

Review:

The Economics of the World Trading System, by Kyle Bagwell and Robert Staiger

The World Trade Organization (WTO), and its predecessor the General Agreement on Tariffs and Trade (GATT), has been the source of much controversy in recent years.

- There is controversy in the general public, with a spirited debate over whether the WTO is assisting or exploiting developing countries in their efforts to grow. This debate was joined in most graphic terms at the WTO Ministerial meeting in Seattle in 1999: protests in the streets joined with discontent among the delegates to bring about an abandonment of the reform package proposed at that meeting.
- While the economics profession is more united on the benefits from free trade, there is controversy within the profession about whether the trade structure negotiated within the WTO (or earlier, the GATT) embodies the rational principles underlying economic theory. Paul Krugman, for one, thought not:

... if our theories really held sway, there would be no need for trade treaties: global free trade would emerge spontaneously from the unrestricted pursuit of national interests. (Krugman, 1997, p. 113).

Bagwell and Staiger (henceforth, the authors) address their analysis exclusively to the intra-profession debate.<sup>1 2</sup> Their thesis is a simple one: the design and implementation features of the WTO have been developed as a rational response to strategic inefficiencies in the setting of national commercial policy.<sup>3</sup>

The authors' logic is straightforward. First, they define a static model in which there is a unique non-cooperative equilibrium in commercial policy. They demonstrate that this equilibrium has the characteristics of a Prisoners' Dilemma: individually rational choice of commercial policy by trade authorities in each country generates a non-cooperative trading equilibrium characterized by positive protection in the trading countries. They then describe a set of cooperative equilibria with reduced protection that is weakly preferred by all trading partners and strongly preferred by at least one. They also specify a trigger strategy mechanism that will ensure the existence of the cooperative equilibrium in each period if the static game is repeated over an infinite time horizon. Second, they examine the principles of the WTO agreements for evidence that the components necessary to replicate the posited cooperative equilibrium are observed in the trading system. They are successful to a remarkable extent in matching features of the WTO system to the essential features of the theoretical model. The authors do not demonstrate

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<sup>1</sup> For a concise summary of the issues raised by the protests in Seattle, see Schott (2000).

<sup>2</sup> I considered briefly using the abbreviation BS in place of "the authors", but decided that this could have unfortunate connotations for the quality of the work reported.

<sup>3</sup> For this review I refer to "commercial policy" as the universe of policy instruments that are used to influence directly the pattern and volume of international trade. Tariffs, export subsidies and quotas are all examples.

that this is the only explanation for the WTO to take the form it does, but they do construct a plausible story.

This book will appeal to a wide variety of readers. Graduate students and professors of international trade theory will find it a valuable bonding of general-equilibrium trade theory to international trade negotiations. Those who've read the authors' previous journal articles (especially Bagwell and Staiger 1999) will not find the theory to be novel but may appreciate the institutional detail on WTO. Commercial-policy analysts, both inside and outside governments, will be carried closer to the theoretical frontier than is typically found in a policy monograph. While the treatment of individual WTO articles is less detailed than they may like, the concordance between theoretical advances and the structure of the WTO will be invaluable.

The book is clearly written and well-organized. Chapters Two and Three set the tone for the discussion. Chapter Two lays out a general-equilibrium model of trading partners. The initial, non-cooperative, equilibrium is characterized by protection in excess of welfare-maximizing levels due to two market failures. The first market failure is the strategic inefficiency associated with individually rational behavior in setting commercial policy. Large countries in international trade face a "Prisoners' Dilemma", with Nash non-cooperative behavior leading to tariffs that are too large, and thus welfare-reducing, relative to preferred cooperative outcomes. The second market failure is the inability of governments to commit credibly to a commercial-policy outcome. Given these pre-existing market failures, how best to increase world welfare? One straightforward way is to increase the volume traded at a given terms of trade. The authors argue that it is precisely this motivation that explains the structure of the WTO. Chapter Three then provides a brief description of the commitments undertaken by signatory countries under the GATT and WTO. The description is not the exhaustive treatment found in works such as Dam (1970) and Jackson (1997), but it does highlight the three principles the authors consider at the heart of the WTO's operating procedure: reciprocity, most-favored-nation (MFN) status, and enforcement.

Chapters Four, Five and Six consider each of these principles in turn. In each chapter the principle is shown to provide the support necessary for negotiations to move the trading equilibrium from the non-cooperative equilibrium to a preferred cooperative equilibrium within the model of Chapter Two. The chapter on reciprocity is illustrative. Reciprocity is not explicitly defined in the WTO (or earlier GATT) document. However, it does in practice represent the negotiation principle that every concession made will be matched by a concession of comparable value by trading partners. The authors derive a simple formulation of this principle in the context of their theoretical model: reciprocity is maintained when the trading partners introduce commercial-policy changes that together maintain unchanged the relative prices on world markets. This formulation of reciprocity, first found in Bagwell and Staiger (1999), represents an intuitive constraint on the cooperative equilibria that will follow from negotiation. Within their model, it also ensures that the cooperative equilibrium will be welfare-preferred to the non-cooperative equilibrium. This illustrates the authors' logic: take a feature of the WTO agreement and translate it into a constraint on the theoretical general-equilibrium model.

Evaluate that constraint for its importance in supporting a cooperative equilibrium. If it is important, then interpret that feature of the WTO agreement as a product of economic reasoning.

In Chapters Seven through Ten, the authors turn to four important debates in international trade policy: the proliferation of preferential trading agreements, the call for a WTO role in environmental and social policy of member countries, the link between commercial policy and competition policy, and the international treatment of agricultural export subsidies. In each of these chapters, the authors presuppose that their formulation of a repeated-game cooperative equilibrium is correct, and then derive the implications for that equilibrium of these phenomena.

I was especially interested in their evaluation of the use of WTO negotiations to attain environmental or social goals. Trade agreements in the past (GATT or WTO) have nearly exclusively focused upon equal treatment of products when entering the country: ensuring non-discrimination based upon country of origin. Using the WTO as a forum to negotiate environmental or social policy standards will expand the purview of these negotiations to allow discrimination among sources of the same product based upon the process of production. For example, in the past a soccer ball was a soccer ball from the WTO perspective; non-discrimination ensured that soccer balls from member countries received identical commercial-policy treatment. Under proposals for social safeguards within the WTO (e.g., Rodrik 1997), standards for domestic labor-market activity would become part of the WTO agreement. If child labor were not permitted under these standards, then soccer balls made with child labor would face more protectionist commercial policy than soccer balls made by other means.

The authors draw a number of interesting conclusions about such standards.

- If changes in the social or environmental policy standards of other countries cause a change in the market access a country obtains under the trade agreement, the country has the right to compensation under the current agreement – no amendment to the WTO is necessary.<sup>4</sup>
- Within the theoretical general-equilibrium model, it could be in each country's individual self-interest to manipulate its social and environmental policies to reverse the concessions made in trade negotiations. The authors call this a “race to the bottom”.
- As a practical matter, it will be difficult for the WTO, with its limited enforcement resources, to police standards in social and environmental policy.

They conclude that the current WTO approach, with its dispute-settlement mechanisms targeted upon changes in market access, is more appropriately targeted than would be extensions of the agreements to include social or environmental standards.

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<sup>4</sup> This will be a “nonviolation nullification-or-impairment complaint” within the WTO. If the country can demonstrate that the market access commitments that it previously negotiated have been systematically offset by a change in the social or environmental policy of the trading partner, it can lodge a complaint within the WTO structure even if that country is not violating WTO rules. This complaint will lead either to offsetting concessions by the trading partner or retaliation (withdrawal of concessions) by the complainant country.

If we return to the intra-profession controversy cited at the beginning of this review, we should be pleased with the authors' success. With a consistent general-equilibrium model of trading partners underpinning the structure of the WTO, we will be better able to predict the future direction of negotiations, and to design better regulations within the WTO. We will also be able to fine-tune the dispute-settlement mechanism, given our understanding of the underlying economic determinants. So, does this book stamp "closed" to the intra-profession controversy on the WTO? Unfortunately, no. Krugman's quote above came with a footnote:

Students of international trade know that there is actually a theoretical caveat to this statement: large countries have an incentive to limit imports – and exports – to improve their terms of trade, even if it is in their collective interests to refrain from doing so. This "optimal tariff" argument, however, plays almost no role in real-world disputes over trade policy. (Krugman, 1997, p .113)

The authors base their entire analysis on the sensitivity of terms of trade to changes in commercial policy: it causes the Prisoners' Dilemma in commercial-policy setting in their model. The controversy remains, although we can now sharpen its focus. To what extent does this terms-of-trade sensitivity to policy drive country participation in and negotiations within the WTO?

The authors recognize that this is a fundamental challenge to their logic and devote their last substantive chapter to it. There are two related questions addressed. First, is there empirical evidence that WTO countries can in general manipulate their terms of trade through commercial policy? Second, even if there is no empirical evidence of such an effect, is there evidence that commercial policy is set as if it were true? Persuasive evidence of this sort would have provided a strong foundation for the projections based upon the theoretical model advanced in the preceding sections. They cite a few empirical papers in passing, but don't give this question the same detailed attention given to the earlier theoretical development. Using statistical terminology, we might say that given the evidence provided the terms-of-trade hypothesis of commercial policy advanced by the authors is observationally equivalent to another hypothesis put forward by Paul Krugman in earlier work on GATT:

To make sense of international trade negotiations, one needs to remember three simple rules about the objectives of negotiating countries:

1. Exports are good.
2. Imports are bad.
3. Other things equal, an equal increase in exports and imports is good.

In other words, GATT-think is enlightened mercantilism. (Krugman, 1991, p. 25; cited by the authors, pp. 59-60)

The authors prefer their own formulation, and it has clear roots in a choice-theoretic model. However, the reader is given insufficient evidence to reject one in favor of the other.

I would have liked the authors to address one other issue within their analysis: WTO policy on intellectual property rights. This is one issue in which the overarching rule of non-discrimination among imports of the same product no longer applies within the WTO. Taking the example of pharmaceuticals, there is an explicit regulation that pharmaceuticals produced out-of-patent will be governed by a different commercial policy than pharmaceuticals produced under patent. If we apply the logic of the chapter on social and environmental policy, we might conclude that the WTO negotiators have no need to amend the WTO to introduce explicit restrictions on non-patent production. Instead, the negotiators have included an explicit protection for intellectual property rights within the WTO. The asymmetry in treatment of these two categories of complaints might provide us with a degree of freedom toward settling the intra-profession controversy.

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