

Austria's External Economic Relations 2010



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Global Economy

1. Developments and challenges of the world economy

1.1 The world economy at a glance

Roman Stöllinger (wiw)

The world economy is recovering from the worst recession since the 1930s, as a result of which global GDP shrank by 2 percent in 2009. The economic crisis of 2008/2009 was global in scope, although some emerging countries, notably China and India, were able to avoid a recession but nevertheless experienced a significant growth slowdown. Taken as a group, emerging and developing countries recorded positive growth (+2.5 percent) in 2009 while GDP in advanced countries declined by 3.2 percent.

Led by Asia, the global economy began to recover in the second quarter of 2009, gaining momentum in the second half of the year. In many countries the recovery process was supported by fiscal stimulus measures and loose monetary policy, and many countries also benefited from the turn in the inventory cycle. The recovery process, however, has differed greatly across countries and regions, with subdued and fragile growth in advanced countries but vivid and robust growth in emerging markets, notably in Asia and South America. For 2010 and 2011, advanced countries are expected to grow by 2.7 percent and 2.2 percent respectively, while GDP in emerging and developing countries will expand by about 7.1 percent and 6.4 percent respectively. The enduring growth differential between industrialised and emerging countries implies that the weight of the latter in the global economy will increase. While OECD countries still accounted for 75 percent of global growth in the year 2000, their contribution will decline to less than half in 2010. On the other hand, the BRIC (Brazil, Russia, India and China) alone will contribute about one third to the global growth rate and their contribution is expected to reach about 40 percent in 2015. Moreover, the growth process of emerging markets will be driven increasingly by "autonomous forces" such as rising internal demand (due to the expansion of the middle class) and the expansion of South-South trade.

The return to growth also caused the prices of energy and metal to recover considerably from their lows of February 2009. The rise in the price of oil, which reached US\$ 78 per barrel in September 2010, reflects not only an increase in demand (which is mainly due to China)

but also OPEC's ambitions to keep the oil price in a price range between US\$ 70 and US\$ 80.

1.2 Challenges ahead

Roman Stöllinger (wiw)

One of the major challenges ahead, at least for a large number of advanced countries, is the consolidation of the budget and a reduction of the public debt. While in many countries, including most euro area members but also the USA, a rebalancing of the budget is absolutely necessary in order to return to a sustainable path for public debt, the simultaneous spending cuts (or tax increases) of major countries may endanger the still fragile post-crisis growth process.

The public debt of the euro area members will increase to almost 85 percent of GDP in 2010. This is well above the threshold at which the debt burden starts curtailing the growth rate, which is estimated to lie between 70 percent and 80 percent for the euro area. The IMF estimates that for advanced countries on average, the debt-to-GDP ratio will reach about 100 percent in 2010.

Apart from the potential negative impact of a high public debt level on long-term growth, the necessity of reducing budget deficits and bringing the evolution of public debt back onto a stable path will, in the short term, have a negative impact on growth and may even threaten the still fragile recovery process. The IMF estimates that reducing the budget deficit by 1 percent of GDP will lead to a 0.5 percent lower growth rate in the short term (within two years) and a 0.3 percent higher unemployment rate. Negative impacts on growth might be even more pronounced due to the fact that a number of important countries will all have to cut down public spending (or raise taxes). Theoretically, a depreciation of domestic currency potentially helps cushion the negative growth effects of a fiscal consolidation; however, in a situation with fiscal consolidation occurring simultaneously in many countries, it is clear that not all countries can depreciate at the same time.

This is one of the reasons behind the recent tensions in the international exchange rate system, which experienced strong fluctuations over the last two to three years. The United States are striving for a lower exchange rate of the US dollar, in particular against the Chinese yuan, which they consider highly undervalued. Since June 2010, the USA has increased pressure on China and the US Congress has adopted a bill that would allow the United States to impose trade sanctions against countries that "manipulate" their exchange rate. The position of the USA, however, is not an easy one, as their large current account deficit makes them highly dependent on China, which finances large parts of the USA's external deficit. Also, China continu-

ously rejects the US allegations regarding an undervalued yuan and argues that the United States should regain their external competitiveness (and reduce their current account deficit) by an internal devaluation of the US dollar instead of trying to bring the exchange rate down.

In September 2010, the Bank of Japan intervened in order to stop the appreciation of the yen, which Japan believed was undermining the competitiveness of the Japanese export industry. The euro, in contrast, depreciated during the first half of 2010 due to the debt crisis in the euro area. While China kept the exchange rate of the yuan almost fixed to the US dollar, the latest developments in the United States, Japan and the euro area have caused the currencies of other countries without capital controls to appreciate sharply (e.g. the Australian dollar and the Brazilian real). The recent efforts to actively influence the exchange rates have caused observers, including the IMF, to warn against an international currency war with negative consequences for all parties involved.

1.3 Economic outlook for advanced countries, the CEEC and emerging markets

Vasily Astrov (wiw), Waltraut Urban (wiw), Roman Stöllinger (wiw)

In advanced countries, growth is expected to be slower than before the crisis, and the recovery process remains fragile. While fiscal stimulus measures have supported a stronger than expected initial recovery, e.g. in the **United States** or **Japan**, growth is expected to flatten out in the second half of 2010, as private demand might still be too weak to compensate the phasing out of fiscal stimulus measures. The **United States** (2010: +2.6 percent) is expected to maintain its growth advantage over the **euro area** (2010: +1.7 percent) in the coming years. Growth in the euro area will be particularly weak, but with marked differences between member states. **Germany**, the largest economy in the euro area, experienced record growth in the second quarter of 2010 and is expected to grow by a solid 3.4 percent for 2010, while others are still in recession (e.g. Spain). After the Greek crisis, fiscal consolidation is one of the major challenges for the **euro area**, as is the loss of external competitiveness in the countries of the periphery but also in **France** and **Italy**. Growth will also remain subdued in the **United Kingdom**, which will expand at about the same pace as the euro area in 2010. Benefiting from the dynamic environment in South East Asia, **Japan** had a strong initial recovery, but the economy is still struggling with deflationary tendencies and a strong yen that is seen as an obstacle for Japan's export industry.

The increased unemployment, the ongoing "credit crunch" and the implemented austerity measures are suppressing consumer demand

in nearly all **Central and Eastern European countries** (CEEC). However, the recent mild improvement in the international environment has boosted their exports, which have returned to between 80 percent and 90 percent of pre-crisis levels. CEEC with flexible exchange rate regimes and a stronger industrial base (such as **Poland** and the **Czech Republic**) are benefiting most from the current international trade rebound. In contrast, prospects for recovery are weakest in the **Baltic States** and the countries of **South Eastern Europe**. Their general reliance on fixed exchange rates has prevented an improvement in external competitiveness; furthermore, their weak industrial sectors remain an obstacle to export-led growth. In **Russia**, the current economic upswing is mainly driven by the recovery in global oil prices, but the government seeks to advance the technological modernisation and diversification of the economy.

The **emerging markets** recovered earlier and faster from the global crisis than the advanced economies and became a major driver of global economic growth in 2010. Their development was supported by prudent government policies and strong domestic demand. However, in some economies signs of overheating can be observed and governments have already introduced certain tightening measures. In 2011 they are expected to expand at a somewhat slower pace than in 2010, more in line with their longer-term development path. **China**, the fastest-growing economy, is fighting an asset bubble and has to deal with rising prices and double-digit wage increases. **India**, ranking second in growth, faces inflationary pressure as well. In **Brazil**, which has experienced a V-shaped recovery, labour markets have become tight, with the unemployment rate at the lowest level it has seen in a long time. **Turkey** shows no signs of overheating so far, but after a deep recession, GDP has already surpassed its pre-crisis level and growth is expected to slow down next year as well. An exception is the **South African** economy, which is lagging behind somewhat and may gain momentum in 2011.

2. The institutional environment of world trade

Waltraut Urban (wiiw), Roman Stöllinger (wiiw)

2.1 WTO and multilateral developments

Despite the success of the tariff provisions of the GATT in avoiding a severe slippage into protectionism by WTO members – basically no tariff obligations were violated and the use of WTO safeguard measures did not increase more than during other business cycle downturns – no real progress was achieved in the current round of WTO free

trade negotiations, the Doha Development Agenda (DDA). The DDA mainly deals with the further elimination and reduction of tariffs in the area of agriculture and industrial goods¹⁾.

In July 2008, the WTO members came very close to an agreement but negotiations finally failed over a technical issue, the thresholds for the special safeguard measures that would allow developing countries to introduce temporary tariffs on imported agricultural products in the event of import surges. WTO rounds are considered as a "single undertaking"; therefore disagreement on this issue, notably between India and the USA, meant that once again the Doha round could not be concluded.

Since this setback, criticism towards the Doha round has been growing and an increasing number of commentators suggest that either a "mini" Doha round should be quickly agreed upon or the DDA should be abandoned altogether in order to move on to more pressing economic issues that can only be resolved in multilateral negotiations, such as undervalued exchange rates or the high volatility of raw materials (the idea of a "Bretton Woods II"). In addition, the more fundamental opposition to WTO free trade negotiations also remains. According to this view, WTO obligations deprive developing countries of the possibility to protect their nascent industries with import tariffs, a very successful strategy that today's developed countries used a great deal during their own industrialisation process. The majority of economists, however, still support the conclusion of the Doha round and this is also the official position of the WTO, supported by the leaders of the G-20, who continue to renew their commitment to the Doha round in each of their meetings. Commitment to the Doha round was also confirmed at the Seventh WTO Ministerial Conference at the end of 2009, but no real progress could be achieved.

Proponents of the Doha round argue that an agreement is essential because it would lock in unilateral (and voluntary) liberalisation by many WTO member states and help avoid a return to large-scale tariff protectionism. It would also strengthen confidence in the WTO and in multilateral negotiations in general, thereby possibly increasing multilateral cooperation in other areas such as climate change. Moreover, Doha would lead to direct trade gains and consequent gains in income. A recent study that includes 22 WTO members estimates that the direct trade gains (exports plus imports) from the Doha round (liberalisation in agriculture and NAMA) would amount to about US\$ 125 billion which would translate into a 0.11 percent increase in

¹⁾ In WTO jargon, liberalisation of trade in industrial goods is referred to as non-agricultural market access (NAMA).

GDP²⁾. Many believe that the prospect of these rather small gains partly explains the lack in political support for the DDA and the demand that further issues, such as liberalisation of trade in services, be included. Progress in this area, however, is very unlikely and the technical difficulties that led to the breakdown of negotiations in July 2008 remain equally unsolved. The next opportunity for main negotiations to make progress will be at the G-20 summit in South Korea in November 2010.

2.2 Bilateral trade relations and regional integration

In contrast to current WTO negotiations, bilateral and regional trade liberalisation is moving forward at great speed. In Asia in particular, a series of new free trade agreements (FTA) came into force in 2009 and 2010, for example the FTA between India and ASEAN (2010); in addition, the FTA between China and ASEAN was deepened to become a free trade area (FTAR) in January 2010.

Trade relations of the EU. Since the adoption of its new trade strategy in 2006, the EU has intensified its bilateral free trade negotiations, in particular with Asian partners. The FTA with South Korea is already signed and is expected to enter into force in July 2011, although the EU-internal ratification procedure has become more complicated since the Lisbon Treaty (through involvement of the European Parliament). Concerns regarding the EU-South Korea FTA remain, in particular regarding the effects of the agreement on sensitive sectors such as automobiles. FTA negotiations are ongoing with India and were opened with Singapore in March 2010 following a change in EU strategy to enable negotiations with individual ASEAN countries (instead of ASEAN as a bloc). Outside Asia, the EU is engaged in FTA negotiations with Canada and the Ukraine, and in May 2010 negotiations with MERCOSUR were relaunched. In addition, FTA with Peru and Colombia were signed, but ratification is still pending.

In 2010 Iceland joined Turkey, Croatia and Macedonia as one of the candidate countries for EU accession.

Trade relations of the USA. US trade policy has seen little progress recently, with the three signed FTA, those with Colombia, Panama and South Korea, still waiting for ratification. The FTA with South Korea ("KORUS") would be the most important trade agreement of the USA since the creation of NAFTA, the free trade area with Canada and Mexico. But as in the FTA between the EU and South Korea, fears over

²⁾ Hufbauer, G. C., Schott, J. J., Wong, W. F., "Figuring Out the Doha Round", Policy Analyses in International Economics, Peterson Institute for International Economics, June 2010, (91).

an import surge of Korean cars are retarding the ratification of the agreement on the part of the USA³).

Economic integration in Asia. The year 2010 is a milestone for Asian regional economic cooperation. On 1 January 2010, the ASEAN–China free trade area started operating and is now the third largest FTAR in the world, after the EU and NAFTA. Furthermore, a free trade agreement between ASEAN, New Zealand and Australia and the ASEAN–India Trade in Goods Agreement entered into force. Finally, trade between South Korea and the six original ASEAN members⁴) was nearly fully liberalised. Within ASEAN, further steps to reach the goal of a single market in 2015 were set and the ASEAN Trade in Goods Agreement (ATIGA) came into force. The various agreements are expected to boost intra-regional trade substantially.

In view of the dynamic development of regional economic integration with ASEAN at the core, APEC is losing importance. One initiative to be mentioned is the eventual extension of the "Trans-Pacific Partnership", now including Brunei Darussalam, Chile, New Zealand and Singapore. The Shanghai Cooperation Organisation (SCO), on the other hand, is gaining importance and has paved the way for new members to join.

Economic integration in South America. After several years of negotiations, the members of MERCOSUR⁵) were finally able to agree on a common customs code (on 2 August 2010), which constitutes an important step towards an effective customs union. The customs code brings to an end the double levy of the external tariff for imports from third countries which are re-exported within MERCOSUR. The customs code should be fully implemented by the end of 2012. Moreover, in April 2010 the FTA between MERCOSUR and Israel entered into force; this is MERCOSUR's first FTA as an economic bloc. MERCOSUR members are not allowed to conclude FTA individually, a provision which has become highly disputed among the members.

3. Developments in world trade

Roman Stöllinger (wiw)

3.1 General developments

Global trade and investment data for 2009 fully reflect the dramatic impact of the global economic crisis in 2008/2009. Taken together, international trade and foreign direct investment (FDI) flows amounted

³) South Korea has not yet ratified the agreement either.

⁴) These are Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand.

⁵) These are Argentina, Brazil, Paraguay and Uruguay.

to US\$ 16.9 trillion, down 22.6 percent compared to their 2008 level. Trade in goods was hit very badly by the crisis, with an extreme slump from the last quarter of 2008 to the first quarter of 2009, and a decline of 23 percent for the entire year 2009. The drop in services trade was less pronounced (–12 percent), while FDI registered its second year of declining flows, which plunged by about 40 percent.

For 2010, trade is expected to recover markedly (+11.4 percent in real terms), while FDI flows are expected to gain only modestly.

3.2 International trade in goods

The decline in global trade can be characterised as "sudden, severe and synchronised"⁶⁾ with real goods trade already dropping 12.5 percent in the fourth quarter of 2008 and reaching its low point in January 2009 at 80 percent of its April 2008 value (Figure 3.1).

On average, advanced economies suffered a more severe setback in exports than emerging markets. The collapse of Japanese exports was remarkable: these dwindled to 60 percent of their pre-crisis level. The recovery of exports was also led by emerging markets, starting around March/April 2009, about one quarter ahead of the advanced economies. The revival of global trade gained momentum in the second half of 2009 but with still pronounced regional differences. The recovery of exports was strongest in Asia and Latin America, where exports have at present already surpassed their pre-crisis level. In contrast, exports from the euro area and Central and Eastern European countries were still far below their April 2008 peak by mid-2010.

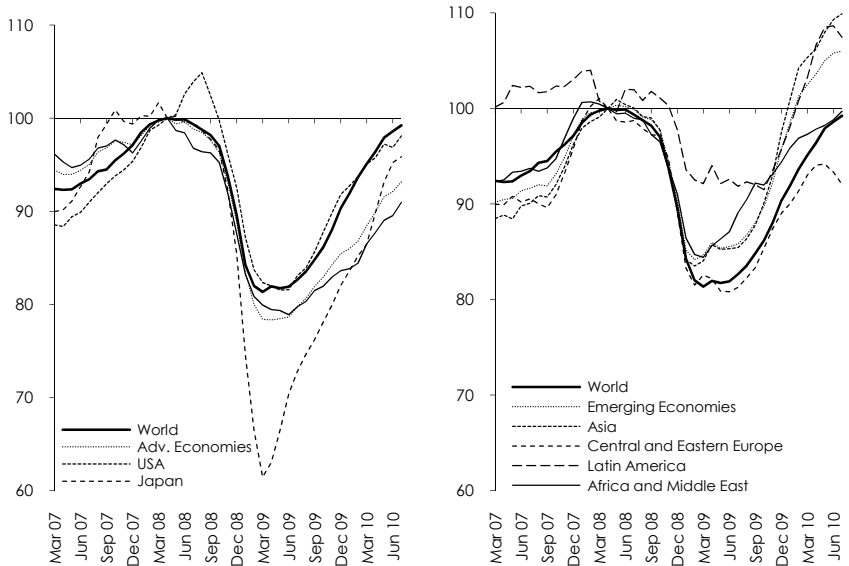
There is broad consensus now that the dramatic fall in global trade flows was mainly the result of the crisis-related negative demand shock. The fact that this demand shock was highly asymmetric, meaning that it hit some industries that play a particularly prominent role in exports and imports (e.g. automotives, machinery) more than others, also explains why the collapse of international trade was higher than expected ("composition effect"), even when taking into account the increased income elasticity of trade. Another contributing factor was the inventory cycle, as businesses ran down their inventory stocks during the economic crisis due to deteriorated business expectations.

The fact that the severe trade slump was mainly a result of demand side factors and only to a lesser extent due to supply side factors directly related to international trade (e.g. increased costs or shortage of trade finance, protectionism, split-up of international supply chains) means that the recovery of global trade flows has been driven by the same factors that caused the more than proportionate decline, i.e. demand pick-up in important traded goods industries and an upswing

⁶⁾ Baldwin, R. E., "The great trade collapse: What caused it and what does it mean?", VoxEU.org, 27 November 2009.

in the inventory cycle. Therefore, in many instances, the countries that were most heavily hit by the trade collapse (e.g. Japan or Germany) also experienced a strong rebound of their exports.

Figure 3.1: Development of global exports in individual countries and regions (real)
3-month average February - April 2008 = 100



Source: CPB world trade database, wiiw calculations. – Values are averages of the preceding three months respectively. Country groupings according to CPB.

An interesting phenomenon of globalisation in the last two decades is the intensified degree of vertical specialisation, leading to the emergence of international production networks. While the role of international production networks in the crisis and the great trade collapse (i.e. whether it intensified them or had a stabilising effect) is not yet clear, it is evident that it contributed to the upgrading in the export structure of emerging economies. Breaking down exports according to the technology intensity of the industries reveals, for example, that China, the ASEAN countries and the Newly Industrialised Countries in Asia (NIC 4)⁷⁾ have a higher proportion of goods coming from high-tech industries (such as electronic industries) in their exports than the traditional industrialised countries (e.g. the EU, the USA or Japan). The latter show a clear specialisation in medium-high-tech industries,

⁷⁾ Hong Kong, South Korea, Singapore, Taiwan.

which include machinery, the automotive industry and the chemical industry (excluding pharmaceuticals). This development is also reflected in the global market share, which has shifted towards China and many other Asian countries to the detriment of the Triad countries. While the EU-27 is still the leading exporter of manufactures in general (market share in 2009: 20 percent, excluding intra-EU trade), China is already the leading exporter of goods from high-technology industries⁸⁾.

3.3 International trade in services

Trade in services showed some resilience to the crisis, at least when compared to trade in goods, with trade in services declining by 12 percent. An explanation for this is that many services industries, including several tradable services, are less reactive to the business cycle. The exception to this is the transportation sector, because the development of trade in transportation services is closely linked to the volume of goods trade and therefore declined by a similar magnitude in 2009 (-22 percent in nominal terms). Noteworthy is the moderate decline in travel services (-11 percent), which are often considered to be the classical expenditure item to be postponed or cancelled first in times of economic crisis. Other commercial services⁹⁾, which account for almost two thirds of global services trade due to rapid growth until the crisis, showed the most resilience in 2009 and trade in this broad category dropped by only 8 percent, even though it includes financial services, which were down by 15 percent globally. Despite the more moderate decline in services trade compared to goods trade, a higher share of services in exports did not shield countries from a slump in their exports in 2009. On average, a country with a 10 percent higher share of services in its exports only experienced a 1.1 percent lower drop in exports from 2008 to 2009, and for other commercial services no stabilising effect could be detected at all¹⁰⁾.

3.4 Global foreign direct investment

Global FDI flows declined by 37 percent¹¹⁾, reflecting a fall of equal magnitude in advanced economies, a sudden stop-like situation with respect to FDI inflows in the new EU member states and the Western

⁸⁾ These results must be interpreted with care, as increasing vertical specialisation implies that in many emerging markets the high share of high-technology exports could result from the fact that multinational firms in high-technology industries are locating their labour-intensive stages of production in countries like China or the ASEAN countries.

⁹⁾ Commercial services excluding transportation and travel.

¹⁰⁾ Results based on simple ordinary least square (OLS) regressions (excluding oil exporters) using WTO data.

¹¹⁾ As measured by FDI inflows.

Balkan States (-78 percent) and a somewhat smaller reduction of inflows in the BRIC¹²⁾ and other countries. The USA remained the leading recipient country of FDI in 2009, despite a 60 percent decline. France advanced to the main recipient country within the EU.

The global economic crisis intensified the trend towards a bigger weight of emerging economies as both recipients and sources of FDI flows. China was the second most important recipient country of FDI in 2009 and the BRIC together absorbed 18 percent of global FDI inflows, a marked increase in comparison to 2000 when their share amounted to about 5 percent. But the catch-up process of important emerging market economies is also visible in the outward FDI flows. China and Russia were both among the top ten investor countries in 2009 and all BRIC countries are important sources of FDI within their region.

The sharp decline in FDI flows in 2009 affected all forms of FDI, equity investments, intra-company loans and reinvested earnings, which reflect reduced company profits due to the crisis. Globally, company profits have been on the rise again since mid-2009. However, new equity investments and intra-company loans remained at a very low level until the first quarter of 2010, and for the whole of 2010 FDI flows are expected to rise only marginally, to about US\$ 1.2 trillion (2009: US\$ 1.1 trillion). In general, the recovery of FDI flows is forecast to be rather slow, with flows not reaching their 2008 level until 2012.

¹²⁾ Brazil, Russia, India, China.

Austria's External Economic Relations

4. Economic development, price competitiveness and an overview of Austria's external economic relations

4.1 Economic development (including outlook for 2010 and 2011)

Sandra Bilek-Steindl (WIFO)

Against the background of the global economic crisis in the year 2009, Austria's economy shrank by 3.9 percent. This is the worst decline since World War II. Affected by the downturn in the most important export markets, goods exports and industrial activity, in particular, contracted in 2009. After the trough was reached in the first quarter, the cyclical stance improved gradually over the year. In the second half of the year, the economy already showed growth on a quarter-on-quarter basis. Like most other industrialised countries, Austria introduced a large range of economic policy schemes which cushioned the downturn. Besides high real per-capita gross earnings, the tax reform and the car-scrapping premium carried private consumption expenditures, which helped to stabilise the economy. Investment demand declined, affected by unfavourable financing conditions. After inflation peaked in 2008 at 3.2 percent, price pressure slowed down to 0.5 percent in 2009, with the largest downward contribution coming from the price decreases in fuel and other energy sources. The economic crisis impacted quickly on the domestic labour market. Even though the negative effects were dampened by the public financing of short-time working schemes, jobs were lost especially in the industrial sector (–6 percent). Unemployment shot up in the economy as a whole as well, and employment declined by 1.4 percent. Automatic stabilisers and fiscal counter-cyclical measures burdened public budgets, with public deficit rising to 3.5 percent of GDP.

In the second quarter of 2010, the Austrian economy expanded at a high pace, benefiting from the improved external environment, notably from the upturn in Germany. But the cyclical expansion has been uneven in the euro area and is still subdued in some peripheral countries. Moreover, the appearance of macroeconomic imbalances is likely to threaten the economic recovery in the euro area as a whole,

including Austria. In 2010, Austrian GDP growth is forecast at 2 percent, with the biggest contribution coming from net exports. With real disposable income increasing moderately, private consumption expenditures will again provide a positive contribution to growth. While the higher inflation pressure will dampen real per-capita gross earnings, the increase in employment will boost real disposable income. Inflation is expected to reach 1.8 percent in 2010, which is entirely due to higher energy prices. As a result of the measures taken to stimulate the economy, the public deficit is expected to widen to 4.1 percent of GDP, despite the improved revenue and expenditure positions.

The weaker external environment and the planned fiscal consolidation package are likely to result in a decline in the quarterly growth profile in Austria, and GDP is expected to grow by 1.9 percent on a yearly basis in 2011. A fiscal consolidation package of about 1.3 percent of GDP is planned for 2011. Measures are expected to be split, about 40 percent comprising tax increases and 60 percent expenditure cuts. However, the measures have not yet been specified in detail. Under these assumptions, public deficit is expected to drop to 3.5 percent of GDP. Inflation is forecast to increase to 2.1 percent, based on the assumption that indirect tax increases will contribute to the inflation rate with 0.4 percentage points. Overall, cost pressures remain low due to low wage growth and still underutilised capacities. Despite an expected rise in employment, unemployment is predicted to remain unchanged because of a strong expansion in the labour supply.

4.2 Price competitiveness

Susanne Sieber (WIFO)

In the short term, price competitiveness is one important determinant of foreign trade. From April 2009 until the end of the year, the US dollar depreciated against the euro continuously. The nominal effective exchange rate in Austria showed an increase of 0.7 percent for industrial goods in 2009. Despite this, the increase in the real effective exchange rate was only 0.4 percent compared to 2008, due to relatively high price stability in Austria (Scheiblecker *et al.*, 2010)¹³. Thus, according to the real effective exchange rate, no excessive deterioration in price competitiveness took place in 2009.

However, the economic crisis significantly affected the development of unit labour costs in Austrian manufacturing; unit labour costs increased by 13.5 percent in 2009. On average, labour costs in the manufacturing sector of the EU's trading partners rose by only

¹³) Scheiblecker, M., *et al.*, "Österreichs Wirtschaft im Jahr 2009: Schwerste Krise seit über 60 Jahren", WIFO-Monatsberichte, 2010, 83(4).

9.8 percent in 2009 (Hölzl – Leoni, 2010)¹⁴). This indicates a deterioration in cost competitiveness, contrary to the trend of the last three years. However, this result must be interpreted with caution, as the crisis affected the reliability of unit labour costs as a competitiveness indicator, due to special effects caused by economic stimulus packages as well as strong differences in the decrease of employment and production in 2009 (see Hölzl – Leoni, 2010).

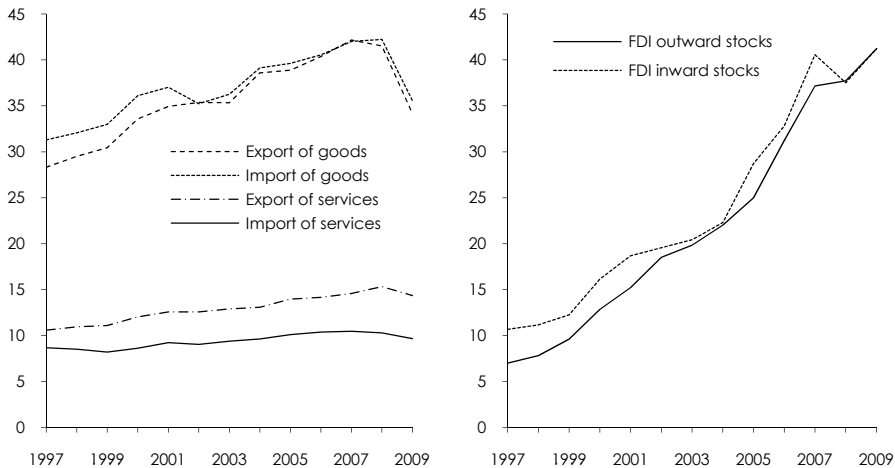
4.3 Overview of Austria's external economic relations – trade in goods, trade in services and foreign direct investment

Susanne Sieber (WIFO)

4.3.1 Austrian integration in the world economy

In the most important figures of Austrian foreign trade, the impact of the economic crisis – particularly on trade in goods – is clearly visible. Austrian nominal goods exports according to national accounts dropped to € 97 billion in 2009 (–20.2 percent).

Figure 4.1: Development of Austrian export, import and FDI quotas
As percent of GDP



Source: Statistics Austria, OeNB, WIFO calculations. – FDI stocks in 2009: estimation of OeNB (2010).

¹⁴) Hölzl, W., Leoni, Th., "Internationale Lohnstückkostenposition 2009 durch Wirtschaftskrise stark beeinflusst", WIFO-Monatsberichte, 2010, 83(9).

Not quite as dramatic but still significant was the decline in exports of services by € 4.5 billion (or –9.7 percent). Somewhat different was the development of Austrian FDI stocks abroad; despite the economic crisis, these stocks reported an increase in both years. The amount of new investments, however, showed a marked decline in 2009 compared to the previous year. The value of foreign FDI stocks in Austria fell in 2008, to € 106.2 billion; however an increase is expected again for 2009 (OeNB, 2010)¹⁵).

The impact of the economic crisis can also be seen in the foreign trade quotas. The continuous increase of the goods exports' share in GDP in the years prior to the economic crisis stopped abruptly and significantly, caused by the strong, disproportionate collapse in exports of goods relative to GDP (Figure 4.1).

4.3.2 Austrian foreign trade according to national accounts

The development of the nominal export values according to national accounts showed that goods exports still constituted more than two thirds of total exports. However, due to the earlier and significantly greater slump in the export of goods during this crisis – compared to exports of services – the importance of exports of services increased.

The development of nominal net exports showed a significant increase in the years before the crisis. Within 10 years the nominal trade surplus increased from a slightly negative value in 1997 (€ –0.9 billion) to plus € 15.7 billion in 2007. In the crisis of 2009, net exports fell significantly to € 12.5 billion. However, for 2010 an improvement is expected.

5. Austrian trade in goods

Susanne Sieber (WIFO)

5.1 Developments in Austrian trade in 2009 and outlook for 2010

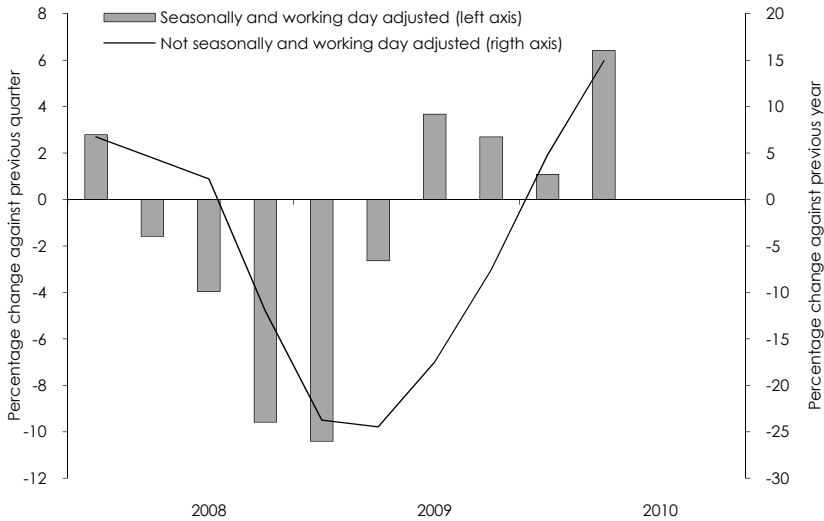
The year 2009 was characterised by a "sudden, severe and synchronised" trade collapse (Baldwin, 2009)¹⁶). This massive decline in international demand also affected Austrian foreign trade, with Austrian exports recording the largest decline in 60 years. Seasonally and working day adjusted real export values according to national accounts

¹⁵) OeNB, "Direktinvestitionen 2008. Österreichische Direktinvestitionen im Ausland und ausländische Direktinvestitionen in Österreich. Stand per Ende 2008", Statistiken – Sonderheft, OeNB, September 2010.

¹⁶) Baldwin, R. E., "The Great Trade Collapse: Causes, Consequences and Prospects", VoEU.org, 27 November 2009.

had already shown significant declines in the third quarter and fourth of 2008 (compared with the respective previous quarters). The slump worsened at the beginning of 2009; in the first quarter, exports dropped by 10.4 percent (compared with the previous quarter). However, in the third quarter and fourth of 2009, exports recorded gains against the respective previous periods.

Figure 5.1: Austrian export of goods (volume)



Source: WIFO calculations

The economic recovery started in Asian emerging markets; in the euro area, the recovery took place with some delay. Austrian exports of goods benefited from these clearly improving international conditions, especially from the unexpectedly high dynamics of Germany in the second quarter of 2010. Austrian exports rose particularly sharply in the second quarter of 2010 (+6.4 percent against the previous quarter, seasonally and working day adjusted real export values according to national accounts).

The severity of the export slump in 2008/2009 can also be seen in the results of the WIFO business cycle survey indicator "assessment of the present level of export orders". The mood deteriorated dramatically; in the third quarter of 2009, the balance of positive and negative answers in percent of respondents reached the exceptionally low value of -65.6 percent. The situation improved in 2010; in the second quarter – for the first time since the current economic crisis – the indicator

"forward-looking expectations regarding the volume of export orders" was above the 5-year average (2005 - 2009: 5.1 percent), which signals positive developments.

Due to the sharp decline at the beginning of 2009, total export figures for 2009 showed a marked decrease compared to the level of 2008. In 2009, a total value of € 93.7 billion was exported, representing a decrease of 20.2 percent compared to the previous year. The level of nominal exports of goods in 2009 was below that of 2005. Real goods exports showed a significant loss in 2009 as well (-18.7 percent). Although the terms of trade improved in 2009, the trade balance worsened again in 2009 by a further € 1.8 billion to a deficit of € 3.8 billion. The dramatic slump in Austrian exports also led to a significant reduction in the export quota (export in percent of GDP), which fell to 34.2 percent in 2009. However, in the first half of 2010, the export quota increased again to 37.8 percent.

5.2 Regional structure

The impact of the economic crisis on Austrian exports was regionally widespread, with the export slump affecting all major markets. One exception was the partner country China; nominal exports to China increased by 7.5 percent in 2009. Moreover, the drop in exports to Switzerland was relatively moderate (-2.7 percent compared to 2008). In sharp contrast to the success stories of Austrian trade to the Central and Eastern European countries in the previous years, the drop in export values to the CEEC-21 was disproportionately high (-26.8 percent).

Not surprisingly, exports to China gained importance in 2009, rising to a share of almost 2.2 percent of all Austrian exports of goods. However, with reference to international comparable levels this share is still relatively low.

The development of Austrian market shares in the OECD-24 nominal exports once again showed a loss in market shares in 2009 (-2.2 percent), despite market share gains in exports to Germany, Switzerland and the USA, as well as to the emerging markets of China, India, Brazil and South Africa.

5.3 Sectoral structure

Looking at the sectoral structure, a particularly sharp fall in exports of semi-finished goods (-28.4 percent) and investment goods (-23.1 percent) can be seen for 2009. The export of agricultural goods (-10.1 percent), food (-7.7 percent) and chemical products seemed to be more resistant to the effects of the world economic crisis.

5.4 Trade balance

Despite positive price effects, resulting from the terms-of-trade improvements in 2009, the trade balance showed a deterioration by an additional € 1.8 billion. Significant improvements in the trade balance (€ +2.8 billion) with Austria's main trading partner Germany, as well as in trade with China, could not compensate for the negative development in other regions, such as the deterioration of the trade balance with Switzerland, and – contrary to the long-term trend – with the 12 new EU countries.

5.5 Exports of goods in Austrian federal provinces

Raimund Kurzmann (JOANNEUM RESEARCH), Karolin Gstinig (JOANNEUM RESEARCH)

5.5.1 Regionalisation of exports

Explaining regional export flows from Austrian federal provinces using concepts of official statistics, such as the foreign trade statistics of Statistics Austria, is insufficient in some cases. This, for example, is a concept using data based on the company level. Therefore, biases against true exports of goods at regional level occur, because companies report their exports at the locations of their headquarters and not at the locations of their factories. A research project by JOANNEUM RESEARCH Forschungsgesellschaft mbH (JR)¹⁷⁾ dealt with this topic and provided findings on regionalised exports of goods based on their manufacturing locations for the years 2000 to 2006. This was the first research project of this kind. The findings showed that exports of goods in some federal provinces of Austria were highly underestimated by the foreign trade statistics.

The present report expands calculations at the regional level up to the year 2009. In addition, effects of the global economic crisis are shown. Furthermore, as a measure of international linkages in terms of exports of goods, the export ratio has been calculated for each province as well as for Austria as a whole. To show relative regional specialisation, the location coefficient has been calculated. Findings in this report are based on corrected values by JR and on current prices.

5.5.2 Findings

The economic crisis induced a decline in exports of goods in Austria, in the year 2009 a reduction of 20 percent was observed. In the years

¹⁷⁾ Kurzmann, R., Aumayr, C., Dumrailer, A., "Regionale Warenexporte der Steiermark 2000 – 2006. Eine neue Methode der Regionalisierung.", JOANNEUM RESEARCH Forschungsgesellschaft mbH, InTeReg Research Report, 2008, (70).

before the crisis (2000 to 2008), exports of goods showed almost continuous growth. The highest average annual growth rates in exports of goods in those years were observed in Styria (+9 percent), Upper Austria (+8.6 percent) and Vorarlberg (+7.6 percent); the lowest were observed in Vienna (+2.6 percent) and Burgenland (+2.7 percent); for Austria as a whole, the average annual growth rate was +6.8 percent. However, the impact of the crisis varied widely across the provinces. The provinces which suffered most from the impact of the crisis in 2009 were Styria, which showed a 30 percent drop in exports, Salzburg (-26 percent) and Burgenland (-25 percent), while the lowest reductions in exports were observed in Vienna (-11 percent). Preliminary data of exports of goods by the foreign trade statistics of Statistics Austria for the first half of 2010 show a 12 percent increase in exports of goods in Austria compared to the same period in 2009. This recovery is observable in all federal provinces, but most notably in those that were badly hit during the crisis, such as Upper Austria and Styria.

After growing continuously for eight years, Austria's export ratio (which achieved a level of 42 percent in 2008) dropped in 2009 to 34 percent, which is equivalent to the level in 2000. An export ratio below the 2000 level was observed in the provinces of Vienna, Salzburg, Lower Austria and Burgenland. Other provinces achieved export ratios either equal to their level in 2000, such as Tyrol (35 percent), or higher, for example Upper Austria (56 percent in 2009 as compared to 48 percent in 2000).

The location coefficients of the Austrian provinces Upper and Lower Austria, Styria and Vorarlberg in 2009 indicate above-average regional specialisation – relative to Austria as a whole – for the export goods basic metals and fabricated metal products¹⁸⁾. Other export goods, such as the group comprising computer products, electronics and optical products as well as electrical equipment have relatively high location coefficients in Burgenland, Carinthia (where the relative specialisation is more than twice as high as for Austria on average), Styria, Tyrol and Vienna. The third group, machinery and equipment, is mainly located in Lower Austria, Salzburg, Styria and Vorarlberg, and also in Carinthia. Upper Austria and Styria show the highest relative regional specialisation for the export goods motor vehicles, trailers and semi-trailers as well as other transport equipment. It should be noted that the location coefficient shows relative strengths – in this case relative to Austria – and not absolute ones. Therefore, a high location coefficient does not necessarily imply high absolute levels of exports.

¹⁸⁾ Except machinery and equipment. For further information about the CPA-2008 classification see the Classification Database of Statistics Austria.

6. Austrian trade in services

Philipp Mayer (WIFO)

6.1 Development of trade in services

Value added in services grew substantially in the last decades. The services sector accounted for 69.3 percent of gross value added in Austria in 2009. In Austria's trade in services in 2009, exports amounted to € 38.2 billion and imports came to € 26.6 billion. However, the global financial crisis also had consequences for Austria's trade in services. Exports and imports in services decreased by 9.6 percent and 8.7 percent respectively in comparison to 2008; this was significantly less than the decrease in trade in goods. Despite the crisis, exports and imports grew with an average annual percentage change of 5.7 percent and 5.1 percent respectively in the last decade. The surplus in the services sector doubled between 1999 and 2009 to € 12 billion or 4.2 percent of GDP (2008: 4.7 percent). Services are mainly responsible for the positive current account in Austria (2009: 2.3 percent of GDP).

6.2 Trade in services according to main categories

In 2009, the most important category within trade in services was travel, with an export value of € 13.9 billion or 36 percent of all services exports. Ten years ago, travel still accounted for 46 percent of all services exports. But the structural shift in services trade which took place over the last decade was partially stopped in 2009. Travel services gained in relative importance for the first time in years. Besides travel services, services trade can be classified into traditional services (including transport), innovative services, knowledge-based services (OeNB, 2009)¹⁹⁾ and other services. The export of transport services, which accounts for the bulk of traditional services exports, decreased substantially in 2009, as did all the other categories; however, it remained, by far, the second largest group. From 1999 until 2009, innovative services exports grew by 13.3 percent on an annual average. In 2009, the innovative services surplus was € 273 million, whereas knowledge-based services recorded a deficit.

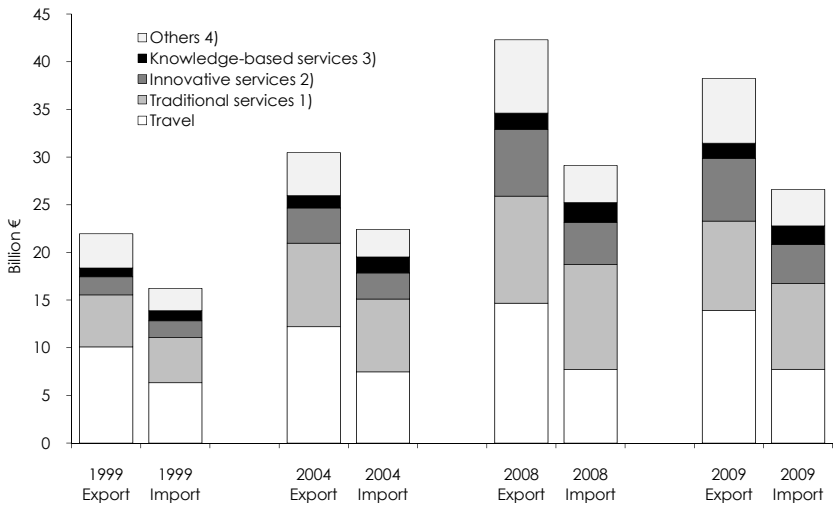
6.3 Regional structure of services trade

75 percent of the Austrian services trade takes place within the EU-27. In 2009, € 24 billion (or 63 percent of all services exports) went to the EU-15, but only 55 percent of all services imports came from the EU-15.

¹⁹⁾ OeNB, Struktur des Dienstleistungshandels 2006. Ergebnisse der Firmenanalyse, Statistiken - Sonderheft, June 2009.

The most important trading partner by far is Germany, with export and import values of € 15 billion and € 8 billion respectively. Apart from Germany, important trading partners in services are Switzerland, Italy, U.K., the Netherlands and the USA. The most important EU-12 countries for services exports are Hungary and Czech Republic. Croatia plays an important role in services imports. In 2009, Austrian services exports to China grew by 5 percent in contrast to almost all other countries.

Figure 6.1: Main categories in services trade



Source: OeNB. – 1) Transportation, construction, merchandising, operational leasing. – 2) Communications services, computer and information services, royalties and license fees, research and development services, architectural, engineering and other technical consultancy. – 3) Legal, accounting, management consulting and public relations services, advertising, market research and public polling and personal, cultural and recreational services. – 4) Insurance and financial services, agricultural, mining and on-site processing, other miscellaneous business, professional and technical services, services between affiliated enterprises and government services, n.i.e.

6.4 Focus: The general crisis-resilience of services trade and the relatively stronger slump in EU-12

In analysing Austria's services trade in 2009, two circumstances stand out: first, trade in services was much more resilient to the global financial crisis than trade in goods, and second, Austria's services exports to the EU-12 decreased significantly more than on average as a whole or to the EU-15.

Concerning the first issue, it is observable that the slump in goods trade (exports: –20.2 percent; imports: –18.4 percent) was more pro-

nounced than in services trade. *Borchert – Mattoo (2009)*²⁰ found two reasons that explain the latter observations: first, traded services are less cyclical, and second, services trade and production are, in contrast to goods trade, less dependent on external finance. Moreover, the potential of services trade in Europe has not yet been fully utilised and there are still important restrictions on services trade.

In 2009, services exports to the EU-12 (13 percent of total exports) showed an above-average decrease (–16.3 percent; EU-15: –7.6 percent; total: –9.6 percent). 50 percent of the drop in absolute numbers can be attributed to Hungary and Poland. One of the reasons for this above-average decline of Austrian services trade with the EU-12 was the significant decline of foreign direct investment of enterprises in 2009, given that these investments are highly related to services trade.

6.5 Tourism

Egon Smeral (WIFO)

Measured in terms of international tourist arrivals, world tourism shrank by 4.5 percent in 2009, after achieving 2 percent growth in 2008. The economic and financial market crisis, which had already spread rapidly in the second half of 2008, was reflected in a substantial drop in international tourist arrivals in 2009 (first quarter: –10.5 percent, second quarter: –7 percent, third quarter: –2.25 percent). It was not until the fourth quarter of 2009 that world tourism began to revive, achieving 1.25 percent growth.

Austria registered 21.4 million arrivals of foreign visitors in 2009, which corresponds to a decrease of 2.6 percent compared to 2008. Revenue from international tourism (tourism exports) amounted to € 15.4 billion (–6.8 percent, or –7.9 percent in real terms, including international transport of passengers). Nevertheless, Austria was still able to gain additional market shares in international tourist travel.

Although the Austrian tourism industry was unable to avoid the effects of the economic and financial crisis in 2009, the downturn was relatively mild compared with other important countries. This was partly due to Austria's strength in neighbouring markets, since in times of economic difficulty, destinations which lie close to highly populated countries with high travel intensities tend to suffer less from slumps in global demand than long-distance destinations and flight destinations in general.

In the calendar year 2009, Austria's tourism industry suffered a 5 percent drop in turnover, mainly as a result of the decrease in inter-

²⁰ Borchert, I., Mattoo, A., "The Crisis-Resilience of Services Trade", The World Bank Policy Research Working Paper, 2009, (4917).

national demand. Due to the fact that the falloff in demand did not begin until February 2009, only moderate losses were posted for the 2008/2009 winter season as a whole (-1.6 percent). The 2009 summer season suffered a considerably steeper downturn (-6.1 percent).

Austrian tourism showed first signs of recovery from the economic and financial crisis at the beginning of 2010, with international demand matching the high level of the same period in the previous year. From January to July 2010, the number of overnight stays by foreign visitors stagnated, whereas the domestic demand for overnight stays in Austria rose by 2.3 percent.

As an annual average for 2010, the total turnover from tourism is expected to stagnate in real terms (-0.3 percent); in 2011 a slight rise of 1.3 percent is predicted.

7. Austrian foreign direct investment

Philipp Mayer (WIFO), Susanne Sieber (WIFO)

7.1 Austria's position in international comparison

Good conditions for foreign direct investment worldwide largely ceased in 2008 and 2009 due to the global economic crisis. Worldwide and Austrian direct outward investment flows decreased significantly in both years. Austrian outward flows amounted to only € 4.7 billion in 2009, more than three quarters less than in 2008, and almost 85 percent less than in 2007²¹⁾.

Inward flows to Austria, however, amounted to € 6.2 billion in 2009, one third higher than in 2008, but almost three quarters less than in 2007. Despite the crisis, inward and outward stocks in 2009 are higher than in 2007 and 2008 and are expected to reach € 113.1 billion in both cases.

The share of Austrian outward foreign direct investment stocks in total worldwide FDI stocks is expected to decrease in 2009 in comparison to 2008. The ratio of Austrian outward FDI stocks to GDP roughly doubled between 2004 (24.2 percent) and 2009 (43.8 percent). Nevertheless, compared to other small open economies, this ratio is still relatively low (Switzerland: 163.8 percent; Sweden: 91.1 percent; Ireland: 82.9 percent; Finland: 52.4 percent). The Austrian FDI to GDP ratio in 2009 was below the average of the EU-27 countries (54.8 percent), but slightly above the average in industrialised countries (41.2 percent). The same conclusions in general hold for inward foreign direct investment.

²¹⁾ Note that the value in 2007 is biased by one large transaction by one enterprise.

Table 7.1: Development of foreign direct investment, worldwide and in Austria

	Outward flows			Outward stocks		
	World	Austria	Austria	World	Austria ¹⁾	Austria ¹⁾
	Billion €		Percentage shares	Billion €		Percentage shares
2001	842	3.4	0.40	8,720	32.4	0.37
2002	571	6.1	1.08	7,404	40.5	0.55
2003	501	6.1	1.21	7,812	44.3	0.57
2004	741	6.5	0.87	8,545	51.2	0.60
2005	718	9.0	1.25	10,525	60.9	0.58
2006	1,124	10.9	0.97	11,891	80.3	0.67
2007	1,657	28.5	1.72	13,120	101.1	0.77
2008	1,317	20.1	1.53	11,645	106.8	0.92
2009	793	4.7	0.59	13,176	113.1	0.86

	Inward flows			Inward stocks		
	World	Austria	Austria	World	Austria ¹⁾	Austria ¹⁾
	Billion €		Percentage shares	Billion €		Percentage shares
2001	922	6.4	0.69	8,475	39.7	0.47
2002	667	0.1	0.02	7,170	42.8	0.60
2003	501	5.5	1.10	7,421	45.6	0.61
2004	590	2.6	0.43	8,117	51.9	0.64
2005	793	8.7	1.09	9,769	70.0	0.72
2006	1,163	6.3	0.54	10,840	84.3	0.78
2007	1,534	22.8	1.48	12,221	110.4	0.90
2008	1,209	4.7	0.39	11,131	106.2	0.95
2009	802	6.2	0.77	12,317	113.1	0.92

Source: Values for the world: UNCTAD, World Investment Report 2010; values for Austria: OeNB. – Due to statistical discrepancies, worldwide outward FDI flows are not equal to worldwide inward FDI flows. – ¹⁾ Austrian FDI stocks 2009: forecast according to OeNB.

7.2 Austrian outward foreign direct investment

In 2008, Austrian outward FDI stocks reached a level of € 106.8 billion. Since 2007, stocks have been continuously higher than € 100 billion. Due to value adjustments following the world economic crisis, however, outward FDI stocks increased significantly less than expected. Austrian FDI stocks are "regional" rather than "global", which means that they are strongly focused on Europe, especially Central and Eastern European countries (CEEC). Almost 50 percent of total Austrian outward FDI stocks in 2008 were invested in the CEEC-21. In 2008, Austria was the most important investor in six CEEC – Slovenia, Bosnia and Herzegovina, Croatia, Serbia (new in 2008), Romania and Bulgaria – and ranked high in some other CEEC, namely Slovakia (2nd), Hungary (3rd), and Czech Republic (3rd). Austria's extraordinarily strong position as an investor in CEEC is also emphasised by the market shares. In 2008, Austria's share in the total inward FDI of the CEEC-21 was 8.2 percent, whereas in global inward FDI Austria only had a

market share of 0.9 percent. Moreover, when adjusted for the country size by standardised market share, Austria exhibits a remarkable position compared to main competitors in the region such as Germany and the Netherlands.

The most important country for Austrian outward FDI in 2008, however, was still Germany. Austria invested € 2.6 billion in the largest European economy and Austrian FDI stocks in Germany amounted to € 15 billion or 14.2 percent of total Austrian FDI stocks. BRIC are playing an increasing role as a destination of Austrian outward FDI flows.

Profitability in Austrian subsidiaries in foreign countries decreased significantly in 2008 (6.8 percent) compared to 2007 (12.8 percent). Total profits in 2008 amounted to € 6.1 billion, 70 percent of them gained in CEEC. But in some countries (e.g. Hungary) there were actually losses. Nevertheless, profits from outward FDI were substantial in the last ten years. Between 1999 and 2008, Austrian enterprises earned € 24.4 billion in CEEC, and € 8.6 billion in the EU-15.

Employment in Austrian subsidiaries increased substantially by 100,000 in 2008, reaching 675,300 persons (weighted by share in voting capital), 69 percent thereof in the CEEC-21. In total, employment in Austrian subsidiaries in 2008 was more than three times as high as in 1999.

With respect to the sectoral structure, investments in the services sector dominated Austrian outward FDI stocks (2008: 74.6 percent). However, interpretation of the sectoral structure is limited due to the importance of holding companies. In 2008, 45 percent of Austrian outward stocks were invested in the financial and insurance sectors.

Table 7.2: Austrian position as an investor in CEEC in 2008

	Rank	Percentage shares in FDI stocks
Slovenia	1	46.6
Bosnia and Herzegovina	1	30.4
Croatia ¹⁾	1	29.1
Serbia ¹⁾	1	20.3
Romania	1	18.8
Bulgaria ¹⁾	1	18.4
Slovakia	2	14.5
Hungary	3	12.7
Czech Republic	3	12.1
Macedonia	4	11.3
Albania	4	8.7
Montenegro ¹⁾	7	7.2
Ukraine ¹⁾	5	6.5
Poland	9	3.5

Source: wiiw. – ¹⁾ 2009.

7.3 Austrian inward foreign direct investment

In 2009, Austria's inward FDI flows amounted to € 6.2 billion, which was one third higher than in 2008. Inward FDI stocks totalled € 106.2 billion. A major part of investment was held by EU-15 countries; almost 70 percent of the stock originated from there. The most important investors in Austria are Germany, Italy and the USA. Overall, inward FDI stocks are more diversified than outward FDI stocks, i.e. the total share of inward FDI stocks held by European countries is lower and overseas investors play a relatively more important role.

The number of people working in foreign subsidiaries in Austria (weighted by share of voting capital) in 2008 (238,400) was almost unchanged compared to 2007. Compared to the peak of employment in 2000, it decreased by 5.5 percent. Even more than in outward FDI, inward FDI is dominated by investment in the services sector, which accounted for 87.7 percent of total FDI stocks in 2008. The sectoral structure of inward FDI stocks is still difficult to interpret due to the fact that approximately 50 percent of all stocks are invested in holding companies.

Foreign subsidiaries in Austria are mainly controlled by headquarters in Germany (42 percent of total cases), Switzerland (12 percent), Italy, the Netherlands and USA (between 5 percent and 6 percent each).

A recent study by the *World Bank* (2010)²²⁾ showed that the investment climate in Austria in three out of four indicators, namely access to industrial land, legal restrictions for foreign investors and strength of legal frameworks for alternative dispute resolution, is as good as on average in the OECD. Only the time needed to start a business is longer in Austria than the OECD average.

8. Austria's foreign trade by sectors

Susanne Sieber (WIFO)

8.1 Importance of specific sectors in Austrian foreign trade

Despite the increasing importance of the services sector for Austrian value added within the national accounts, the importance of service exports (including travel) relative to goods exports declined in the years before the economic crisis. However, due to the lower drop in services exports in the crisis years 2008/2009, the services exports share in total exports increased significantly to 30 percent in 2009. Within ex-

²²⁾ World Bank, *Investing Across Borders 2010*, Indicators of foreign direct investment regulation in 87 economies, Washington, D.C., 2010.

ports of services, the increasing importance of innovative, technical types of services in recent years can be emphasised. Exports of goods are dominated by consumer goods, capital goods and semi-manufactured goods; the importance of consumer goods declined, however, in the years before the economic crisis. The share of industrial goods in total Austrian nominal exports of goods has decreased in recent years; however, an international comparison shows similar developments in other typical reference countries.

8.2 Foreign trade development of selected product groups

Austrian exports of cars collapsed dramatically during the crisis, dropping by 46.1 percent in 2009, total Austrian trade in goods dropped on average by 20.2 percent. The export of automotive engines yielded a positive contribution to the Austrian balance of trade in 2009, in spite of declines in nominal values. The surplus achieved amounted to almost € 2.5 billion, which represents 92 percent of all motor exports. Moreover, the indicator of the OECD-24 export market share shows an exceptional competitiveness position of Austrian exports of automotive engines; their market share lies far above the average market share of Austrian goods exports. Similar positive findings can also be seen for the exports of trucks and motor bikes, both of which also showed a comparative advantage and above-average shares in the OECD-24 export market. Other product groups which also show outstanding positive trade balances relative to their export size are the exports of beverages as well as the exports of wood and wood products, even though a deterioration of the trade balance was recorded in both groups in 2009. In both, exports of beverages as well as the exports of wood and wood products, above-average OECD-24 export market shares were achieved in 2008.

8.3 Structural change in manufacturing exports

For Austria, as a highly developed country, one would expect an increasing proportion of future-oriented sectors in the export composition. Given the relatively high wage costs and the high level of social standards, a desirable structural change would be a shift away from exports of very price-elastic industries to products in which competition is based particularly on quality. Similarly, a decrease in the importance of exports of labour-intensive industries relative to technology driven sectors is expected. Further, given the good human capital of Austria, a tendency towards a shift to export sectors with high skill demands on human capital is expected.

Compared to the pre-crisis 2007 level, the export of technology driven industries lost some of its importance within Austrian total exports, but

the relative position compared to typical reference countries did not change. The importance of exports of industries, characterised by high qualification requirements on the human capital used, increased in 2009. Quality-competition-dominated industries showed a decline in comparison with the pre-crisis level in 2007; however, similar results can also be found in Finland, Sweden or the Netherlands. An international comparison showed that Austrian exports held a relative good position in the category of industries dominated by quality competition relative to typical reference countries.

8.4 Focus: creative industries

Rahel Falk (WIFO)

The creative industries (CI) comprise activities at the crossroads between the arts, business and technology that combine cultural creativity, economic creativity and technological creativity. The sector's scope ranges from traditional cultural activities such as the art market and crafts to the proliferating media industry (audiovisuals and publishing) and the providers of creative business market services and intermediate goods for mainly functional output (e.g. advertising, architecture or design). Recently UNCTAD has made a serious effort to compile the very first global comparative database of traded goods and services which fall into the domain of the creative industries. Between 1996 and 2006, worldwide exports of creative industries goods grew at an average annual rate of 5.3 percent, reaching a value of approximately € 243 billion in 2006. Exports of the music industry, new media and audiovisuals showed particularly dynamic development. Yet these industries' shares in total CI exports are generally small – Austria being a notable exception. In 2006, two thirds of world exports in creative industries goods were classified as design, and three economic regions accounted for more than 80 percent of the world's exports of creative goods: nearly a third from China, close to 10 percent from the USA and 42 percent from the EU-27 countries. Between 1996 and 2006, Austria gained market shares in all segments of creative goods. Nevertheless, detailed analysis suggests that technological advancements and the pervasiveness of new technologies are putting serious pressure on the business model of the creative industries.

9. Export participation, export concentration and export premia in Austria – results of a firm-level analysis

Roman Stöllinger (wiw)

The "new new trade theory", pioneered by Melitz (*Melitz, 2003*)²³, stresses the importance of firm heterogeneity and is a very useful theoretical backbone for analysing firms' export behaviour. Taking into account firm heterogeneity, in particular with respect to differences in productivity, finally puts firms (instead of industries or even countries) back at centre stage of international trade analysis. The Melitz model predicts that also within a given industry, only a subset of firms, the most productive ones, engage in export (as opposed to either all or none of the firms in an industry) because they are the ones that are capable of covering fixed costs of exporting.

The availability of firm-level datasets makes it possible to tackle a number of questions related to the predictions of the new new trade theory, such as export participation, i.e. the percentage of exporting firms within an industry, export concentration or the existence of export premia, that is, the advantage of exporting firms over non-exporters in terms of size and performance. Results on these issues for firms in the Austrian manufacturing sector, based on a sample of about 6,000 firms per year over a period of five years (2002 - 2006), have recently become available (*Pöschl et al., 2009*)²⁴.

One of the major findings is that in the manufacturing sector as a whole, about 56 percent of firms are exporters. But in several major industries such as the chemical industry, machinery and equipment, or the automotive industry, the export participation rate is much higher, amounting to 80 percent. In contrast, export participation is quite low in the food and beverages industry (28 percent) which, however, accounts for a large number of firms (1,197 out of 6,326) and helps to explain why export participation in the manufacturing sector as a whole is relatively low²⁵). Within the group of exporting firms, the high percentage of firms with very high export intensity is particularly notable: 74 percent in the metallurgy industry, for example, and a full 100 percent in the office machinery and computer industry. Sector-wide, 39 percent of all exporters generate more than

²³ Melitz, M. J., "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity", *Econometrica*, 2003, 71(6), pp. 1695-1725.

²⁴ Pöschl, J., Stehrer, R., Stöllinger, R., "Characteristics of exporting and non-exporting firms in Austria", *FIW Research Report*, 2009, (01).

²⁵ All figures refer to 2006.

50 percent of their sales from their export operations²⁶). The high export participation of many major industries and the high export intensity of firms reflect Austria's position as a small open economy with a high percentage of intra-EU exports.

High export participation and export intensity could suggest that aggregate manufacturing exports are driven by the export operations of a large number of firms. However, in line with findings from other country studies, Austrian manufacturing is characterised by quite a high degree of export concentration. This means that a small number of firms account for the bulk of aggregate exports: the top 1 percent of firms account for 42 percent of overall manufacturing exports, while export sales of the top 5 percent and 10 percent of firms add up to 74 percent and 87 percent respectively of aggregate exports²⁷).

Following the approach introduced by Bernard and Jensen (*Bernard – Jensen, 1999*)²⁸), Austrian firm-level data were also used to estimate the export premia for a series of size and performance characteristics. Using information on the export status of a firm, i.e. whether or not a firm engages in export, it is possible to estimate whether exporters are significantly larger (in terms of sales, the wage sum, investments or employment) and better performing (in terms of labour productivity, wages per employee or investment intensity). For Austrian manufacturing firms, it turns out that exporters are indeed larger than their non-exporting peers. For example, they generate 3.6 times higher sales and their investments exceed those of non-exporters by a factor of 3.8. They also employ more than twice as many personnel. But exporters are not only larger, they are also more productive and they pay higher wages than non-exporters (by a factor of 1.66 and 1.23 respectively).

It should be stressed, however, that the correlation between exporting and higher productivity (or other performance measures) does not imply a causal relationship, in the sense that exporters are more productive because they export. Rather, the opposite could be the case and more productive firms are in a position to self-select themselves into exporting, which is actually the prediction of the Melitz model, and indeed most studies dealing with the issue of causality find evidence for the self-selection hypothesis. For Austria this question, which is of high relevance for export promotion policy, is still to be explored.

²⁶) A firm is considered to have a very high export intensity if it generates more than 50 percent of its sales from export.

²⁷) Figures refer to 2006.

²⁸) Bernard, A. B., Jensen, J. B., "Exceptional exporter performance: cause, effect, or both?", *Journal of International Economics*, 1999, (47), pp. 1-25.

Special Topic: Macroeconomic and Institutional Challenges in the Euro Area

10. The euro area in the light of optimum currency area theory

Ralf Kronberger (Austrian Federal Economic Chamber)²⁹⁾

10.1 Introduction

In the past few months, the euro area experienced considerable turbulences due to the debt crisis of the euro area member Greece. A persisting twin deficit – current account and public deficits – provoked spreads of Greek bonds over the German Bund as high as 1,000 basis points. As a consequence, in May 2010 the European Union and the IMF granted Greece a € 110 billion financing package for three years. In addition, the European Financial Stability Facility was established in case further euro area countries should face financing problems. Public discussion on the future of the euro became louder. One of the main issues was whether the euro area would manage to get its fiscal coordination under control; another issue was how the euro area members should deal with significant macroeconomic imbalances not jeopardising economic growth. Which instruments – in the absence of a flexible exchange rate regime – could be used to restore relative competitiveness? This is also the central question covered by the optimum currency area theory.

10.2 Optimum currency area theory

The optimum currency area theory is intended to indicate whether a country benefits from joining a currency union. From this theory, criteria have been derived to help decide whether the relinquishment of the exchange rate instrument is advantageous. The concept of the

²⁹⁾ The views expressed in this article are those of the author and do not necessarily represent those of the Austria Federal Economic Chamber.

optimum currency area theory goes back to *Mundell* (1961)³⁰. An optimum currency area is achieved either where member states face only few asymmetric disturbances or where, in the presence of such asymmetric shocks, the members are able to accommodate these disturbances by wage flexibility, labour mobility or fiscal transfers. Among others, *McKinnon* (1963)³¹ emphasised the significance of the degree of openness for member countries and *Kenen* (1969)³² underlined the importance of product diversification. *Tavlas* (2009)³³ provides an extensive list of optimum currency area criteria which are additional to the ones already mentioned:

- the kinds of shocks (e.g. nominal versus real, temporary versus permanent) to which an economy is subjected (subsequent literature);
- the degree of trade integration between economies (*McKinnon*, 1963);
- the level of fiscal integration (*Kenen*, 1969);
- the sustainability of an economy's fiscal situation (subsequent literature);
- small currency areas could result in thin foreign-exchange markets, making the conduct of monetary policy difficult (*Mundell*, 1961);
- high levels of foreign exchange reserves are required to sustain pegged exchange rates; countries with low levels of reserves are better off floating (subsequent literature);
- monetary unions lead to economies of scale in the holding of reserves (subsequent literature).

New approaches to optimum currency area, e.g. that of *Giavazzi – Pagano* (1988)³⁴, demonstrated that by credibly committing to an exchange rate rule – more so by adhering to a monetary union – an economy can reduce its inflation rate without incurring too much cost. This is contrary to the early literature on optimum currency areas that sought to identify the characteristics (criteria) that an economy should satisfy prior to joining a monetary union. Optimum currency area criteria become endogenous. More recent work, pioneered by

³⁰) *Mundell*, R., "A Theory of Optimum Currency Areas", *American Economic Review*, 1961, 51(4), pp. 657–665.

³¹) *McKinnon*, R., "Optimum Currency Areas", *American Economic Review*, 1963, 53(4), pp. 717–725.

³²) *Kenen*, P., "The Theory of Optimum Currency Areas: An Eclectic View", in *Mundell*, R., *Swoboda*, A. (eds.), *Monetary Problems of the International Economy*, University of Chicago Press, Chicago, 1969.

³³) *Tavlas*, G. S., "Optimum-Currency-Area Paradoxes", *Review of International Economics*, 2009, 17(3), pp. 536–551.

³⁴) *Giavazzi*, F., *Pagano*, M., "The Advantage of Tying One's Hands: EMS Discipline and Central Bank Credibility", *European Economic Review*, 1988, (32), pp. 1055–1082.

Frankel – Rose (1996)³⁵), concentrated on changes in economic structure and performance that are possibly the result of participation in a monetary union. De Grauwe – Mongelli (2005)³⁶ lists four areas where endogeneities can be observed:

- the endogeneity of economic integration, primarily seen in prices and trade;
- the endogeneity of financial integration or equivalently of insurance schemes provided by capital markets;
- the endogeneity of symmetry of shocks and (similarly) synchronisation of outputs;
- the endogeneity of product market and labour market flexibility.

10.3 Empirical evidence

Applying the optimum currency area criteria to the euro area delivers, in the ex ante approach, disappointing results. The degrees of openness of trade for the euro area 16 vary between 5.6 percent of GDP (Cyprus) to 61.9 percent (Slovakia). Accumulated current account deficits and surpluses from 2000 to 2007 for the euro area 12 show values between 83 percent for Luxembourg and, at the other end of the scale, –67 percent for Greece and –71 percent for Portugal. The range of accumulated inflation starts at 14.3 percent for Germany and ends with 30.1 percent for Greece and 31.6 percent for Ireland. Accumulated public deficits show the lowest value for Finland, with a decrease of 32.4 percent of GDP and the highest values for Portugal and Greece, with increases of 28.9 percent and 40 percent respectively. As an indicator for the capability of adjusting competitiveness, the relative unit labour cost (ULC) proves to be useful: Starting with an index of 100 in 2000, Finland was able to lower its ULC to 88.1 by 2007, whereas Italy faced an increase to 134.6 in the same period. Countries like Greece or Spain lost competitiveness, too, with respective ULC values of 116.8 and 122.2.

As regards the empiricism of the "new" optimum currency area theory, several studies have shown that trade integration cum monetary integration results in a somewhat more tightly correlated business cycle. The same is true for the effects of financial integration in the euro area. Reforms of the labour market and product market have slowed their pace since the euro area was established. However, in general a convergence of business cycles in the euro area in recent years cannot be confirmed. Numerous empirical studies deliver contradictory

³⁵) Frankel, J., Rose, A., "The Endogeneity of the Optimum Currency Area Criteria", NBER Working Paper, 1996, (5700).

³⁶) De Grauwe, P., Mongelli, F. P., "Endogeneities of optimum currency areas: what brings countries sharing a single currency closer together?", ECB Working Paper Series, 2005, (468).

results (*de Haan et al.*, 2005)³⁷). Idiosyncratic shocks are still dominant over a European business cycle component.

10.4 Conclusions

Empirically, the traditional approach to optimum currency area criteria gives little reason for belief in the euro area's being optimal. Taking into consideration the endogeneities, trade integration cum monetary integration as well as financial integration, in particular, have led to some convergence of business cycles, which are still dominated by idiosyncratic shocks. Even despite the recent turmoil in the euro area, counterfactual analysis is a good indicator for the expected continuity of the euro area. *Eichengreen* (2007)³⁸ discusses the consequences of a hypothetical withdrawal of euro area members from the currency union. The resulting technical difficulties would be formidable, benefits of regained monetary sovereignty might be small and, finally, long-term political costs would weigh hard on the leaving member as well as on the whole integration project.

Financial markets have reacted sensitively to overly large public expenditures and persisting macroeconomic imbalances in the euro area. Measures such as the European Financial Stability Facility, the European Semester and proposals of the European Commission containing more stringent rules for the Stability and Growth Pact have provided temporary relief. However, it is clear that fiscal and macroeconomic coordination have to be improved significantly. The interesting questions are: How deep will economic (and perhaps political) integration become? Which resolutions can be found to avoid persistent macroeconomic imbalances within the euro area and/or cushion the effects of these imbalances?

11. Debt crisis and imbalances in the euro area

Leon Podkaminer (wiw), Roman Stöllinger (wiw)

In May 2010, for the first time in the history of the euro area, a member state, Greece, had to be saved from default with a bail-out credit, in the amount of € 110 billion. Greek's debt crisis caused the euro to depreciate against the US dollar (and other currencies) and there were fears that the crisis could spill over to other euro members in the

³⁷) de Haan, J., Inklaar, R., Jong-a-Pin, R., "Will business cycles in the Euro Area converge? A critical survey of empirical research", University of Groningen, CCSO Working Paper, 2005, (08).

³⁸) Eichengreen, B., "The Breakup of the Euro Area", NBER Working Paper, 2007, (13393).

(southern) periphery³⁹). While Greece's unsustainable debt situation (public debt amounted to 115 percent of GDP in 2009 and has continued to increase since then) was the trigger for what became a wider euro area crisis, it is misleading to attribute the European debt crisis to irresponsible fiscal policies. In fact, the evolution of public debt in Greece is not representative, and many euro area members, including some in the periphery, managed to reduce their debt levels in the years before the crisis. Rather than public debt, it was private debts that increased rapidly in the years preceding the economic crisis. Corporate sector debt in the euro area, for example, climbed from 80 percent of GDP in 2000 to more than 100 percent in 2008, while public debt remained fairly constant at around 65 percent-70 percent.

The argument being put forward in this chapter is that the driving forces behind the euro crisis of 2010 are asymmetries and diverging real economic developments rather than irresponsible national fiscal policies. Of utmost importance in this respect are diverging wage policies in the euro area members states. While Germany and other low-inflation countries (e.g. Austria) followed restrictive wage policies that led to rather modest increases in nominal wages, countries in the euro area periphery, such as Greece and Spain, but also Portugal, experienced much more pronounced increases in wage costs.

These diverging wage developments are also one of the main factors behind the still existing – despite some convergence – inflation differentials within the euro area. The persisting inflation differentials have made it very difficult, if not impossible, for the ECB to pursue a monetary policy that suits all euro area members. The common monetary policy has led to too high real interest rates in the low inflation countries (such as Germany) and too low real interest rates in the countries of the euro area periphery with higher inflation rates. Such a constellation of interest rates created incentives for high inflation countries to take out new loans that caused the debt dynamics, in particular in the private sector, as pointed out above. Most important in this context is the fact that Greece, Ireland, Spain and Portugal indebted themselves mainly abroad⁴⁰), which led to capital account surpluses – the mirror image of current account deficits.

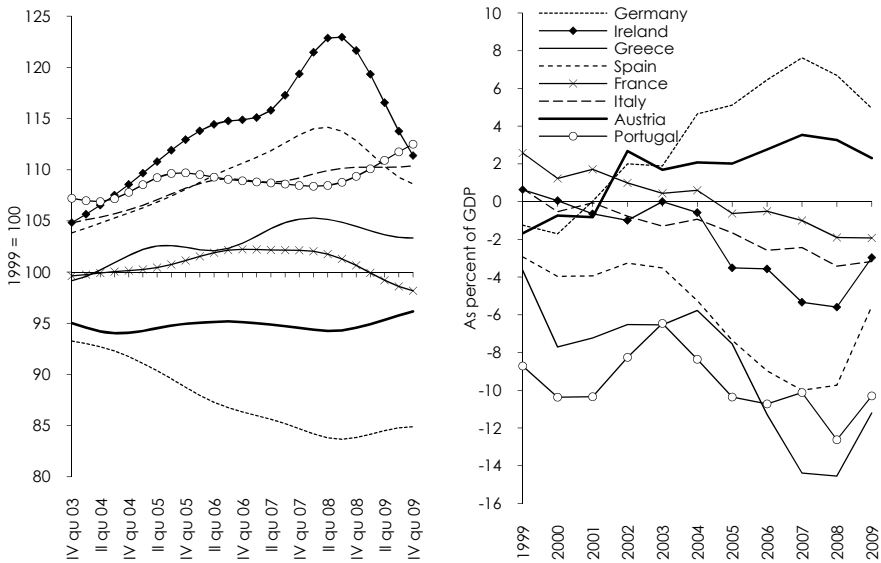
On the real economy side, the diverging wage developments created increasing current account imbalances within the euro area, with high surpluses run by Germany and considerable current account deficits in the euro area periphery (e.g. 14.5 percent of GDP in Greece and 12.6 percent of GDP in Portugal in 2008). Theoretically,

³⁹) Euro area periphery is not a clearly defined term. Here it refers to Greece, Portugal, Spain, Italy and Ireland.

⁴⁰) In particular, large amounts are owed to French and German banks.

superior productivity gains in the periphery could have acted as a counterforce to higher wage increases. But this was not the case, so that the different wage paths were translated into a severe loss of external competitiveness of periphery countries, as measured by the real effective exchange rate based on unit labour costs. The deterioration of competitiveness was most dramatic for Ireland, Spain, Italy and Portugal (Figure 11.1, left). The loss of external competitiveness can also be tracked in the resulting current account deficits of these countries (Figure 11.1, right). Clearly, euro area members do not have the possibility of adjusting their exchange rates to improve their external competitiveness.

Figure 11.1: Real effective exchange rates (left) and current account balances (right) in selected euro area members



Source: Eurostat. – Real exchange rates based on unit labour costs.

Current account deficits per se need not be a major problem if they are the result of an efficient intertemporal resource allocation. Nevertheless, at some stage creditors may become suspicious about the sustainability of the current account deficit and this is what some euro area members, in particular Greece, seem to have experienced. Thus, the difficulty is not only the huge public debt burden that, for example, Greece has accumulated, but the large debts – both private and public – that are owed to foreigners. Therefore, a more im-

portant distinction than the one between public and private debt could be the one between foreign and domestic debts.

In the euro area, the common monetary policy reinforces centrifugal forces that are set in motion by the diverging external competitive positions of euro area members.

The major challenge for the euro area is to get rid of the underlying causes of differences in competitiveness (and inflation differentials) which are, first of all, uncoordinated labour policies and wage developments. Difficult as it may be, the euro area members, at least to some extent, will have to harmonise their wage-setting mechanisms if further crises like the one of May 2010 are to be avoided. A possible framework could be a rule by which each euro area member adjusts the nominal wages according to the productivity increases plus the targeted inflation rate⁴¹). This approach would certainly help to avoid the type of competitiveness gap between euro area members that was observable in the first ten years following the introduction of the euro.

Another much-needed improvement in the institutional structure of the euro area is an at least mild centralisation of the tax competence. The current budget of the EU amounts to roughly 1 percent of GDP, which is far too little to give the EU the possibility of implementing automatic stabilisers (through public expenditures) as is the case at the level of the member states. Such automatic stabilisers should be seen as insurance against negative shocks that can hit any member state. In the event of such a negative shock, affected members would be supported with transfers⁴²) from the EU (or the euro area) budget⁴³).

The major challenge ahead for the euro area, however, is a closer coordination of economic policies among member states, in particular wage policies, although this may be hard to do in practice due to large institutional differences in wage setting procedure. The wage development in individual countries needs to be aligned in order to avoid beggar-thy-neighbour policies of members and to reduce the imbalances in the euro area that have built up.

⁴¹) See Laski, K., Podkaminer, L., "Long-term growth prospects in Central and Eastern Europe hinge on changes in the basic paradigms of EU economic policy", in wiiw (ed.), Will Exports Prevail over Austerity?, wiiw Current Analyses and Forecasts, 6 July 2010.

⁴²) E.g. transfer payments for countries that suffer from unusually high unemployment.

⁴³) Another type of insurance system for euro area members in difficulties was created in the form of the European Financial Stability Facility (EFSF).

12. Exchange rate dynamics and effects on euro area exports

Robert Stehrer (wiiw)

12.1 The development of the euro exchange rate

The global financial and economic crisis of the last two years, triggered by strong imbalances in the world economy, also led to an intensified discussion on the exchange rate system, mostly between the large economies such as the USA, the euro area, China and Japan, although smaller economies are also effected by these exchange rate movements. One of the important issues is the notorious undervaluation of the Chinese yuan against the US dollar and other currencies, such as the euro. In Europe, the discussion of the stability of the euro exchange rate was triggered by the fiscal crisis in the Greek economy which led to a short-term depreciation of the euro. On the one hand, the debate was about a sustained loss of confidence in the euro together with the feared financial implications, which even led to a debate about the future of the currency union, the possibility of particular economies being enabled to leave the European Monetary Union, and a reform of the system. On the other hand, a depreciation of the euro would also imply a potentially positive effect on export activities – as goods become cheaper abroad – and thus an expected positive stimulus for GDP and employment growth.

However, from a longer-term perspective, it first has to be noticed that the recent exchange rate movement is not yet distressing: From the introduction of the euro in 1999, when it started at a level of 1.12 US\$ per euro, the exchange rate went down to 0.9 US\$ before starting to rise, reaching a peak of about 1.6 US\$ in 2008 before the crisis shook the world economy, in other words an increase of more than 60 percent in about eight years. Although this would imply a strong loss in competitiveness for a small economy, it is less worrying for a larger and more or less integrated economic zone like the EU or the euro area, where the bulk of export activities occur within this zone. In the wake of the crisis, and the Greek crisis in particular, the exchange rate went down to about 1.3 US\$ and is again on the rise, having reached a level of about 1.4 US\$ in the third quarter of 2010. This is only slightly higher than the purchasing power parity relation would suggest. Thus, also in this respect, the devaluation of the euro which occurred in the last two years is not outstanding.

Furthermore, the relationship between the US dollar and the euro is not the only important exchange rate affecting export activities, since exports go to many countries. Regarding other currencies, one can

see a similar development, perhaps with the exception of the relationship between the euro and the British pound.

Given these dynamics, two important questions arise: First, what is the effect of a longer-term tendency of exchange rates on exports and thus also on GDP and employment growth? And, second, what is the likely future development of the euro exchange rate in particular and the system of exchange rates in the world economy in general?

With respect to the first question, one can estimate the effects of exchange rate movements on exports while controlling for other relevant variables, such as demand in partner countries, either in a bilateral setup or using so-called effective exchange rates. Nominal effective exchange rates are a trade-weighted average of the exchange rates of the main trading partners of a country; real effective exchange rates also take the price levels (measured either according to the consumer price index, the GDP deflator or unit labour costs) into account. Looking at such figures first reveals that the movements of the nominal effective exchange rate of euro area members are much less pronounced compared to the dynamics of the nominal US-dollar/euro exchange rate. This is even more so when considering the real effective exchange rate, which, for a number of countries of the euro area, has been fairly stable, though detailed country comparisons reveal some differences. Furthermore, exchange rate movements, according to these two definitions, have been more pronounced for other countries such as China, Japan and the USA.

From a theoretical perspective, the effects of a devaluation of a currency are sorted out and summarised in the so-called "J-curve effect" with respect to the balance of payments. This effect says that a depreciation of a currency could, in the short term, also cause a deterioration of the balance of payments due to relatively faster price effects compared to quantity effects. Only in the medium to longer term are the quantity effects strong enough to lead to an improvement of the balance of payments.

The evidence on this issue is rather mixed, though in most cases the results show a small but positive impact of devaluation, together with a much more important effect of the development of GDP – and therefore demand in the trading partner countries – on export activities. On average, the evidence indicates that a 10 percent depreciation leads to an increase in exports of between 5 percent and 10 percent, whereas a 1 percent increase in foreign GDP leads to a positive effect on exports in the range of 1.2 percent to 1.6 percent. Focusing on longer-term movements, one also finds these positive effects of depreciations, together with a stronger effect from foreign GDP growth.

This leads to the second question, regarding the expected future developments of the euro exchange rate. In considering this, one first

has to emphasise the character of the international exchange rate system, which is nicely summarised in the following statement: "The point is that an exchange rate system is a system, in which countries on both sides of the exchange rate relationship have a responsibility for contributing to its stability and smooth operation", (Eichengreen – Temin, 2010)⁴⁴). In a way, this mutual interdependence of exchange rates is reflected in the recent heated debate between the USA and China on the undervaluation of the yuan against the US dollar, but also in the attempts to stop appreciations of currencies in Japan and other economies. In a way, this debate also concerns the question of the extent to which surplus economies also have to be engaged in reducing global imbalances, a point which the British economist J. M. Keynes was unsuccessful in carrying against his US counterpart Mr. White in negotiations after World War II. Thus, though the likely developments of exchange rates are hard to predict, a serious devaluation of the euro – apart from the scenario of another financial disaster, which would put us in a completely different situation anyway – seems unlikely. In fact, one might even expect a tendency toward another appreciation of the euro, which has now already reached a level of 1.4 US\$ per euro again. Overall, this recent tendency of the exchange rate, together with the fact that the effects of nominal exchange rate changes on exports are small in any case, implies that we cannot expect strong positive effects on GDP and employment growth from a depreciation of the euro.

13. Macroeconomic effects of exchange rate changes in the case of a global exchange rate battle: model simulations

Fritz Breuss (WIFO)

13.1 Introduction

The risk of a full-blown global "currency war", with the United States and China as the main combatants, dominated the 2010 Annual Meetings of the International Monetary Fund (IMF) and the World Bank Group in Washington on 8-10 October 2010. IMF chief Dominique Strauss-Kahn set the tone before the start of the meetings, warning that the global recovery is still fragile. "There is clearly the idea beginning to circulate that currencies can be used as a policy weapon. Translated into action, such an idea would represent a very serious risk to the global recovery," he said. Besides China, both Japan and Brazil

⁴⁴) Eichengreen, B., Temin, P., "Fetters of gold and paper", NBER Working Paper, 2010, (16202).

have intimated that they are manipulating their currencies. Also the US dollar is weakening in the course of an ultra-loose monetary policy and a fragile business outlook. This makes Europe a "loser" in this exchange rate race to the bottom.

The US\$/euro exchange rate has fluctuated considerably since the inception of the euro in 1999. Until the introduction of the euro as legal tender in 2002, the euro lost nearly 23 percent of its value against the US dollar. Subsequently, up to the peak in 2008, it gained in value by nearly 80 percent. The global financial and economic crisis set the euro under pressure until mid-2010. Since then it has risen in value again considerably.

Many experts estimate that the Chinese yuan is undervalued by 20 percent to 30 percent. The USA and also the European Commission have often asked the Chinese government for more flexibility in its exchange rate policy. Recently, the USA has been considering the introduction of punitive tariffs on a variety of products originating in China.

In order to obtain some orientation on the economic implications of the suspected exchange rate battle, we have conducted simulation experiments for two scenarios:

- a 10 percent revaluation of the euro against the US dollar and
- a 10 percent revaluation of the yuan against the US dollar.

The simulations have been carried out with the Oxford Economics Global Macro Model, encompassing most of the world economies. In these simulations, the exchange rate shocks are inputted in the third quarter of 2010 and remain sustained until the fourth quarter of 2015.

13.2 Results of the euro revaluation

The results concentrate on two main macroeconomic variables: real GDP and the current account balance. A 10 percent revaluation of the euro against the US dollar (starting in the third quarter of 2010) decreases Austria's real GDP in the year 2011 by 0.7 percentage points. On average, seven small European countries suffer an even stronger decline (-1 percentage point) in their real GDP. In the euro area, real GDP declines by only 0.3 percentage points (in Germany by 0.2 percentage points). As a mirror image of GDP in the USA, real GDP increases by 0.4 percentage points.

The euro revaluation deteriorates price competitiveness in Europe and hence can help mitigate, to a small extent, the existing considerable imbalances in the current account positions in the USA and in Europe. Austria's current account balance would deteriorate by 0.8 percentage points of GDP, those of the euro area, on average, by 0.3 percentage points. In the USA, on the other hand, the current account balance would improve by 0.2 percentage points of GDP.

13.3 Results of the yuan revaluation

A 10 percent revaluation of the yuan against the US dollar exhibits noticeable real GDP effects only in China (-1.1 percentage points in 2011). In the USA and in Europe, real GDP would increase only marginally by 0.2 percentage points.

The amount of revaluation of the yuan is also too small to rectify the huge imbalance in current accounts between the USA and China. In China, the current account balance would decrease by 0.7 percentage points of GDP, in the USA and in the euro area the improvement would only amount to 0.1 percentage points of GDP.

13.4 Conclusions

We have simulated only a slight aspect of a possible "currency battle". Moreover, the model simulation results presented here would only apply if the respective exchange rate changes were to last over a longer period (more than one year). One cannot attribute the effects calculated here to very short-lived (highly volatile) exchange rate shocks. The symmetry feature of the Oxford Macro Model makes it possible to interpret the results (here for revaluations against the US dollar) for exchange rate movements in the other direction as well. One only has to change the signs of the calculated effects.

The hypothetical exchange rate simulations were carried out for a scale of 10 percent. On this basis, the effects of exchange rate changes of other magnitudes can easily be calculated.

14. The Euro in an enlarged Europe – exchange rate regimes in crisis?

Doris Ritzberger-Grünwald (OeNB)

Central and Eastern European countries are different from each other in many respects, especially with regard to their currency and exchange rate regimes. Whereas some of them have already introduced the euro (Slovenia, Slovakia) or will do so shortly (Estonia), others have not yet given up their national currencies as an important policy instrument. Obviously, small open countries prefer a fixed exchange rate regime, e.g. a currency board, whereas larger countries prefer flexible exchange rates. Other important factors in this choice (apart from country size) are the countries' trade links, but also their historical ties, which many post-Communist countries have tried to shake off. For those who have an anchor currency, the stabilisation of expectations is another main factor. Countries with a flexible exchange rate system can let their currency appreciate continuously in

line with the catching-up process. Conversely, they can use this flexibility during a crisis to strengthen competitiveness. Poland, for instance, depreciated its currency during the crisis by around 25 percent. This may have been a central factor in the country's extraordinarily good performance – Poland was the only EU country to post positive real GDP growth in 2009. In contrast, Slovenia and Slovakia have profited from having joined the euro area soon after their EU accession. In their case, the euro acted as a kind of shelter from the crisis. Slovenian and Slovak government bonds – unlike many others – have not been downgraded in the wake of the crisis.

These very different experiences lead to the conclusion that no single exchange rate system benefits all countries alike under all circumstances. In addition, it has to be admitted that euro area entry is more or less out of reach for all Central and Eastern European countries in the near future. Whereas in the past, price stability was the major hurdle (due to the catching-up process), the greatest difficulty now is meeting fiscal criteria (due to the crisis-related fiscal packages).

In light of these developments, all countries have, for the time being, postponed their plans to join the euro area. Some of them had to give up very precise dates, for instance the Czech Republic, which had announced 2010 many years ago. In the meantime, official entry dates have become rare; instead, most countries are making more or less vague announcements for 2014 at the earliest. The reasons for this new strategy are manifold. On the one hand, governments have become more realistic. Knowing that they would probably fail to meet the convergence criteria, they do not want to find themselves in a position where they would have to postpone an entry date they have already officially announced, as this would involve a further loss of reputation. On the other hand, some countries that had been eager to introduce the euro as fast as possible right after joining the EU used the instrument of exchange rate flexibility quite successfully during the crisis and therefore have switched to a wait-and-see approach.

Interestingly, the perception of ERM II has also changed recently. Originally, it was established as a kind of training room for countries to test what coping without the exchange rate instrument would be like. In the meantime, this approach has changed completely and ERM II is perceived much more as a waiting room where countries try to minimise the duration of their stay. Besides the risk of speculative attacks and the reputational risk (a government entering ERM II promises at least implicitly that it will introduce the euro as soon as possible), the experience of Slovenia and Slovakia and their advice to stay with the ERM as briefly as possible has redefined the stage. As a result, ERM II has become an even more important – and carefully guarded – entry gate to the euro area.

Independently of the choice of exchange rate regime, we find a significant degree of euroisation especially in South Eastern European countries. A large proportion of cash holdings, deposits and loans are denominated in foreign currencies (mainly in euro, a small percentage in Swiss francs). This is revealed by the results of a survey that was commissioned by the Oesterreichische Nationalbank and is conducted twice a year in ten Central, Eastern and South Eastern European countries (OeNB Euro Survey). The households' motives for holding foreign currency assets or loans vary widely. Having undergone very bad experiences with the local banking sector in former times is mentioned quite often, but also the fact that durable consumer goods and housing are often priced (and paid for) in euro. In some countries, foreign currency loans are very popular – depending on interest rate differentials and the exchange rate regime, of course. But foreign currency loans to households (which are not hedged appropriately) have become a problem, especially during the crisis, and several international initiatives are underway to increase awareness of this issue. While this kind of de facto euroisation observed in some countries will by no means replace the official introduction of the euro, the current widespread use is quite an impressive sign of trust placed in our relatively new currency, the euro.

15. Strengthening the European financial architecture

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Europe was strongly affected by the financial crisis, which started in the USA in 2007 and exposed the weakness of the European financial architecture. Fully liberalised financial markets make European countries susceptible to currency, banking and sovereign debt crises. The euro protects the euro area countries only against currency crises. Between 1970 and 2007, the IMF counted many crises worldwide: 124 banking crises, 208 currency crises and 63 sovereign debt crises. In 42 cases, double crises (banking and currency crises) occurred and in 10 cases, triple crises (banking, currency, and sovereign debt crises), which had especially negative consequences. The EU was affected by currency crises in the European Monetary System prior to the creation of the euro in 1999. One of the main reasons for the creation of the euro was to protect the participating countries against currency crises. Also, financial deregulation and liberalisation in Europe triggered lending booms, and speculative bubbles developed in the freshly deregulated financial markets. The countries went through boom/bust cycles accompanied by severe financial crisis. The Nordic EFTA members Finland, Norway and Sweden experienced severe sys-

temic banking crises in the early 1990s. However, the more regulated EFTA members Austria and Iceland were not afflicted by any crisis in the early 1990s. The recent financial crises in Europe – Iceland in 2008, the CESEE countries in 2008 and 2009, Greece in 2010 – have demonstrated how vulnerable European countries are to financial crises.

Market fundamentalists forgot that fully liberalised financial markets are volatile and over the past have developed boom/bust cycles and financial crises. Despite widespread market failure, market elements were incorporated even into banking regulation (Basel II) and accounting rules (mark-to-market), with the result that these rules and regulations had strong pro-cyclical effects. The pro-cyclical tendency of the financial sector became even stronger, which led to more overshooting and created even stronger boom/bust cycles.

Keynes' insight that the Great Depression had its roots in the imperfections of the monetary and financial system was forgotten. Critical voices such as Minsky and Reinhart – Rogoff were overlooked. I have pointed out in earlier articles that a deregulated financial sector has a pro-cyclical tendency, which leads to overshooting and creates boom/bust cycles. There is usually also a massive overshooting of capital flows. Countries are flooded with capital, fuelling the boom, and later there is a reversal of capital flows, triggering the crisis. Restrictive monetary policy is undermined by carry trades and foreign currency loans which increase vulnerability.

A boom/bust cycle also developed in the Central, Eastern and South Eastern European region (CESEE) after a process of liberalisation, financial deregulation and privatisation. Countries outside the euro area are also vulnerable to currency crises, whereas the euro acts as a protective shield for euro area countries. Contagion is also a problem in Europe. The crisis in Iceland had contagion effects on Hungary in the autumn of 2008. In early 2009, contagion also affected CESEE countries with strong fundamentals, whose currencies came under pressure, but also euro area banks and countries with a large exposure to the CESEE region. The problems in Greece had contagion effects on other euro area countries.

15.1 Measures aimed at strengthening the European financial architecture

The CESEE region was stabilised by an increase in the EU balance of payments assistance facility to € 50 billion in March 2009 and a substantial increase in IMF funding. In the EU, expansionary fiscal and monetary policies and bank support packages were implemented. In January 2009 the "Vienna Initiative" was launched, which brought private sector involvement to the crisis resolution efforts in the CESEE re-

gion. In May 2010, the euro area members agreed on a € 110 billion bilateral financing package for Greece to avoid a sovereign default. As this was not sufficient to calm markets and stop contagion effects for other countries, a European Financial Stabilisation Mechanism (EFSM) and a European Financial Stability Facility (EFSF) with volumes of € 60 billion and € 440 billion respectively were established. The EU/euro area and the IMF provided crisis financing in Europe. Overall, € 205 billion were pledged, € 99 billion thereof by the IMF. € 73 billion have already been paid out, € 41 billion by the IMF and € 32 billion by the EU. The Eurosystem has started buying bonds of affected euro area member countries to stabilise the government bond markets. A new architecture for European financial supervision was agreed upon in September 2010.

Together, these measures stabilised financial markets and deepened European integration. The mainly Anglo-Saxon commentators who had forecast a break-up of the euro area were again proved wrong.



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