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Commentary

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This paper makes an important contribution to the debate on the potential gains from further global trade liberalization under the proposed World Trade Organization's (WTO) round of negotiations, WTO2000. We know from the Uruguay Round (UR) that the results of applied general equilibrium (AGE) simulations can influence the stance of negotiators. Likewise, the potential for results (such as these) to have a similar impact on WTO2000 outcomes is enhanced by three major features. First, they are based on microconsistent projections of production, consumption trade, and trade-barriers data to 2005 (the date for completion of UR commitments). Second, these projections are based on the assumption that China will be a member of the WTO by that date. Third, the liberalization of trade in services is modeled explicitly (although, as acknowledged, imperfectly).

The construction of the 2005 benchmark data from the starting point of the 1995 Global Trade Analysis Project (GTAP) database required the collection of data from a wide range of sources. These fall into two broad categories—growth parameters affecting production possibilities and policy variables that impact the regional and sectoral structures of production, consumption, and trade.¹ The former (endowment growth, total factor productivity growth, and natural resource depletion) result in projected gross domestic product growth rates that are broadly consistent with World Bank projections. The modeling of policy changes necessarily is more important and problematic. Of the UR outcomes directed at sectors, two—the completion of manufactures' tariff cuts and the reform of the Multifiber Arrangement (MFA)—are reasonably easy to incorporate. The others, concerning agriculture and services, are more problematic. In both cases it has been assumed that there will be no effective changes in protection between 1995 and 2005.² Several of the structural changes indicated by the 2005 projections are striking. In particular, the developing countries grow quickly, as a consequence of reductions in manufactures' tariffs and MFA reform, and they also

become more outward-oriented in manufactures, with "South-South" trade substantially larger.

The liberalization scenarios chosen are complete liberalization in isolation of each of the three main categories (manufactures, agriculture, and services) and the combination of these three. It is not surprising—and broadly consistent with liberalization simulations carried out using the 1995 GTAP database—that while there is greater *pro-rata* expansion in manufacturing trade than agriculture, the majority of the global welfare gains result from the removal of the highly distortionary agricultural policies. In both cases, the effects of liberalization in services is dominated by the other main categories, for reasons that are made clear in the paper. When considered from a regional perspective, the most striking outcome is the high share of the global welfare gains that accrue to the developing countries; their losses due to adverse terms-of-trade changes are substantially outweighed by their efficiency gains.

It is evident that these complete liberalization scenarios are highly unlikely to be realized in the outcome of any WTO2000 negotiations. The developing countries may well seek and retain some measure of special treatment because agricultural reform will undoubtedly pose problems, the efficacy of the General Agreement on Trade in Services (GATS) as a vehicle for liberalization is open to debate, and other issues are likely to intrude. These scenarios, however, indicate the scale of possibilities for trade liberalization, both as an overall package and on a sector-by-sector basis, and, as such, they are a substantial contribution.

Having acknowledged the contributions made by the paper, it seems appropriate to discuss modifications that could be made to the model structure in order to make it more realistic. The standard

¹ Necessarily, in view of the comparative static nature of the underlying model, no attempt is made to assess the probable interaction between liberalization and growth in total sector productivity, nor the effect of the trade-related investment measures (TRIMS) and trade-related intellectual property (TRIPS) agreements.

² In the case of agriculture, I find the "no change" assumption rather implausible, but accept that the virtual impossibility of estimating likely policy changes (in the light of both dirty tariffication and the susceptibility of governments to lobbying by their farm sectors), which makes "no change" a reasonable working assumption.

GTAP model implemented here, in common with the majority of AGE multi-regional trade models, is based on the assumptions of perfect competition and constant returns to scale. There are many ways in which such a model may be modified to make it more consistent with observed market structures, and some of these already have been implemented in some form using the GTAP database. What follows is perhaps best interpreted as a wish list, since many would require a nontrivial augmentation of the existing GTAP database (or its equivalent).

It is convenient to distinguish two types of market structure that arguably should be modeled explicitly: imperfect competition within regional frontiers, and multinational enterprises (MNEs). Within the former, the new trade theories identify two broad structures, both with decreasing costs: differentiated products with many producers and (usually) freedom of entry/exit, and few producers—often of a homogeneous good, with strategic interdependence and (most often) barriers to entry. Both give rise to cross-hauling, a phenomenon dealt with in the standard GTAP model via the Armington assumption, which is consistent with perfect competition. Intuition suggests that, in a multiregion model, even a few firms producing weakly differentiated goods, with freedom of entry and exit, will be approximated fairly well by the perfect competition/Armington structure. Certainly some AGE models that have used these as alternative structures do not report very different outcomes (e.g., Blake et al., 1999, Harrison et al., 1997). When there are few firms and barriers to entry, however, it is likely that explicit modeling of that structure will have an important effect on outcomes, particularly in sectors where firms have monopsony as well as monopoly power. As an indicator of the differences within one sector across countries, which is attributable at least in part to barriers to entry, Table 1 reports estimates of net margins in large food retailers for five developed economies. It is immediately apparent that the net margin for the United Kingdom (UK) is considerably greater than the average for the other countries.

This prompts four observations:

1. When there are few firms and the number of firms stays constant over the medium term (as is typically the case in many retail sectors), there may be a significant effect on consumer prices;
2. Concentration in the retailing sector may have a greater effect on consumer prices than concentration in manufacturing;

Table 1

Net Margins in Large Food Retailers for 1992

France	0.5 - 2%
Germany	0.5 - 1.5%
Holland	0.5 - 1.5%
United Kingdom	6.3%
United States	1.5%

I am grateful to my colleague, Wyn Morgan, for providing me with these data, which were derived from various sources.

3. A disaggregation of the “other services (private)” sector in the GTAP database that allowed modeling of the retail and other intermediary sectors—ideally with the provision of data on sectoral concentration—would be of great value; and
4. Modeling of such activities preferably should be done on a sectoral and regional basis.³

Multinational enterprises, of course, also raise many of the issues listed above, along with some other issues that are peculiar to themselves. Data on the activities of MNEs notoriously are difficult to obtain, but, given those data, MNEs may be incorporated into an AGE framework (e.g., Markusen, 1998). Their dominance in some sectors (both manufacturing and service) is readily apparent, and makes them a target of choice for organizations (including governments) seeking to restrain (if not reverse) trade liberalization. The failure of applied models of trade liberalization to take specific account of MNEs makes it all too easy for opponents of further trade liberalization to dismiss such models (at least to their own satisfaction) as unrealistic (if not biased). Making some attempt to remedy the omission of

³ Britain has consumer prices that are notably higher than those in other European Union (EU) countries (i.e., the price differential far exceeds the costs to a private individual for transporting the goods back to the United Kingdom.) These seem to reflect both continued dominance of many retailing sectors by a small number of firms and effective non-tariff barriers to trade with the rest of the European Union. Despite rulings by the European Commission and investigations by the UK’s Office of Fair Trading—notably for automobiles and a maintained press campaign against “Rip-off Britain”—there is little indication of change.

MNEs will improve the general acceptability of applied trade models.

The growing tendency of both domestic firms and MNEs to source their intermediate inputs from low-wage developing economies has, of course, an impact on the developing countries' level and structure of trade. Perhaps just as importantly, it will affect developing countries' labor markets, in particular wage levels and labor standards. The potentially beneficial effects of increased trade, however, may be reduced if the developed country firms have, and exploit, their monopsony power. Given that labor standards and wages in low-income countries also are a subject of (self-interested) concern to trade negotiators in the developed countries, the relevance of applied trade models would be enhanced by greater detail in labor disaggregation in global databases. Since in most trade models labor is specified as internationally immobile, such disaggregation could proceed on a region-by-region basis. This greater detail also would facilitate the modeling of domestic institutions and policies that affect labor mobility between domestic sectors, such as unionization, wage legislation and rigidities, and hire-fire legislation.

One of the strengths of applied general equilibrium modeling is that it allows the estimation of outcomes in second-best situations, where even the signs of changes may be indeterminate in more general analytic models. Even the piecemeal incorporation of some of the modifications suggested above would better inform the debate on further trade liberalization. I have little doubt that the implementation of several already is planned by those associated with the Global Trade Analysis Project.

REFERENCES

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