

Implications and Interpretations

First of all, notice that in the noncooperative game, each country is acting in its own best interests, yet the outcome is one that is clearly inferior for both countries relative to the cooperative strategy set (free trade, free trade). When both countries set optimal tariffs, each country realizes 90 units of welfare, while if both countries pursued free trade, each country would realize 100 units of welfare. This kind of result is often referred to as a prisoner's dilemma outcome. The dilemma is that pursuit of self-interest leads to an inferior outcome for both participants.

However, without cooperation, it may be difficult for the two countries to realize the superior free trade outcome. If both countries begin in free trade, each country has an individual incentive to deviate and implement optimal tariffs. And if either country does deviate, then the other would either suffer the welfare losses caused by the other country's restrictions or retaliate with tariff increases of its own in order to recoup some of the losses. This scenario in which one country retaliates in response to another's trade policy could be thought of as a trade war.

This story closely corresponds with events after the Smoot-Hawley Tariff Act was passed in the United States in 1930. The Smoot-Hawley Tariff Act raised tariffs to an average rate of 60 percent on many products imported into the United States. Although it is unlikely that the U.S. government set optimal tariffs, the tariffs nevertheless reduced foreign exports to the United States and injured foreign firms. In response to the U.S. tariffs, approximately sixty foreign nations retaliated and raised their tariffs on imports from the United States. The net effect was a substantial reduction in world trade, which very likely contributed to the length and severity of the Great Depression.

After World War II, the United States and other allied nations believed that high restrictions on trade were detrimental to growth in the world economy. The General Agreement on Tariffs and Trade (GATT) was initiated to promote trade liberalization among its member countries. The method of GATT was to hold multilateral tariff reduction "rounds." At each round, countries would agree to lower tariffs on imports by a certain average percentage in exchange for a reduction in tariffs by

other countries by an equal percentage. Although GATT agreements never achieved a movement to free trade by all member countries, they do represent movements in that direction.

In a sense, then, the GATT represents an international cooperative agreement that facilitates movement toward the free trade strategy set for all countries. If a GATT member nation refuses to reduce its tariffs, then other members refuse to lower theirs. If a GATT member raises its tariffs on some product above the level to which it had previously agreed, then the other member nations are allowed, under the agreement, to retaliate with increases in their own tariffs. In this way, nations have a greater incentive to move in the direction of free trade and a disincentive to take advantage of others by unilaterally raising their tariffs.

The simple prisoner's dilemma trade policy game therefore offers a simple explanation of the need for international organizations like the GATT or the World Trade Organization (WTO). These agreements may represent methods to achieve cooperative solutions between trading countries.