International Trade & Domestic Growth: Determinants, Linkages and Challenges

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On September 27, 2007, the Oesterreichische Nationalbank (OeNB), The Vienna Institute for International Economic Studies (wiiw) and the Austrian Federal Economic Chamber held a one-day workshop entitled "International Trade & Domestic Growth: Determinants, Linkages and Challenges." The workshop aimed at providing a forum for an in-depth discussion of the growth effects of increasing internationalization from theoretical, empirical and institutional perspectives. A number of renowned experts from Austria and abroad participated in the workshop.

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By way of introduction, *Peter Mooslechner (OeNB)* emphasized how relevant the topic was against the background of progressive European integration and globalization; he drew special attention to the welfare effects of foreign trade. *Ralf Kronberger (Austrian Federal Economic Chamber)* noted that Austrian exports had risen sharply since 1995. Growth has remained strong in the first half of 2007, with Austrian deliveries abroad advancing by 10% and exports to Central, Eastern and Southeastern Europe as well as Asia surging even more. Kronberger went on to review Hans-Werner Sinn's "bazaar economy" hypothesis. The speaker identified the reduction of nontariff trade barriers as one area requiring a great need for action. Moreover, Austria should work on becoming a leading location for high-level services, which would require more investment in both education and R&D.

Michael Landesmann (wiiw) introduced keynote speaker *David Greenaway (University of Nottingham)*. With his presentation, entitled "New Perspectives on Exporting and Productivity," Greenaway provided a comprehensive overview of the newest theoretical and empirical findings about foreign trade and productivity. Greenaway is one of the proponents of the New New Trade Theory, which stresses the importance of firm heterogeneity. Neither the "classical" theory of international trade (Heckscher-Ohlin model) nor the New Trade Theory (represented above all in the work of Paul Krugman: Increasing Returns, Monopolistic Competition, and International Trade, Journal of International Economics, 1979) take account of the concept of firm heterogeneity. The classical theory does not even define the boundaries of firms, and the New Trade Theory assumes that firms are symmetric. Greenaway cited the contribution by Marc Melitz (The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity; Econometrica, 2003) as an outstanding theoretical work of New New Trade Theory. The speaker advocated a review of foreign trade between dissimilar countries as an important extension of Melitz's model; this would allow for the introduction of comparative advantages according to Heckscher and Ohlin by taking into account countries' heterogeneous endowments with production factors. Greenaway pointed out that it would also be necessary to analyze firms' choice of either exports or direct investment as alternative or complementary strategies and to look at in- and outsourcing in this context.

At the empirical level, Greenaway drew attention to the positive correlation of exports and growth at the macroeconomic level. A similar correlation can be identified at the firm level, namely between firms' productivity and their export activities. In this connection, Greenaway presented newer studies that examine the cause and effect relationship between firm productivity and firm exports. Nearly all of these studies conclude that more productive firms are more likely to self-select into the export market. Firms from smaller and hence less competitive markets are most likely to experience learning effects after entering export markets and to make use of these learning effects to raise productivity. Overall, though, the empirical evidence is mixed. Other factors in addition to productivity are also relevant for export market entry: agglomeration effects; firm size; human capital; general export intensity (all of which enter the equation with a positive sign) and factors specific to the respective industry (e.g. the amount of sunk costs). Most of these factors are also decisive for potential export market exits, in this case with a reversed sign. Firms' chances of survival in foreign trade are very high. Greenaway pointed out what implications the results of this work had for trade policymaking, where widespread consensus about the positive effects of export activities can be observed both at the national and at the multilateral level. The positive impact of firm size and agglomeration on export market entry suggests that targeted subsidies for small and medium-sized enterprises and for investment in infrastructure might be beneficial. Conversely, the benefits of general export subsidies might be questionable.

Additionally, the speaker noted that multinational firms that pursued foreign direct investment activities appear to be more productive than exporting firms that did not. Further empirical research would be necessary, in particular on the heterogeneity of learning effects and self-selection, and for the evaluation of foreign trade policy measures. Further headway in disentangling the effects of globalization and technological progress as well as in measuring firm productivity would also be important. Finally, Greenaway noted that more consideration needed to be given to where exports come from and where they go.

Michael Landesmann (wiiw) opened Session 1 on "Theory and Empirical Evidence." In a joint work with Robert Stehrer (wiiw), Landesmann analyzed the changing structure of world trade and drew attention to the resurgence of North-South trade from the mid-1990s, which is attributable above all to the enormous rise in trade between some Southeast Asian countries (the Asian tigers, India and China) and the EU-15, the U.S.A. and Japan. Moreover, EU-15 trade with Central, Eastern and Southeastern Europe has grown at an above-average rate. Additionally, there is empirical evidence of large discrepancies in the convergence of productivity in different sectors. The authors used a model based on these observations to analyze the change in the relative competitive advantages of countries and sectors caused by productivity catching-up coupled with incomplete adjustment of factor wages. Under such conditions, international outsourcing leads to positive growth effects in all regions concerned and speeds up structural change.

Continuing, *Gabriel Felbermayr (University of Tübingen)* attempted to explain whether and how firms access foreign markets. To this end, he used a theoretical model he developed together with Benjamin Jung (University of Tübingen). His presentation began with an overview of firm exports in Germany. Although only about 4% of exporters make foreign direct investments, sales via these exporters' affiliates abroad represent over half of Germany's export revenue. Some 40% of export revenue comes from sales via third-party agents, while direct sales account for the remainder. Just under half of all firms choose either third-party agents or direct sales as their export mode. The authors exclude direct sales, the least important export channel, from their model, and concentrate on the two other export modes. In their New New Trade Theory model, the establishment of local subsidiaries abroad, which causes high fixed costs, pays off only for firms which have a relatively high competitive advantage. Somewhat weaker firms can always choose to sell through a third-party agent. This option entails higher variable costs than sales on the domestic market, though, because it is difficult to find sales partners abroad. These two export channels are not available, however, to firms which suffer from a relative competitive disadvantage and which just barely survive on the domestic market. These theoretical results are consistent with Greenaway's statement about the empirical evidence of productivity differences between multinationals, firms engaged in exporting without direct investments abroad and firms that only do domestic business. In the context of this model, Felbermayr analyzed the impact of the changes in fixed and variable costs of access to foreign markets.

Julia Wörz (wiiw) presented the results of her joint research with Joseph Francois (Centre of Economic Policy Research – CEPR, University of Linz), according to which the importance of services as production input has risen. Moreover, the intensity of service use exhibits a positive correlation with the level of economic development. According to Wörz, international service trade has risen since the mid-1980s, especially as a result of technological progress and the greater fragmentation of production. Trade in the category of services supplied through any type of business establishment of one country in the territory of another (i.e. foreign direct investment) has grown especially sharply at least since the mid-1990s. According to the four modes of the supply of services described in the General Agreement on Trade in Services (GATS), such services fall under "mode 3" services (commercial presence). However, compiling data from this category is very problematic. The analysis of the effect of imports of various services by sectors showed that services have a particularly strong impact on manufacturing value added, exports and employment. The impact is positive in technology-intensive sectors and negative in labor-intensive sectors. Furthermore, Wörz and Francois found a rather low competitiveness for Austria in production-related services and pointed out fairly large barriers to FDI in the service sector. Moreover, barriers to international service trade, in particular to transportation services trade, are high in many countries.

Session II, entitled "Empirical Analysis for Austria," was opened with a presentation by *Gerhard Fenz (OeNB)*, who reported on an analysis drawn up with Martin Schneider (OeNB) of the transmission of German business cycle shocks to Austria. By way of introduction, Fenz explained that the volatility of the global business cycle has decreased and that particularly the integration of Central, Eastern and Southeastern European countries into the EU has reduced the importance of Germany as a trade partner for Austria. While Germany's contribution to Austrian exports and imports of goods as a percentage of GDP has continued to rise since 1990, its share in foreign trade has fallen. Likewise, Austrian FDI in Germany rose as a share of GDP, but its share in total outward FDI dropped. But the continued fairly constant correlation of both countries' business cycles can be seen as evidence of the continued strong influence of the German economy on Austria. However, a spectral analysis pointed out that the German economy led the Austrian economy by one quarter at the beginning of the 1980s, but currently exhibits a lag of one quarter. An estimation of a two-country Vector Autoregressive (VAR) model of the periods from 1972 to 1989 and from 1990 to 2005 showed that the strength of transmission of German supply shocks to Austria remained roughly of the same order, whereas that of monetary shocks increased and that of demand shocks weakened. As the volatility of shocks in Germany diminished over time, though, the effects transmitted to Austria also declined. Nevertheless, there was no evidence of a decoupling of Austria from the German business cycle.

In the next presentation, *Thomas Reininger (OeNB)* examined the import demand of selected new Central and Northeastern European Member States (Estonia, Lithuania, Poland, Slovakia, Slovenia, the Czech Republic and Hungary) by means of cointegration analysis employing the DOLS (dynamic ordinary least squares) method. To this end, Reininger used quarterly data from the mid-1990s onward. In nearly all countries, long-run import elasticities are largest in relation to exports and smallest in relation to consumption. The long-run import elasticity of fixed investment lies between that of exports and that of consumption. Slovakia represents an exception; here, the long-run import elasticity is highest with respect to consumption. The total of all three elasticities is just over 1 for most countries.

Additionally, Reininger determined a strong influence of EU-15 imports on the imports of the countries reviewed, in particular on the Czech Republic and on Hungary, with elasticities of approximately 1. This strong impact reflects advanced economic integration.

Discussant *Andreas Wörgötter (OECD)* drew attention to possible problems in identifying shocks in Fenz and Schneider's work and to data problems in Reininger's analysis. According to Wörgötter, the results of Reininger's analysis signal that the countries reviewed already belonged to the group of developed economies. In his opinion, both studies reflect the growing competitive pressure and the increasing structural change to which Austria is subjected. Therefore, changes in the educational system (especially in apprentice training), further deregulation measures and the provision of a stable macroeconomic framework through economic policymaking will be necessary. Wörgötter cited further increases in the labor market participation rates as another important goal.

Session III dealt with "Trade Policy and Growth" and was opened by *Przemyslav Kowalski (OECD)* with a survey of various studies on the welfare effects of growing trade liberalization. Kowalski attributed the large fluctuations of the results to different assumptions on technology and on the structure of goods and labor markets, apart from differences in the data and methods used. Most studies conclude that in absolute figures, liberalization results in larger increases of value added for developed countries. In addition, the estimated values are generally fairly low compared with the total output of the countries examined, which, according to Kowalski, is partly ascribable to the fact that the productivity-increasing impact of foreign trade was barely taken into account in most studies.

In his presentation, *Joseph Francois (CEPR; Johannes Kepler University, Linz)* underlined that on average countries with relatively open markets do better in economic terms. However, a comparison between Southeast Asia and Sub-Saharan Africa shows that a high foreign trade share alone does not guarantee a good growth performance. On the other hand India's and China's share of foreign trade in total economic activity rose when these economies began to boom. Moreover, just before the boom, the share of development aid declined in both countries, raising doubts about the usefulness of such benefits. The literature is unanimous in confirming that sustainable economic policy makes a positive contribution to economic growth. By way of conclusion, Francois presented an overview of the strengths and weaknesses of Applied General Equilibrium (AGE) models in analyzing the impact of trade liberalization. The speaker saw a need for action inter alia in the evaluation and structural estimation of such models, taking into account firm heterogeneity, the measurement of trade policy measures and investment modeling.

In her discussion of the two presentations in Session III, *Nora Dihel (European Commission)* noted that, above all, the results on the welfare effects of liberalization in services are very diverse. *Michael Landesmann (wiiw)* emphasized that such studies should take the impacts on particular groups (e.g. households with a particular profile) more into account.

The sessions were followed by a panel discussion with panelists *Nora Dihel (European Commission), Manfred Schekulin (Federal Ministry of Economics and Labour), Rudolf Payer (RHI AG) and Werner Raza (Chamber of Labour)* on the implications of globalization for trade and economic policy. Dihel noted that, above all, low-skilled workers range among the globalization losers. She also explained the European Commission's position on globalization, pointing in particular to the Lisbon strategy. Schekulin clarified that Austria pursues a policy of "prudent globalization" and that it is important to take into account the losers of trade liberalization. Therefore, trade adjustment policies such as labor market activation policies are required to buffer adverse effects. According to Schekulin, one reason to exercise caution in liberalization is the growing importance of sovereign wealth funds. Payer presented a large enterprise's view of globalization. He called for legislative changes in Austria on CO^2 emissions and the issuing of visa as well as for an EU-wide uniform execution of the VAT regulations. Raza noted that internationalization is not an end in itself. Arguing on the basis of the drop in unit labor costs and the decline in the wage share of GDP in Austria, Raza called for an increase in real wages, which had been stagnating lately. Moreover, he emphasized the importance of investment in infrastructure and R&D. Finally, Raza criticized Austrian foreign trade policy because it allowed for structural current account surpluses and the concentration of export promotion on large enterprises. The workshop closed with a discussion of the issues introduced by Raza.