. In 1930, the United States failed to play by the established code of conduct: it indiscriminately increased tariffs, many with no apparent domestic objective, and it imposed tariffs while in current account surplus. More recently, the United States has changed the way it interprets the rules of the game: it has widened the scope of foreign policies that elicit off-setting duties, and it has increasingly used trade threats against

one industry to extract trade concessions in another industry. There are two possible outcomes of such changes in established behavior: other countries agree to negotiate on the new terms, or they decide not to negotiate and instead may retaliate.

A simple game theory payoff matrix in which two countries can choose to negotiate to open markets or retaliate and close markets will frame these stylized facts. For example, macroeconomic stress changes the political and economic benefits of pursuing an open-markets trade policy, thus changing elements of the payoff matrix. If the United States increases the range of foreign policies that elicit off-setting penalties, or links infractions in one industry to penalties in another industry, this also changes the payoffs in the matrix. When the United States changes its established behavior by threatening to impose penalties, our trading partners must decide whether to believe the threat. We can think of this as altering the probability the trading partner puts on the payoffs in the old matrix versus the payoffs in the new matrix. The magnitude of the change in the payoffs and the likelihood that these changes reflect a new strategy are both critical determinants of whether countries end up in a trade war with closed markets or decide to negotiate and open markets.

The structure of the paper is as follows. The next section describes in more detail the features of the macroeconomic, political, and institutional landscape common to the Smoot-Hawley era and to the present. This examination suggests a set of stylized facts about the political and economic gains or losses of following a particular trade policy strategy. This section also develops more fully the similarities and differences between the League of Nations and the GATT for their

codifying of the rules of the game for their dispute settlement procedures, and the extent to which these differences contribute to a reduced likelihood of a trade war today.

Then I suggest how a set of simple game-theory payoff matrices can provide a framework for these stylized facts. The model suggests that retaliation after the Smoot-Hawley tariff was not a necessary result, nor is it a necessary result today. The analysis further points out what factors may be important contributors to a negotiated outcome, instead of a round of retaliation.

Following that, I discuss incidents of retaliation for the Smoot-Hawley bill and analyze some cases of protection and retaliation from the 1980s. This event analysis fits the hypotheses generated by the game-theory analysis.

Macroeconomic, Political, and Institutional Environment

Macroeconomic Environment

In terms of severity, global reach, and depth of economic dislocation, there is little comparison between the macroeconomic problems of the 1930s and the 1980s. Nevertheless, relative to recent historical experience, the macroeconomic imbalances of the 1980s are severe, especially from the viewpoint of the United States. Moreover in both time periods, most economists believe the proximate causes of the macroeconomic imbalances to be macroeconomic in nature. Yet, in both periods, policy-makers turned to trade policy to provide at least a partial solution to the macroeconomic problems.

In the late 1920s and early 1930s, price deflation and unemployment were the most severe problems. Between 1929 and 1931, agricultural

prices fell 50 percent. Unemployment rose from 3.2 percent in 1929 to 15.9 percent in 1931. Many economists argue that the proximate cause of the Depression was monetary restraint combined with fiscal inaction. But, at that time, the policy-makers' solution to the problems of deflation and unemployment was to raise domestic prices and redirect demand towards domestic producers by increasing tariffs. For the Republican Party, then in office, the tariff was the "household remedy". Moreover, "all the popular debates of the last generation ... inculcated the belief that the mere imposing of a duty served at once to benefit the domestic producer....The rank and file welcome(d) immediate and drastic tariff charges".² Unfortunately, prohibitive tariffs imposed by all countries drives trade to zero.³ Thus, the Smoot-Hawley Tariff Act combined with retaliation and other economic dislocations of the time achieved exactly the opposite result from what policy-makers had hoped. Agricultural prices continued to slide, and the unemployment rate rose to 24.9 percent by 1933.

In the 1980's, the massive current account deficit in the United States is the key imbalance. Causes include the large U.S. fiscal budget deficit and a relatively low U.S. personal savings rate. The Gramm-Rudman-Hollings deficit reduction bill attempts to target the macroeconomic imbalance at its source. But, the omnibus trade bills currently in Congress focus on righting the trade imbalance through trade policy actions such as surcharges on imports from certain trading

2. Taussig, in Liepmann, p. 225.

3. The original article discussing optimal tariffs and retaliation is Johnson (1953). He shows that two large countries with elastic offer curves will drive trade to zero if they both try to impose optimal tariffs. However, if one of the offer curves has an inelastic portion, trade will not go to zero. Kuga (1973) presents this argument more formally. Rodriguez (1974) examines quotas and retaliation, finding the same basic result.

partners enjoying large bilateral surpluses with the United States, and linking U.S. imports of certain countries' products to U.S. export performance in those countries' domestic markets.

Real exchange rate variability also encouraged the use of the tariff in the 1930s. Under the notion of the "scientific tariff", the appropriate tariff was the one that equalized the costs of production at home and abroad. As the Depression deepened, post-war gold parities broke down and even Britain left the gold standard. In the ensuing "currency warfare ... tariffs became a very important weapon ... in meeting the competition of the European and overseas devaluation countries (the countries overseas that were devaluing)...".⁴ A commentator of the time agreed, noting that "stabilization of currencies" (as well as a removal of the "hindrances to trade") would be necessary before the "existing economic situation could be ...improved".⁵

In the 1980s real exchange rate variability has quite likely been one of the causes of increased trade complaints by U.S. industries. As the dollar appreciated, U.S. companies filed an increasing number of cases petitioning for emergency protection from import surges. Other companies charged foreign importers with pricing below cost of production or sales price in their home markets through the countervailing and antidumping (CV/AD) statutes. The CV/AD caseload more than doubled from 1980 to 1985. As the dollar depreciates, the number of CV/AD cases are rising as foreigners cut profit margins and prices on goods sold into the U.S. market in an effort to maintain their market share in the United States. With 79 cases filed between January and April this year this

4. Liepmann, p.362.

5. Liepmann, p. 355.

suggests (projected at an annual rate) a further increase of 20 percent over the 1985 caseload.

Another similarity between the 1930s and the present is the magnitude of some countries' external debts, and the concomitant pressures on them to reduce their imports in order to repay these debts. In the 1930s German war reparations (had they been paid) ranged up to 50 percent of exports. Liepmann says, "Pressure of reparations ... considerably accentuated the pace of German agrarian tariff policy.... It was essential to cut Germany's agrarian imports.... in order to rectify the German balance of trade and provide the necessary foreign currency for reparations."⁶ In the 1980s, the pressures on the Latin debtors to reduce their imports exacerbated the U.S. current account deficit. In 1980, U.S. exports to Latin America accounted for 17 percent of export volume. By 1985, that share had dropped to 14 percent.

Political Environment in the United States

Besides Congress' use of external policy to resolve macroeconomic imbalances, there are other similarities in the political environment between the Smoot-Hawley period and now. In both periods, Congress has been more aggressive in asserting its Constitutional right over the direction of trade policy. The Smoot-Hawley bill was the "last general congressional review of the tariff"⁷. Congress reviewed every tariff rate on every product. Others suggest that Smoot-Hawley resulted from Hoover refusing his role as moderator of special interest groups, and then waiving his veto power.⁸ Characteristics common to the House and Senate Omnibus trade bills include special treatment for a number of

6. Liepmann, p. 362.

7. Dobson, p. 35.

8. Schattsheider, p.293.

specific industries and restrictions on the President's discretionary powers over trade policy decisions.

Historically, Congress legislated changes in tariff rates because of its constitutionally-mandated power to levy taxes. Over the decade prior to Smoot-Hawley, Congress delegated some of its power to the President. The Fordney-McCumber Tariff of 1922 gave the President authority to adjust tariffs on specific commodities up or down 50 percent. Congress gave the President this flexibility because it believed the pace of technological progress, and therefore the decline in foreign prices, was too quick for it to submit each specific tariff case to legislative review. The President could raise (or lower) a tariff on a specific product to equalize the domestic and foreign costs of production as calculated by the non-partisan Tariff Commission (predecessor to the International Trade Commission). In fact, the President made only 37 changes in specific tariffs between 1922 and 1930 (35 were increases).⁹

However, as the economic dislocation of the Depression deepened and prices continued to fall, Congress reasserted its right over the specifics of tariff policy and produced the Smoot-Hawley Tariff Act of 1930. While starting out as a bill to increase agricultural tariffs, Smoot-Hawley could not have passed had the agricultural interests not formed a coalition with certain manufacturers.¹⁰ Eventually, the bill engendered 20,000 pages of testimony covering 25,000 products. An example of the remarkable detail in the bill is the treatment of cork; there were eighteen different tariff rates for various types of cork.¹¹

9. Isaacs, P. 255.

10. Eichengreen, p. 18.

11. Isaacs, p. 238.

After Smoot-Hawley passed, dutiable imports rose from 34 percent of total value of imports in 1929 to 48 percent of total value in 1931. Average duties on dutiable imports rose from 40 percent in 1929 to 53 percent in 1931, and to 59 percent in 1932.¹²

Turning to the present, Congress is again asserting its mandate to direct trade policy. The omnibus trade bills contain articles limiting the right of the President to veto trade protection for industries which have received an affirmative judgement of injury by the International Trade Commission (ITC). Other articles would require the President to retaliate against the imports of countries if the ITC determines that they use unfair trade practices to restrict U.S. exports. Unfair trade practices are defined very broadly, ranging from domestic "market reservation" policies to targeting "traditional" U.S. overseas markets. Moreover, unlike the 1974 trade bill (which had few amendments warranting special treatment for specific industries) amendments to the omnibus trade bills currently in Congress single out for special treatment industries such as titanium and telecommunications, as well as steel and textiles.

Institutional Environment

There are today and were also in the 1930s multilateral forums for the discussion of international trade problems. In the late 1920s and early 1930s the League of Nations sponsored several meetings to discuss limiting tariff increases. These conferences were essentially crisis management and focussed mostly on trying to arrest the unraveling international trade situation in Europe. Today, the GATT principles represent the general international consensus on the norms of appropriate

12. Eichengreen, p. 22a.

trade policy behavior. Perhaps because the GATT principles are relatively clear (even if their implementation is woefully vague) and because the signatories agree to bring trade disputes to the GATT, there is hope that the Uruguay Round will be more successful at preventing an escalating trade war than was the institutional environment of the 1930s.

The World Economic Conference of 1927, attended by representatives from 50 nations, unanimously concluded "that the time has come to put a stop to the growth of customs tariffs and to reverse the direction of movement."¹³ As the business cycle turned in 1929, the Economic Committee of the League of Nations noted with great concern that "in spite of a few sporadic efforts no decisive movement has occurred in this direction"¹⁴ It called for a two-year tariff truce. Thirty nations sent delegates with negotiating authority, and seven nations sent observers to the Convention of March 1930 which produced a draft agreement stating that signatories would not abrogate their existing commercial treaties for at least two years and would only increase tariffs in the case of an (undefined) domestic emergency. But, this draft text was never put into practical effect. By the spring of 1931, "...all the attempts made on the initiative of the League of Nations Assembly of the Autumn of 1929, to give effect to the urgent exhortations of the World Economic Conference of 1927 to effect a reversal in tariff policy ended in complete fiasco."¹⁵ An escalating round of tariff increases was underway; nothing could stop it.

One of the factors that may help prevent escalating retaliation today is the GATT. The GATT Articles, signed by nearly 100 nations (with

13. Liepmann, p. 348.

14. Liepmann, p. 348.

15. Liepmann, p.352.

more joining) are vaguely worded, cannot be enforced, and are critically uncomprehensive in both the range of trade issues addressed and solutions allowed. Nevertheless, maybe by weight of numbers, GATT does represent a consensus of what most countries believe should be the guiding principles of external policy. Those principles are transparency and nondiscrimination; protection should be based on a price mechanism and be limited in time and scope; and countries must compensate their trading partners if they invoke emergency protection. Moreover, GATT Contracting Parties agree to bring trade disputes to GATT, even if results of the committee deliberations cannot be enforced. If nothing else, "taking the case to GATT" may help diffuse protectionist sentiments in political forums in some countries.

However, interpreting and implementing the principles are quite difficult, especially when doing so causes domestic and external policy objectives to conflict. The most contentious issues in the drafting of the agenda for the Uruguay round were the inclusion of services trade, agricultural subsidies, and intellectual property rights. In all these areas, there are clear conflicts between domestic objectives and the obligations of the GATT principles.

To sidestep some of the principles and obligations of GATT, members turn to policies that are not within the spirit of GATT, although they are not explicitly outside the letter of GATT. Market reservation schemes, non-tariff barriers, and voluntary restraint agreements on exports are several examples. These policies are derogations from the GATT principles; they weaken the GATT consensus. Maintaining an established consensus for international behavior may be key to avoiding an escalating round of tariff retaliation.

To summarize the themes common to the 1930s and the 1980s and to preface the remaining sections of the paper: First, U.S. involvement in trade skirmishes is more frequent during periods of macroeconomic stress in the United States that are correctly or incorrectly attributed to causes external to the United States. Second, during these periods, the political and perhaps the economic costs of maintaining a liberal trading environment become greater. Certainly the economic costs to certain industries increase, and so do their lobbying efforts in Congress. Yet, these factors alone are not likely to cause countries to choose a "retaliatory" trade policy that closes markets to trade.

Congress responds to general concern and specific interests by changing the conduct and implementation of U.S. trade policy by, in part, deviating from the established international "rules of the game". These norms, codified in GATT, derive from an international consensus, however vague and uncomprehensive, about what types of disturbances warrant what kinds of trade policy actions. U.S. trade law reflects these same principles, but Congress has a fair degree of power over how broadly or how aggressively to interpret the rules.

This change in established behavior by the United States is the most important consequence of macroeconomic stress in the United States because it may confuse our trading partners as to the future course of U.S. trade policy. Trading partners may not fully understand why the United States is now complaining or even retaliating against their policies that heretofore had been acceptable under the United States' earlier interpretation of the rules of the game when the U.S. current account was closer to equilibrium. Once the largest trading partner decides to play with a different set of rules, other countries can

similarly reinterpret the rules to their advantage. The consequences of trading partners failing to agree on the rules of the game are confusion, threats, and perhaps retaliation.

A Simple Game-Theory Presentation of the Stylized Facts of Protection

A simple game-theory model will help show how both a change in the political and economic payoffs to applying protection and possibly a change in the perceptions by a country's trading partners that it has changed its trade policy strategy could result in either negotiation that opens markets to trade or retaliation that closes markets to trade.¹⁶

As noted in the title to this section, the following model is a simple presentation of the stylized facts using a game-theory paradigm. Virtually all the difficult aspects of the solution are saved for another paper (forthcoming) and I ignore the technical aspects of game theory that would stand in the way of this simple presentation.

Consider the payoff matrix displayed in Figure 1.¹⁷ The two countries A and B can choose two strategies, negotiate (N) or retaliate (R). We can think of the "negotiation" strategy as one where the countries reduce tariffs and open their markets to trade. The

16. Thursby and Jensen (1983) use a conjectural variations approach to analyze how the magnitude of an optimal tariff changes with an increase in the likelihood of retaliation. They find that an increased likelihood of retaliation by one player decreases the tariff that is optimal for the other player to apply. Riezman (1983) considers an equilibrium where two players negotiate tariffs. The negotiated tariffs lie between the optimal tariff rates of the two players. The relative size of the two actors is key to the magnitude of the negotiated tariffs; the larger player's tariff is closer to its optimal tariff.

17. The values in the following matrices have been selected so that equilibrium will be achieved in the quadrant that best reflects the stylized facts of the historical analysis. While the magnitude of any payoff can change somewhat, their relative sizes are not so flexible. A good overview of the applications of game theory to international problems is McMillan (1986).

"retaliation" strategy increases tariff levels and closes markets to trade. The elements of the cells show the payoffs (which could be measured in utility terms) that each country obtains at the equilibrium of their joint strategies.¹⁸ For example, if the equilibrium results in each country negotiating and opening its markets, country A obtains A^{NN} units of utility and country B obtains B^{NN} units of utility. When country B negotiates and country A retaliates is an equilibrium, the payoffs are shown in the southwest cell where country A obtains A^{RN} units of utility and country B obtains B^{RN} .¹⁹

18. We could think of payoffs in the matrices coming from a social welfare function where the payoffs from pursuing any particular strategy is a function of macroeconomic events and trade policy lobbying activity. Some of the macroeconomic variables that presumably would appear in the welfare function are unemployment, GNP growth, inflation, and possibly the magnitude of the trade deficit. The weights on these various targets are likely to change however as the macroeconomic environment changes. Moreover, politicians voting for the policies to achieve the targets must also consider the likelihood of reelection. The weights on the macroeconomic targets may be affected by the political business cycle, as well as any tradeoffs between regional constituency and national constituency.

One strand of the economics literature focuses on this latter point of lobbying and the political economy of tariff formation. A good overview piece on this topic is Robert Baldwin (1982). A number of other papers (Wellisz and Wilson (1986), Findlay and Wellisz (1982), Mayer (1984), Feenstra and Bhagwati (1982)) examine in more detail the outcome of lobbying behavior where politicians and workers play a game against each other to determine the magnitude of a protective tariff. Both players weigh political and economic costs and benefits, and in some cases consider the welfare effects to the nation as a whole of applying a tariff. Mayer returns to first principles to examine how ownership of capital and labor, factor mobility, and industry diversification affect the negotiated tariffs.

19. Two articles that explicitly acknowledge the role of retaliation in the tariff formation process are Mayer (1981) and Richard Baldwin (1986). Mayer's paper focuses mainly on optimal tariffs and retaliation in the case where players are of different economic sizes. But, he does consider the implication for the home country's tariff choice if there are domestic lobbying groups of different size and strength. Baldwin focuses on how the likelihood of retaliation in export markets should affect the lobbying activity for tariff protection in the home market. He assumes that firms produce for both domestic and overseas sales.

Figure 1

		country B	
		negotiate	retaliate
country A	negotiate	A^{NN}, B^{NN}	A^{NR}, B^{NR}
	retaliate	A^{RN}, B^{RN}	A^{RR}, B^{RR}

Equilibrium in any particular cell results from a cooperative decision to pursue particular strategies, but can also result from the countries failing to cooperate. For example, the payoffs shown in Figure 2 yield a non-cooperative equilibrium in the closed markets corner of the matrix (the southeast corner) where both countries (in this case Europe and the United States) lose 4 units of utility.²⁰ If these two countries cooperated, they could reach a negotiated outcome where each obtains 1 unit of utility.²¹

Figure 2

		United States	
		N	R
Europe	N	1, 1	-5, 2
	R	2, -5	-4, -4

20. The non-cooperative equilibrium is the one where each country chooses its best policy given the choice of the other country. In this case, if the United States chooses a strategy first, it chooses R. Europe then chooses R because if it chooses N it will lose 5 units of utility instead of only losing 4 units. A similar argument holds for the United States.

21. Cooperation cannot be obtained in the one-shot game presented here because there are no future negotiations in which Europe can bribe the United States into choosing the negotiation strategy. Trade policy is a natural application for the repeated game format. But, I have not chosen that technique here because I wish to focus more on the problem of uncertainty.

Figure 2 could represent payoffs faced by Europe and the United States during the Smoot-Hawley period. The United States believed that closing its markets would increase domestic demand leading to a higher payoff than would free trade ($U^{NN} = 1$ while $U^{NR} = 2$). However, once the United States choose the closed markets strategy, Europe minimized its losses by also choosing the closed markets strategy. There is no way in this one-shot game to avoid the worst-case outcome.

But suppose neither Europe nor the United States had full information regarding the payoffs. For example, suppose the payoff from choosing the open-markets strategy could be either to gain 1 unit or to gain 3 units. In this case, the expected payoff of the negotiation strategy would be a simple weighted average of the two possible outcomes. In other words, during the Smoot-Hawley period both the United States and Europe might have weighted the gains from trade too lightly, perhaps because of political pressures from lobbying groups. Figure 3 shows this structure, where q , the weight, is assumed for simplicity to be equal for the United States and Europe.

Figure 3

		United States	
		N	R
Europe (E)	N	$q*1+(1-q)*3, q*1+(1-q)*3$	-5, 2
	R	2, -5	-4, -4

For any q less than .5 the United States and Europe could reach the open markets outcome even without having to cooperate. Thus this analysis suggests that uncertainty regarding payoffs could be important in determining the outcome of trade negotiations.

Consider now the present day situation. Instead of focusing on uncertainty regarding the payoffs, I will examine the effect of uncertainty facing the United State's trading partners with regard to the overall conduct of U.S. trade policy. Suppose the other country is Japan, and payoffs are shown in Figure 4. We can think of matrix 4a as displaying payoffs prior to about 1985.²² In matrix 4a, the equilibrium that obtains when each country pursues its own best interests without cooperating with the other country (the non-cooperative equilibrium) is in the southwest corner. An equilibrium in this corner could obtain if the social utility function in the United States weights the moral imperative of maintaining a liberal trading environment more highly than the economic losses associated with Japan's strategy of closed markets. This result could come from a variety of different weights on moral benefits versus economic costs in the utility function.

Figure 4

	matrix 4a			matrix 4b		
	United States			United States		
	N	R		N	R	
Japan	N 4,4	2,2		N 4,3	-2,2	
	R 8,3	0,0		R 8,-1	-4,0	
	pre-1985			post-1985		

22. I choose this date only because that is when the President initiated his trade policy "Strike Force". Also in that Congressional year, the House and Senate started work on a new Trade bill.

The historical analysis suggests that for the United States the balance between moral benefits and economic costs of pursuing a free trade policy has changed over the last several years, thus affecting many of the entries in the matrix. The large current account deficit increases the political and economic consequences in the United States of maintaining a liberal trading environment, and reduces the utility obtained by being a free-trader. This change may reduce the payoff to the United States associated with a negotiation strategy (U^{NN} falls from 4 to 3, and U^{RN} falls from 3 to -1). The U.S. Congress has made it easier for U.S. industries to obtain injury judgements and protection and to impose penalties for dumping. This change increases the penalty facing Japan if the United States retaliates (J^{NR} changes from 2 to -2, and J^{RR} falls from 0 to -4). Figure 4b shows values consistent with these stylized facts.²³

The key question is will the change in the conduct of U.S. trade policy, as parameterized by values in payoff matrix 4b, change Japan's strategy (trade policy) from a closed-markets strategy to an open-markets strategy? Will uncertainty about whether U.S. policy has in fact changed cause Japan to underestimate the expected value of the open-market strategy, and therefore to choose the closed-markets strategy, forcing the United States into a trade war? The answers to these questions depend on (1) whether the United States can credibly threaten to retaliate if Japan chooses the retaliation strategy, (2) what probability Japan assigns to the likelihood that Figure 4b accurately reflects U.S.

23. In this example, I assume that all the entries in the matrices are known with certainty. What is uncertain is how Japan weights the two matrices; in other words to what extent Japan "believes" that the payoffs for the United States have changed and that therefore the United States will change its strategy.

payoffs, and (3) the magnitude of the difference between Japan's positive payoff if it negotiates and its penalty if it chooses a retaliation strategy and the United States retaliates as well.

Changing the payoff U^{RN} from 3 in matrix 4a to -1 in matrix 4b creates a credible threat; it is no longer in the U.S. interest to negotiate regardless of Japan's strategy. If Japan chooses the retaliation strategy, then the United States will choose that strategy as well. Japan will lose 4 units of utility, while the United States will get a zero payoff. However, this credible threat is only effective in getting Japan to change policies to the open-markets strategy if Japan puts enough weight on payoffs in matrix 4b. Therefore, it is a combination of magnitude of the change in payoffs as well as the priors Japan puts on the state of the U.S. Congress that determine whether the negotiation or retaliation equilibrium results.

Let p equal Japan's prior that matrix 4a accurately reflects the payoffs associated with U.S. trade policy, and so will dictate U.S. conduct. Calculate the expected payoffs for Japan assuming that the United States chooses strategies as represented in the two matrices. If Japan chooses a negotiation strategy, its expected payoff is:

$$N = p * J_{pre}^{NN} + (1-p) * J_{post}^{NN} = p * 4 + (1-p) * 4 = 4.$$

If Japan maintains the closed-markets strategy, its expected payoff is:

$$R = p * J_{pre}^{RN} + (1-p) * J_{post}^{RR} = p * 8 + (1-p) * (-4) = 12p - 4.$$

If p , the belief that the United States has not changed its payoffs of conduct, is greater than .67, then Japan will keep the closed-markets strategy, the United States will change to that strategy and the retaliation/trade war equilibrium obtains. ($p=.67$ is where the expected value of the negotiation strategy equals the expected value of the retaliation strategy.) But, for any p less than .67, the expected value of the negotiation strategy is greater than the expected value of the retaliation strategy. Japan will choose the open-markets strategy and the United States will do likewise. The United States is better off, although Japan is not as well off, as in the equilibrium strategy in matrix 4a. But both are better off than they would be under the retaliation-retaliation strategy in matrix 4b.

What can the United States do to get Japan to choose the negotiation strategy? It can increase Japan's prior that matrix 4b represents the true payoffs and strategies; we could call this increasing the threat of retaliation. Or, the United States can increase the penalties of the retaliation-retaliation equilibrium (which will also affect the breakeven prior that the United State's conduct has in fact changed).²⁴ The posturing in Congress, the threats of retaliation, the stricter application of trade laws, and actual incidents of retaliation by the United States, are ways of communicating changes in the values of the payoffs and informing trading partners that they should not look back at the payoffs in the old game, but should look forward at the payoffs in the new game.

24. In a repeated game framework, we could think of a set of payoff matrices each representing an update on what Japan believes are the payoffs.

However, this very simple example points out that we cannot be sure that the outcome for either or both countries is superior to that obtained before the U.S. changed its conduct (that outcome associated with matrix 4a). (Notice that the U^{NN} element in matrix 4b is the same as U^{RN} in matrix 4a.) But, it is clear that the open-markets strategy is superior within the confines of the payoffs in matrix 4b. Therefore, the uncertainty about whether U.S. conduct has in fact changed is critical for the correct choice of trade strategy by the trading partner. That is why when the largest trading nation changes the way it plays the game, confusion and possibly retaliation results, at least until the rules of the new game are known to all.

Retaliation

The model suggests that the retaliation equilibrium, where both countries pursue a trade strategy that closes markets, is more likely when the losses due to that outcome are small or are weighted too little by the other country when it tries to determine if trade strategy has changed. The historical record on retaliation after Smoot-Hawley and present trade policy disputes support this hypothesis.

Smoot-Hawley Period

Not all the tariff increases in Europe and Latin America during the 1930s can be attributed to the Smoot-Hawley tariff. As noted above, the League of Nations convened a conference to discuss tariff increases in Europe well before Smoot-Hawley was even in committee. Distinguishing between retaliatory trade actions and ones that a country would have taken anyway is extremely difficult, both in contemporaneous time and certainly no less so looking back in the historical record.

Nevertheless, I will present three examples where the timing and the specificity of the actions suggest the countries were retaliating for the Smoot-Hawley tariff. A key theme of these cases is that these countries retaliated because they felt that the U.S. tariff action against them was a violation of the established code of international behavior -- the United States had violated the "rules of the game". The Smoot-Hawley tariff violated the rules in two ways: First, the U.S. applied the tariff when it was a creditor nation. Second, a number of the tariff increases apparently had no domestic objective; it seemed they were pure harassment.

During the 1920s and 1930s, many politicians and economists believed that international flows of gold, as well as of credit, determined domestic and international growth and stability. The Smoot-Hawley tariff undermined these flows.²⁵ In a textbook model of the price-specie flow mechanism, surplus countries gain gold supplies leading to increases in domestic wages and prices. This in turn increases absorption and reduces competitiveness, stemming the gold flows into the country. Restricting gold flows by limiting trade implies that deficit countries could not hope to improve their situation by means of increasing competitiveness.

The Smoot-Hawley tariff restricted U.S. imports when the United States was enjoying a current account surplus. Some politicians even hoped that Smoot-Hawley would return the country to autarchy. Other countries interpreted this behavior as trying to reduce permanently the gold supply in circulation, yielding further declines in prices and

25. In fact, Eichengreen hypothesizes that Smoot-Hawley probably worsened the Depression more through its influence on the international financial system than through anything else.

activity in the deficit countries. As stated by Liepmann, "nothing has contributed more to the impeding of international trade relations than the American Tariff of 1930, by which the the greatest creditor nation in the world surrounded itself at the moment of severe crises with the highest tariff walls in its history, intending to exclude entirely all imports".²⁶ Isaacs reports that Italian editorials charged the United States with "attempting to corner the gold supply and ruin the entire world, especially Italy".²⁷ Kindleberger summarizes: the United States "failed to act like a creditor nation".²⁸

Another element of the established code of international trade conduct was that tariffs could be applied to protect domestic industry. But, the Smoot-Hawley tariffs hit innumerable products that the United States did not, or in some cases could not, produce. As stated in Isaacs, "many of the items are not competitive with American items because they come from different climates or resources not found in this country....Few, if any, can be regarded as competing with products of American 'infant' industries. On the other hand, many of these products are vital to the protesting countries since they constitute important export items."²⁹ The 1000 percent increase in the tariff on cashew nuts was, "unjustified (because the) United States (does) not produce cashews. (The) cashew industry in British India will be destroyed."³⁰

U.S. trading partners watched the Smoot-Hawley bill barrel through Congress, becoming more far-reaching each day. More than 1000 economists warned of the dangers of retaliation and the consequences to economic

26. Liepmann, p. 363.

27. Isaacs, p. 236.

28. Kindleberger, p. 132.

29. Isaacs, p. 231.

30. Isaacs, p. 231.

activity of a world trade war. About 35 countries sent official cables threatening retaliation should the bill become law. Some of the foreign cables were diplomatically worded, others more strident. The Japanese government cabled, "Japan's purchasing power is in a large measure derived from her exports, especially that to the United States. Any decrease in her exports to the United States, therefore cannot but reduce her demand for American products."³¹ France cabled that there were "protests...on the part of numerous groups of exporters and manufacturers (because the) minimum French tariff has been granted to almost all American merchandise without the slightest corresponding advantage having been obtained for French trade..."³² When the Smoot-Hawley bill became law, some countries retaliated by selectively imposing tariffs on U.S. exports (Spain, Italy, and Canada); others required a zero bilateral trade balance (Italy); and still others removed U.S. products from most-favored nation status (Canada).

Fish, cork and other agricultural products from Spain were targets of Smoot-Hawley. A combination of tariff and non-tariff barriers caused U.S. imports of cork to fall to zero from 51 percent of Spain's output in 1929. Spain retaliated by increasing tariffs on U.S. assembled autos by 100 to 150 percent. To avoid transshipment of unassembled autos through Europe, Spain taxed those as well. Duties on other manufactured products in which the United States enjoyed a comparative advantage, such as sewing machines, motorcycles and razor blades, also rose substantially, as much as 700 percent in the case of the razor blades. Moreover, the Spanish market for U.S. exports was ruined as France "within six weeks

31. Isaacs, p. 232.

32. Isaacs, p. 232.

sent a brilliant crew of commercial experts to negotiate a treaty with Spain (such that) France found herself enjoying preferential treatment on practically all the commodities which our exporters lost."³³

U.S. auto exports were a target in Italy in retaliation for Smoot-Hawley tariffs on ships, marble, and textiles. Retaliation was not only pecuniary, but also took the form of moral suasion. "Un-heard of duties" stopped car imports and Ford closed its assembly plant. In addition, "Italian drivers were embarrassed and annoyed by having their tires puncturedThe Royal Automobile Club of Italy wanted to publicize the names of all Italians buying American cars." Mussolini said, "We will buy in the United States only the amount of goods equivalent to the amount of goods the United States will buy in Italy." Exports from the Soviet Union to Italy rose from \$18 million in 1929 to \$29.5 million in 1931 (during a time when world trade value fell in half), suggestive of who replaced the U.S. exporters in the Italian market.³⁴

The Smoot-Hawley bill targeted Canadian products from all provinces. Moving from east to west, Smoot-Hawley increased tariffs on halibut, dairy, potatoes, cattle, grains, apples, and lumber. To retaliate, Canada raised tariffs on 125 U.S. products. Canada expanded British preference and explicitly discriminated against certain U.S. exports. Chemicals from England were duty-free, chemicals from other countries entered with a 10 percent duty, but U.S. chemicals were subject to a 25 percent surcharge.³⁵

Taking this historical evidence and applying it to the game-theory paradigm may reveal broad generalities about possible influences on U.S.

33. Isaacs, p. 235.

34. Isaacs, p. 236.

35. Isaacs, p. 237.

policy-makers that induced them to pass the Smoot-Hawley bill even in the face of threats of retaliation. In the game-theory paradigm, the United States chooses the closed-market strategy when the political rewards outweigh possible economic losses of the strategy. Certainly politicians of the constituents protected by high Smoot-Hawley tariffs saw political benefits; they probably thought there would be economic benefits as well. Moreover, the closed-markets/retaliatory outcome is more likely the lower the probability the United States puts on the likelihood of a retaliation strategy being pursued by its trading partners. Perhaps the United States underestimated the likelihood of retaliation by other countries, despite the cables. The United States probably also underestimated the economic losses resulting from retaliation. Given these beliefs, the worst-case closed-markets outcome resulted.

As trade volume continued to fall to the trough of the Depression, the closed markets philosophy increasingly came under fire. The denouement of the Smoot-Hawley Tariff was the Reciprocal Trade Agreements Act of 1934. The stated goal of the bill was to "expand foreign markets and regulate imports".³⁶ More important, Congress authorized the President to negotiate bilateral and reciprocal tariff treaties. Country-by-country the United States would try to pursue the open-markets negotiation strategy in the hopes of achieving the beneficial outcome that clearly had not been attained through the closed-markets strategy.

The 1980s

In the Smoot-Hawley period the United States had to analyze the likelihood of retaliation and the magnitude of the losses should the retaliation take place. Currently, against a back-drop of years of the

36. Isaacs, p. 251.

United States more-or-less choosing a negotiation strategy, it may be more appropriate to think that it is other countries that must decide whether the United States is likely to retaliate and what might be the magnitude of the penalty if the United States does retaliate.³⁷ The Smoot-Hawley analysis suggests that the United States can encourage its trading partners to pursue the negotiation/open-markets strategy by making the economic losses of retaliation large, and by convincing its trading partners that it will in fact retaliate. The recent actions taken by the United States in the Canadian lumber, European Community "luxury edibles", and Japanese semiconductor cases may represent ways of signaling that the United States will retaliate and that the stakes are high.

President Reagan instituted his trade policy "Strike Force" in September 1985. Since then, the Administration has aggressively interpreted existing trade legislation, and Congress has tightened other legislation. The first result of this behavior is that it confuses our trading partners. It may appear to them that the United States is now retaliating against their heretofore acceptable domestic or external policies. The change in the U.S. stance may encourage its trading partners to review their own trade policies and strategies. The end result could be an increased level of more specific and more politically motivated protection in the United States and abroad with a concomitant greater potential for retaliation as consensus about the standard of international trade behavior breaks down. Alternatively, the U.S. change in stance could induce greater negotiation (in the Uruguay Round for

37. Although it is certainly true that once the United States embarks on a closed-markets strategy, it must consider the likelihood of other countries closing their markets.

example) and possibly a new consensus with a more open-markets strategy being pursued by all. To what extent can the U.S. conduct of trade policy affect which of these two outcomes results? First, the United States can make clear that the payoffs have changed. Second, the United States can make clear its trade strategy has changed.

When countries sign the GATT, they agree to a standard of international behavior ("rules of the game") regarding emergency protection and offsetting penalties for certain domestic policies. Moreover, even when emergency protection is allowed and "fair", it must follow the GATT principles of transparency, nondiscrimination, and market orientation. Article XIX (the safeguard clause) outlines the emergency situations that allow temporary protection for specific industries, and also details the rules of compensation for imposing any protection. Articles VI and XVI (countervailing duty, antidumping, and export subsidy rules) suggest what domestic and external policies can elicit offsetting duties by another country. These "rules of the game" are not binding, and are not clear or comprehensive. But the signatories to the GATT have agreed to these ideas in principle and have agreed to bring disputes over their implementation to the GATT under Article XXIII (dispute settlement). The Articles of GATT, therefore, represent a relatively stable consensus on what trade policies are grounds for penalties but not escalating retaliation. Moreover, applying protection allowed under the GATT does impose a discipline: "an important cost of discrimination ... (is) the necessity of reporting on it and defending it periodically in semi-public forums before an essentially hostile audience..."³⁸

38. Patterson, p. 38.

The United States has close analogues to the GATT Articles in its own trade laws. Section 201 of the Trade Act of 1974 (the "escape clause") allows emergency protection of industries injured by imports. The countervailing and antidumping statutes allow offsetting penalties for a wide variety of foreign policies. Unlike the GATT Articles, Section 301 allows the President to act against the imports of any country which the ITC finds to be restricting U.S. exports.

Since 1985, the United States has become much more aggressive in its definition of policies that can elicit penalties. Both the Administration and Congress are interpreting U.S. trade law and GATT Articles much more broadly. The Administration reopened trade cases closed several years ago. It unilaterally expanded the list of external and domestic policies eliciting "fair" CV/AD penalties. It has leveraged the CV/AD statutes with Section 301 to try to gain market access for U.S. exports in foreign markets. It also has negotiated numerous voluntary restraint agreements and other creative agreements that probably run counter to the GATT principles of transparency and nondiscrimination. Following are a number of specific cases expanding on this claim.

The Administration closed the Canadian lumber case three years ago when the ITC found no injury and the Commerce Department found no dumping and no subsidies to production. In the intervening years, Canadian stumpage policy ³⁹(which the U.S. industry charged is a subsidy) has not changed. Yet, when the case was reopened last year, Commerce found a subsidy and the ITC found injury. The United States threatened a 15 percent countervailing duty. Canada chose instead to levy an export tax of the same amount. More importantly, Canada applied a countervailing

39. Stumpage fees are the price of a right to cut lumber on government land.

duty on U.S. corn imports, charging that U.S. farm policy subsidizes corn. (Canada also felt that reopening the lumber case constituted trade harassment.) No country has ever applied a countervailing duty on U.S. farm products. This case smacks of tit-for-tat retaliation, and the demonstration value of the Canadian duty is larger than the small volume of Canadian corn imports would suggest. In terms of the game-theory paradigm, the closed-markets outcome resulted probably because the economic losses of retaliation were considered to be significantly smaller than the political gains.

Another case is the recent U.S.-European Community (EC) dispute over EC enlargement. Upon joining the EC, Spain and Portugal redirected from the United States to France annual purchases of about \$400 million of grain. The United States retaliated for this loss of export markets with 200 percent prohibitive tariffs on a variety of EC "luxury edible" exports (wine, cheese, ham, gin). Hours before the tariffs were to take effect, the United States and the EC negotiated an agreement that allows U.S. grain exporters to compete with community producers for part of the Spanish market. In this case, it appears that the threat of prohibitive tariffs raised the economic stakes sufficiently to encourage a negotiation/open-markets strategy. Also, imposing the tariffs, and then giving the EC an opportunity to negotiate them away, increased the perception that the United States was serious.

The U.S.-Japan Semiconductor Accord of July 1986, and the more recent imposition of tariffs on certain Japanese electronics, is another very interesting case. Following an affirmative finding of dumping of certain kinds of semiconductor chips, the United States and Japan negotiated an agreement designed first to reduce the flood of chips into

the United States, second to increase the price of chips without differentially hurting U.S. users of chips, and third to enhance the position of U.S. chipmakers in Japanese markets. In order to meet the second objective, the U.S. did not want to simply apply dumping duties. Instead, the Accord appears to come close in spirit to fixing the world price for certain kinds of chips.⁴⁰

Commerce has since charged the Japanese government with failing to monitor properly export prices, thus allowing chips to be dumped through third markets. The Administration imposed 100 percent tariffs on \$300 million of Japanese electronic products such as laptop computers, certain television sets, and power-driven hand tools. Coincidentally, some of these products are ones where U.S. industries have been trying to crack the Japanese market. The tariffs come at a time when Japanese producers are particularly vulnerable in U.S. markets because of the appreciation of the yen and the readiness of the Korean and Taiwanese producers to step in. Therefore, it appears that Commerce's threat of retaliation for the Japanese government's nonperformance on the chip agreement was credible and imposed some economic losses on Japan. Although the tariffs were imposed, Commerce has said that they will be rescinded as soon as Japan can prove that it is not dumping chips into third markets. Thus, as in the "luxury edibles" case, there is an opportunity for the United States and Japan to reach the negotiated outcome. This negotiated outcome may not have been possible without the United States showing that it is serious about choosing the retaliation

40. Commerce, using Japanese production cost data, decides on a "fair" price for Japanese chips (which includes an 8 percent profit). The Japanese government must then monitor its industries' compliance with this export price.

strategy if that is what is necessary to raise the probability Japan puts on the losses associated with a trade war.

Various aspects of the semiconductor case have been brought to GATT. The EC has filed a case arguing the illegality of the Semiconductor Accord. Even though the Accord appears to be nondiscriminatory, it certainly does not meet the market test required of GATT-approved methods of protection, because it regulates the market in an effort to set prices. Moreover, Japan threatens to file in GATT for compensatory damages, arguing that in fact it has met the terms of the agreement. If so, the U.S. tariffs may come under Article XIX, which allows the affected country to apply compensating tariffs.

Other examples of a change in U.S. policy stance can be found in Section 201 cases. Congress has changed the measures the ITC applies when determining injury. Effectively, these changes loosen the requirements for obtaining an affirmative judgement of injury. Changes include relaxing the requirement that imports be the most important cause of injury and that injury be measured primarily by changes in employment. Now, imports need be only one of several causes and the ITC must measure injury much more broadly than by just changes in employment. Because of these legislated changes, the non-rubber footwear case turned from a no-injury decision in 1983 to a vote (under the new rules) of injury in 1985.

Congress sought to increase its power over trade policy (thereby increasing the political gains of pursuing an aggressive trade stance) by loosening the requirements for an affirmative judgement in the ITC. Constituents could obtain protection via the ITC route without involving Congress in a discussion of the merits of each case. But, under existing

law, the President need not abide by the ITC recommendations. In the footwear case, President Reagan vetoed any protection. In the omnibus bills, Congress seeks to close this loophole and strengthen the ITC avenue by limiting Presidential discretion.

In another example of how the United States is signalling its intention to play hardball in the trade policy game, the Administration has begun to use Section 301 "unfair trade practices" as a threat to open export markets. If a country is found to be unfairly closing markets to U.S. exports, the President can retaliate against any product exported from that country anywhere in the world. This rather broad mandate has led to agreements opening the Korean insurance market. Agreements to open the Japanese tobacco market involve removing a 26 percent tariff and restructuring the domestic tobacco monopoly. But, again the President has discretion over Section 301 cases. The President refused to act on Section 301 cases against Japanese rice and Argentine soybean producers. Congress wants to limit Presidential discretion in Section 301 matters as well. Moreover, the omnibus trade bills expand the definition of unfair trade practices to include such issues as workers rights and targeting of the United State's "traditional" overseas markets.

An interesting problem of these negotiated settlements to the Section 301 cases is cheating.⁴¹ For example, in the Korean insurance case, the initial settlement apparently opened the market. But, U.S. companies were not initially allowed to participate in a compulsory financing pool, so a second case was threatened. Another example is the Japanese telecommunications case. The U.S. charged the Japanese with

41. We can put cheating into the game theory paradigm by making payoffs a weighted average of the cheat and no-cheat values. However, the repeated game format is a necessity for this model to make sense.

unfairly limiting competition in the telecommunications market because Nippon Telephone and Telegraph (NTT) is a government entity. The Japanese government agreed to take NTT public. It is now a public corporation, but all the shares are owned by the government.

The Administration is also using other existing legislation more extensively in the trade arena, applying Section 232 (national security) to products ranging from machine tools to frozen concentrated orange juice. Taiwan and Japan agreed to a voluntary restraint agreement on machine tools, perhaps because they are used to having this kind of policy "negotiated", and after all, they do get the rents. Switzerland and Germany did not agree to a voluntary restraint. Because their machine tools do not compete with U.S. products, they stated that the U.S. threat was politically motivated, that voluntary restraints run counter to GATT rules, and thus they would not be party to any such agreements. The President has threatened to slap quotas on their machine tools if their imports exceed a specified level.

Collectively these actions seem to signal a shift in U.S. trade policy. Even so, U.S. behavior is hard to predict. Moreover, the costs of retaliation are hard to quantify. In some of the specific cases noted above, threats of U.S. retaliation apparently led to negotiations to open-markets. But, in other cases, it appears that tit-for-tat retaliation strategy is being pursued. Therefore, the United States cannot be sure that its threats of retaliation will lead to other countries choosing the open-markets strategy.

Consequently, the United States is employing two other techniques to increase the economic gains from an open-market strategy and to increase the likelihood that other countries will pursue that strategy.

The Uruguay Round brings to the table many topics and many countries. On the other hand, and similar to the approach of the Reciprocal Trade Agreements Act, the United States is also advocating bilateral negotiations. The United States and Israel negotiated a free-trade agreement, and one is being negotiated with Canada. There is mention of trade agreements with areas ranging from Mexico to the South East Asian nations. Together these two negotiation techniques may be the best way to yield the maximum likelihood of the open-markets strategy being pursued by all.

Conclusions

An examination of the macroeconomic, political, and institutional environment of the the 1930s and the 1980s suggests a set of stylized facts associated with periods of trade tensions and incidents of trade retaliation. Periods of macroeconomic stress, especially when linked to external events, decrease the political benefits of following a liberal and open-markets trade policy. During these periods, Congress (with its regional constituency) may be relatively more powerful than is the Presidency (with its national constituency). The shifting balance of power may further undermine support for free trade. As a result, the conduct of U.S. trade policy becomes somewhat difficult for trading partners to predict. Moreover, in re-examining its commitment to free trade, the United States may change its response to policies abroad. Finally, the United States may not only deviate from its established behavioral norms, but may also stray from the consensual international code of trade conduct.

These stylized relationships between macroeconomic environment and political and institutional pressures are applied to a simple game theory

paradigm. Changes in the environment and balance of political power change the elements of a payoff matrix. Trading partners may be uncertain both about the magnitudes of the payoffs and about the likelihood of the United States making good on its trade threats. They may not be sure whether, in fact, U.S. policy has changed or whether political posturing and threats are just camouflage. Trading partners therefore must choose a trading strategy based on expected value of payoffs. This uncertainty can result in an ex-post suboptimal choice of trade strategy, and possibly force retaliation.

In this paper, incidents of trade tensions and trade retaliation from the 1930s and the 1980s are examined in light of the simple game-theory paradigm, and give some support for pursuing this analytical construct further. The policy implications of the model are that the United States should, subject to the restrictions of a democracy, make clear both the direction of its trade policy and the magnitudes of any penalties. Much of the tit-for-tat trade retaliation observed in recent months may represent just such a communication effort.

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