

# FIW-Research Reports 2010/11 N° 05 April 2011

Policy Note

# Model Simulations for Trade Policy Analysis: the impact of potential trade agreements on Austria

Joseph Francois, Olga Pindyuk

#### Abstract -

In this paper, we examine possible medium-term changes in EU trade policy, including the negotiation and implementation of Free Trade Agreements (FTAs) with regional entities like ASEAN and the NAFTA countries. We also examine the possible conclusion of the Doha Round of multilateral trade negotiations. Such changes in policy at the regional and global level imply changes in trade policy and industrial structure that affect Austria as part of the network of European industry. To accomplish this, we work with a computable general equilibrium model (CGE) of the Austrian economy and its major global trading partners. This model is benchmarked to 2020 macroeconomic projections. The modeling scenarios are based on a mix of tariff reductions for goods and non-tariff barriers (NTB) reductions for services. The services liberalization scenario is based on protection with an "actionability" assumption. The results include estimated changes in GDP, welfare, as well as in the value added contained in Austrian exports. The focus on value added provides important insight to the overall impact on the Austrian economy. In all policy cases examined, the striking messages is the importance of high technology services (ICT and other business services) to the total growth in Austrian exports, on a value added basis. This reflects both the high value added content of trade in this sector, and the apparent comparative advantage of Austria in this sector in the 2020 baseline.

Keywords: trade agreements, ASEAN, NAFTA, Doha Round, Austria, CGE

**JEL-codes**: F15, F17, C68

\_\_\_\_

The FIW-Research Reports 2010/11 present the results of six thematic work packages "The financial and economic crisis of 2007-2010 and the European economy", "Modelling the Effects of Trade Policy and the Transmission Mechanisms of the Economic Crisis on the Austrian Economy", "The Gravity Equation", "Macroeconomic Aspects of European Integration", "Effects of International Integration on Income Distribution" and "New Energy Policy and Security of Gas Supply", that were announced by the Austrian Federal Ministry of Economics, Family and Youth (BMWFJ) within the framework of the "Research Centre International Economics" (FIW) in January 2010.



## **Policy Brief**

# Model Simulations for Trade Policy Analysis: The Impact of Potential Trade Agreements on Austria

Authors: Joseph Francois, Johannes Kepler University, Linz; wiiw

Olga Pindyuk, wiiw

Financing of the study: The study was commissioned by the Austrian Federal

Ministry of Economy, Family and Youth (BMWFJ) within the scope of the Research Centre International Economics (FIW) and funded out of the Austrian Federal Government's

"Internationalisation Drive".

December 2010

Austrian trade policy is bound tightly to European policy on several levels. An obvious linkage is the core institutional mechanisms that establish trade policy at the level of the European Union. These translate directly into the rules that govern Austria's trade with its major partners, both in Europe but also outside the scope of the European Economic Area. A second set of linkages involves tight connections at the industry level between Austrian firms and those in other EU Member States, especially firms in Germany, Italy, and the new Members. Cross border linkages at industry level mean that the trade-related performance of the Austrian economy hinges on what happens at the European level. This also means industrial policy and the evolution of industrial structure in other Member States impacts Austria directly. Such inter-linkages mean that changes in policy at the regional and global level affect trade and industrial structure of Austria.

This brief summarizes a recent study that quantifies medium-term changes in the Austrian economy caused by possible implementation of Free Trade Agreements (FTAs) between EU and ASEAN and NAFTA countries, and by possible conclusion of the Doha Development Round of multilateral trade negotiations. The impact analysis is performed using a computable general equilibrium model of the Austrian economy and its major global trading partners.

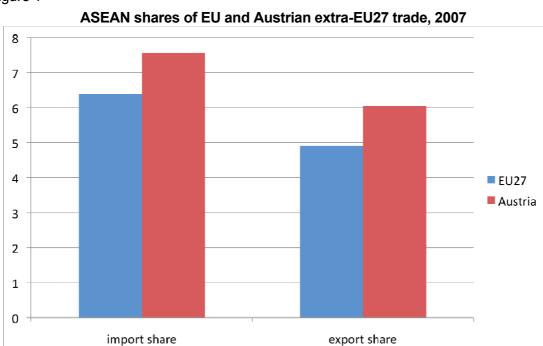
### **EU-ASEAN Trade Agreement**

Currently, ASEAN is negotiating a free trade agreement with the EU. The negotiations process started in 2007. However, progress in these negotiations was slow and both sides agreed in March 2009 to call a pause to negotiations. Recently, the negotiations were restarted as EU Member States asked the Commission to pursue negotiations with those individual ASEAN countries that show interest in negotiating comprehensive FTAs bilaterally. The final shape of an EU agreement or set of agreements, with the countries that make up ASEAN remains to be established.

The motivation for pursuing an agreement with the ASEAN countries is their collective importance for the EU as trading partners, when viewed as a combined trading block. Figure 1 highlights the importance of the ASEAN block as a destination of Austrian exports, and as a source of imports. Collectively, the ASEAN countries represent roughly 6 percent of Austrian extra-EU trade as a combined trading block. This is more than Japan and Korea combined, and roughly at par with trade with China.

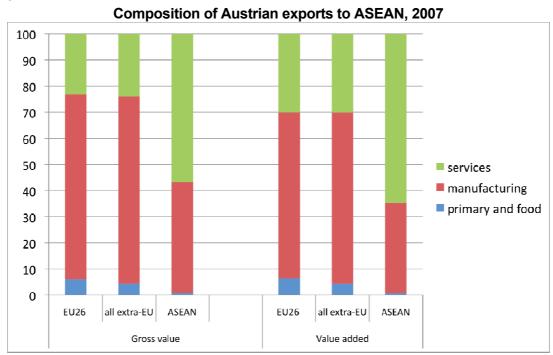
Figure 2 highlights the actual composition of trade with ASEAN. The first set of columns presents the composition of Austrian exports to ASEAN on a gross value basis. Here, we can already see that services dominate Austrian exports to ASEAN. This contrasts sharply with the general pattern of Austrian exports, where manufacturing dominates. This point is seen even more clearly when we examine trade on a value added basis. The second set of columns in Figure 2 present Austrian exports on a value added basis (reflecting estimated direct sector value added, as well as Austrian value added linked to demand for intermediates). On this basis, services account for over 60 percent of the value added contained in Austrian exports to ASEAN. Again, this contrasts sharply with the general pattern of Austrian exports, where manufacturing dominates the export profile.

Figure 1



Note: includes services trade. Source: COMTRADE and GTAP8.

Figure 2



Source: own calculations based on GTAP8.

## Transatlantic Free Trade Agreement

The potential benefits of an EU-NAFTA free-trade agreement are substantial. The North American economies, collectively, account for 25% of Austrian extra-EU exports, and over 20% of imports (see Figure 3). However, in contrast to ASEAN, this trade is concentrated in manufactured goods rather than in services (see Figure 4). This means that barriers to trade in goods are relatively much more important in a trans-Atlantic context than they are in the ASEAN context, where services are the dominant linkage between exports and Austrian value added.

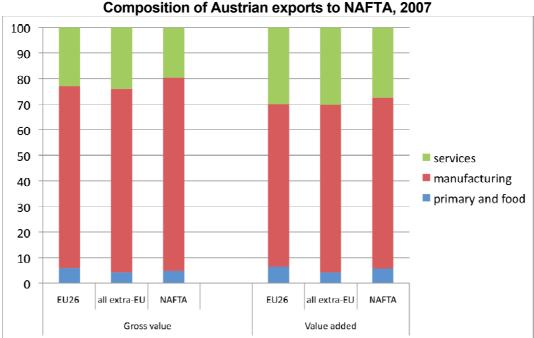
Figure 3

NAFTA shares of EU and Austrian extra-EU27 trade, 2007



Note: includes services trade. Source: COMTRADE and GTAP8.

Figure 4



Source: own calculations based on GTAP8.

However, despite ongoing dialogue and initiatives, high expectations linked to previous initiatives have not been met with respect to the United States. Hence, while the EU and Canadian governments are now in explicit dialogue linked to an eventual FTA, the process with the US is nascent. Indeed, like ASEAN, the shape of EU agreements with the NAFTA economies may ultimately involve bilateral agreements rather than an EU-NAFTA treaty.

## Doha Development Round

The Doha round of WTO negotiations, which was launched back in November 2001, aims at opening agricultural and manufacturing markets, as well as decreasing barriers to trade in services and expanding intellectual property regulation. The intent of the round, according to its proponents, was to make trade rules fairer for developing countries, however finding consensus among negotiating parties has turned out to be rather difficult. The negotiations collapsed on 29 July 2008 over issues of agricultural trade between the United States, India, and China. In particular, there was insoluble disagreement between India and the United States over the special safeguard mechanism (SSM), a measure designed to protect poor farmers by allowing countries to impose a special tariff on certain agricultural goods in the event of an import surge or price fall. After that the negotiations have remained in impasse.

Recently, several countries have called for negotiations to start again. The declaration at the end of the G20 summit of world leaders in London in 2009 included a pledge to

6

complete the Doha round. Brazil and Pascal Lamy have led the process of resuscitating the Doha Round, focusing on the role of the United States in overcoming the deadlock. Even allowing for likely exceptions for sensitive and special products, concluding the Doha Round of trade negotiations would bring significant reduction in barriers to trade in manufactures and agricultural products. While there is great potential for liberalization in services as well, at this stage there is little evidence that current offers in services would provide liberalization, though there would be improved security linked to market access.

## Modeling results

The highest GDP growth and welfare increase for Austria are estimated for the Transatlantic FTA – 0.25% and EUR 874 million respectively. Liberalization of trade under the ASEAN FTA yields the lowest increase in GDP – less than 0.1%. Imports increase roughly in line with exports in case of both FTAs. The Doha Round conclusion would yield gains similar, but slightly less than under a NAFTA agreement (0.24% of GDP).

The study also presented estimated changes in the value added contained in Austrian exports under all three liberalization scenarios. Under all scenarios, the value added content of expanded exports is between 45% and 65% of the gross value of expanded exports. This reflects the role of complex production chains, and the difference between gross exports (which include imported intermediate goods) and the domestic value added contained in those exports.

It is noteworthy, that exports of services grow the fastest relative to other sectors in the regional trade liberalization scenarios, while multilateral liberalization under the Doha Round scenario is expected to stimulate relatively more exports of manufacturing products and agricultural produce. As a result of such sectoral changes, in the ASEAN experiment, where export growth in services is the primary contributor to total export growth, 65% of gross export growth is in value added, while under the Doha case, the value added accounts only for 45% of gross export growth. The NAFTA case is in the middle, with value added contained in new exports equal to 55% of gross new export values.

There is also a strong difference in the importance of different sectors to total value added growth. For example, though import protection in motor vehicles is relatively low in North America, the motor vehicles sector is actually quite important when we look at the impact of a North American FTA on Austrian value added contained in exports. In all cases, one striking message from the simulations is the importance of high technology services (ICT and other business services) to the total growth in Austrian exports, on a value added basis. This reflects both the high value added content of trade in this sector, and the apparent comparative advantage of Austria in this sector.