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Does Foreign Investment Shape Trade Policies? A CGE Assessment of the Doha Stalemate

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1 Introduction

Conventionally, international trade and associated trade policy measures are analyzed from a national point of view and reflect the interests of domestic stakeholders. As in the last decades the world economy has seen a surge in both international trade flows and foreign investment, the circle of the stakeholders has widened by one more player: the foreign capital owner.

There is an important body of empirical literature that argues for a complementarity relation between trade and foreign investment on the aggregate[1]. In the context of a global economic slowdown the question arising is whether the decline in trade flows will be associated with a reduction of foreign investment and a more than proportional response of foreign direct investment flows. In addition, we may wonder whether, contrarily to the 1930's situation, foreign capital will strongly affect the political economy of rising protectionism and help secure current level of tariffs. Therefore, trade

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[1]For a survey see (FontagnÃl' and Pajot 1999).

and FDI appear to be complementary not only in economic but political aspects, as well.

The paper is built around the hypothesis that the foreign capital owner in its role of a stakeholder in trade policy formulation may limit the incentive of domestic capital owners in their support of protectionist trade policies. More explicitly, we investigate two channels through which foreign investment influences trade policies. First, depending on the share of capital stock owned by foreign investors, the incentive of government to provide protection is reduced as a part of the rents will shift abroad. Second, we consider the fact that firms associated with FDI flows (i.e. multinational companies) are more integrated in the world economy in both their input and output markets than other firms. Therefore, investors will fight any rise of protectionism at the global level.

The present paper is aimed at looking at the political economy implications of the costs of a non-Doha scenario as defined by (Bouët and Laborde 2009). The trade policy scenario we focus on, considers both rise in MFN protection and the end of unilateral preferential schemes.

An extended version of the dynamic MIRAGE model with explicit FDI modeling is used. International capital allocation decisions are made by the capital owner (domestic or foreign) based solely on the rate of return to their investment. The share of foreign ownership of the total capital stock captures the first channel through which foreign investment influences trade policy.

We decide to not introduce a productivity bias[2] in favor of foreign firms and we assume that all firms employ the same technology; nonetheless we introduce an asymmetry between foreign-owned and domestic firms in terms of trade openness. More explicitly, on the input side we assume that foreign owned companies benefit from lower international trade costs (transaction

[2] Differences in productivity between multinationals and domestic firms have been inevitably an extensively examined question of the FDI literature. Subsidiaries of multinationals have been shown to be superior to domestic firms in terms of both labour and total factor productivity. Estimates of the TFP premium of multinational firms range from 2.3% to 15.5%.

costs) and thus relative prices between world and domestic prices faced by domestic and foreign companies are different. At the same time it is assumed that trade costs decrease with the share of foreign ownership at a bilateral level.

The data of bilateral FDI flows and stocks employed in our modeling exercise has been built by CEPII, France and it is entirely documented in (Boumellassa, Gouel, and Laborde 2007): contrarily to other data sources, this database is fully consistent, balanced and suitable for use in a CGE work.

The potential costs of non-Doha estimated by (**?**) pointed out that the potential losses incurred in case of a failure of DDA would lead to an increase in protectionism. The present paper extends this analysis by looking at the political economy implications with and without considering FDI. We show that in the short term, existing FDI stocks may help to lock tariffs at their existing level and oppose protectionist trends. However, on the long term, a vicious circle may appear where decreasing trade and/or decreasing FDI will erode pro-trade behaviour. Finally, this paper illustrates the importance of binding trade policy to promote trade and FDI.

2 Literature review

Political economy of trade policy can be explained traditionally with two different economic models the Heckscher-Ohlin model, in which factor specificity is low and the Ricardo-Viner model, in which factor specificity is very high. In the first approach, capitalists' preferences about trade policy will differ across countries, and in the latter, across sectors. Empiric evidences, such as (Magee 1980), support the Ricardo-Viner model: trade liberalization shifts rents from import-competing firms to exporting ones. An important assumption in both approaches is the international immobility of factor, introducing international capital mobility changes the traditionnal approach ((Laborde 2008)). Capital owners' income depend on domestic and foreign rate of return and their preferences may change overtime with the evolution

of the structure of their portfolio.

FDI and trade policy interact through different channels concerning both firm strategy and the political economy of protectionism:

1. The import-substitution strategy or the Tariff Jumping Argument: firms, in this case multi-national companies (MNC), invest abroad to sell their products on the destination market without facing tariff barriers. In this situation, high tariffs attract FDI and existing FDI will reinforce protectionist trends on final consumption products;

2. The export-oriented strategy: MNC invest abroad to export the production of their new plants towards their home market or toward a third market. They invest in the host countries to benefit from its comparative advantages. In this case, MNC will favour free trade to reduce production costs in the destination country;

3. In the context of the strategic trade policy litterature ((Brander and Spencer 1984)), the rent shifting argument has been revisited by (Miyagiwa 1992) in presence of foreign investors: a larger share of foreign capital will decrease incentives for the government to introduce tariffs.

The theoretical framework developed in (Blanchard 2006) provides interesting insights. In this formal model, Blanchard identifies the *ownership effect* in international trade relations and argues that the existence of FDI may result in governments setting efficient tariffs unilaterally as they have less incentive to manipulate trade policy instruments to improve terms of trade. It is also pointed out that if the pattern of international ownership is not symmetric across sectors, governments will tend to manipulate prices in favor of industries with a higher degree of domestic ownership.

A similar argument has been advanced by (Irwin 2008) in a paper that addresses differences between the existent global economic recession and the 1930 Great Depression while assessing concerns with respect to increasing incentives for higher protectionism. The paper draws attention to the fact that multinational companies would resist protectionism while at the same

time domestic firms have less incentive to promote higher tariffs as competitive pressure mainly arises due to the presence of multinational companies on the domestic market.

For the purposes of this paper, the issue of intra-firm trade is another topic of high relevance. A large share of the trade growth during the last decades has been the results of the rise in intra-firm trade associated to the international segmentation of the value added chain. For instance, (Wilamoski and Tinkler 1999) prove that there was a rise of intra-firm exports and imports between the US and Mexico as a result of US FDI in Mexico. Further, in a theoretical model by (Konan 2000) it has been shown that intra-firm trade in intermediate goods implies that vertical investment complements rather than substitutes for trade.

3 Methodology

3.1 Databases

Macroeconomic data (such as world trade flows, production, consumption, and intermediate use of commodities and services) come from the GTAP 7 database. Twenty-seven regions are identified in the model (eight high-income regions), which map the main trade blocks. 15 sectors are considered with two sectors for agricultural products (raw and processed). Even if trade policies are much more complex in this sector, FDI still plays a weaker role in the agricultural sector.

FDI data are based on (Boumellassa, Gouel, and Laborde 2007) that provides both information on positions and on flows.

Trade policy data uses the MacMapHS6v2.1 database ((Laborde 2008)) with bound and applied tariff data for 2004 (including 5,113 products, 170 importing countries, and 208 exporting countries) as well as the TRAINS dataset.

3.2 Overview

Tariff reform is implemented at the HS6 level of the MacMapHS6v2.1 database. We add several updates to take into account all major changes that occurred up to 2008, including major regional trade agreements (RTA), new WTO members (such as Ukraine), but also the trade policy consequences of ongoing domestic reforms (as the EU Sugar trade reform). The TRAINS database was used to investigate tariff changes since 1995, and a special procedure was adopted to ensure comparability of MFN tariff rates between MacMapHS6 and TRAINS. For insuring inter-temporal comparison of nominal protection, all specific tariffs are converted using the reference group unit values from MAcMapHS6v2. But for the purpose of tariff reduction formula classification, the official guidelines to compute unit values are used. All trade policy scenarios are implemented on yearly basis following relevant timelines in each case.

Tariffs are aggregated from the HS6 level to the model aggregation (see above) using the reference group weighting scheme methodology ((Bouët and Laborde 2009)) and then implemented in the MIRAGE (Modeling International Relationships in Applied General Equilibrium) multi-country, multi-sector dynamic model, developed initially at the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) in Paris. We assume perfect competition across all sectors. A full description of the model is available in (Decreux and Valin 2007). Based on standard and robust assumptions, it should be noted that the model may underestimate the positive effects of trade reform, particularly when such reform drives new investments, technology improvements, or important trade or production diversification.

In each country a representative consumer maximizes a CES-LES utility function under a budget constraint to allocate his income across goods. The origin of goods is determined by a CES nested structure following the Armington assumption. In addition, Northern countries are supposed to produce high-quality industrial goods, as compared to those supplied by Southern countries. On the production side, value added and intermediate

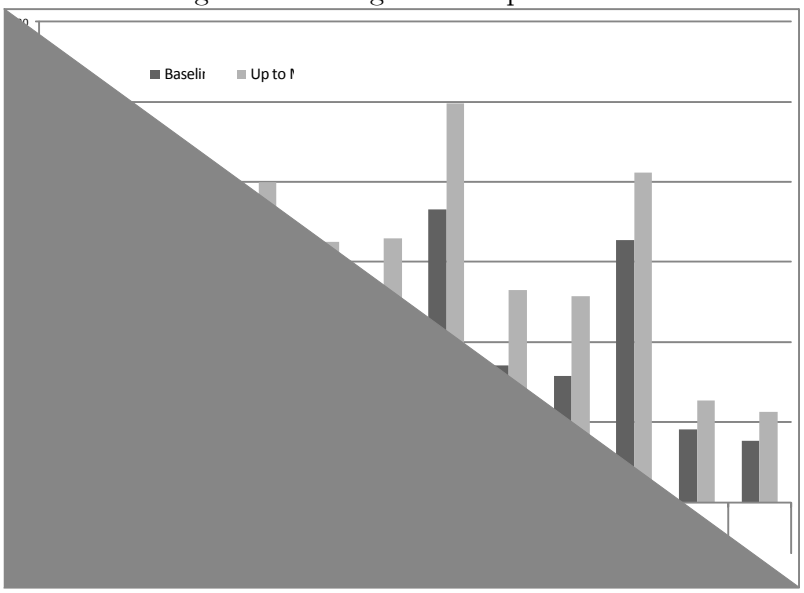
goods are complements under a Leontief hypothesis. The value added is a CES function of unskilled labor and a composite of skilled labor and capital: it allows for including less substitutability between the last two production factors. In agriculture and mining, production also depends on land and natural resources. Investment is savings-driven and the current account is assumed to be constant in terms of world GDP. This last assumption is important in this study since tariff increases will have positively correlated impacts on both imports and exports for every country.

The dynamic MIRAGE framework allows for international investments based on relative return to capital. However, the modelling approach does not differentiate FDI from portfolio investments and foreign investments do not differ from domestic ones. We have improved the FDI modelling on several dimensions.

3.3 Experimental design

We investigate a surge in protectionism as described by (Bouët and Laborde 2009) in their *Up to max* scenario. The stalemate of the Doha Round and the economic slowdown create a new space for protectionist pressures. To assess a plausible rise in protection, historical data is used to determine the highest applied protection rate implemented by every country during 1995–2006. Then, the minimum between the historical maximum level and the existing bound tariffs is selected. This *Up to Max* scenario corresponds to a case whereby governments apply the most adverse trade policies of the past 10 years, but still respect their UR commitments. On an historical basis, tariffs evolve as a response to changes in world prices, domestic production structure, and political pressures. This scenario allows the share of binding overhang that is really relevant for private agents to be captured since it corresponds to the behavior exhibited by policymakers since the end of the UR. It is important to note that in all scenarios with increasing tariffs, the preferential tariffs protected by bilateral or regional agreements are not changed. MFN rates are increased and unilateral preferences, except the

Figure 1: Average level of protection



European Union *Everything But Arms* initiative are removed.

As shown in figure 1, this scenario implies a significant rise in protection at the world level: + 39.1 percent or 1.8 points. Industrial activities will be the most impacted in relative terms (+46.2 percent in average). Due to the large binding overhang in developing countries, these increases are concentrated in developing countries: +63.3 oercent or 5 points for Middle Income Countries (MIC) and + 79.3 percent or 7.3 points in Least Developed Countries. Due to the rising importance of MIC countries in the FDI pattern as well as the growth opportunity represented by FDI for LDC countries, we see that FDI strategy in these countries may be strongly affected by changes in trade policies and that the role of the binding process of tariffs structure is quite important.

At the same time, the end of unilateral preferences combined to the increase of some MFN tariffs in developed countries increase the protection faced by the MICs on these markets by 28 percent (and by 63 percent for LDCs). Once again, the consolidation of preferential scheme appears to be

an important issue.

Even if this protectionist scenario takes place in a context of economic crisis, we do not assume that preferences in terms of FDI (risk premium, reduction of current account imbalances etc.) will be affected by the situation.

4 Results

We focus on several indicators: first the political economy is studied through real return to factors as well as welfare results; second, FDI and Trade flows.

The putty clay assumption leads us to two additional choices:

- results are displayed for two time horizons: short term (2015) and long term (2025) after capital reallocation;
- differentiated rates of return of capital by sector (specific factor assumption) implies heterogenous preferences among capital owners. Since different sectors have different lobbying capacities (concentration, historic networks), we have to go beyond the average rate of return of capital and we provide the evolution of capital owner income by sectors for key countries (EU, US, Japan, India, China).

4.1 Political economy of protectionism

<< to be included >>

4.2 Vicious and Virtuous cycle of trade and FDI

<< to be included >>

5 Conclusion

<< to be included >>

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