

# Revision of Price/Cost Competitiveness Indicators for Austria

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The issue of short-term competitiveness, i.e. price and cost competitiveness, has moved to center stage in the economic policy debate amid the economic crisis. Within the Eurosystem, the various indicators that are used to monitor short-term competitiveness are revised at regular intervals by the ECB and national compilers. In Austria, these indicators are compiled by the OeNB in cooperation with WIFO, the Austrian Institute of Economic Research. The regular revisions are meant to ensure that the indicators adequately reflect changing country-specific trade patterns, remain useful measures and continue to be internationally comparable. In the revision undertaken in 2013, the basic conceptual framework was left unchanged in as much as the typical building blocks of the Austrian competitiveness indicator have been retained. At the same time, a number of adjustments were made: The previously fixed country weights were replaced by variable weights based on non-overlapping three-year periods, the underlying samples of trading partners and competing countries were adjusted, a services subindex was substituted for the existing travel and tourism subindex, and two new competitiveness indicators were added to enable cross-checks with the traditional consumer price-based measures. The two additions are, first, a new price competitiveness indicator for the manufacturing industry, based on relative producer prices and second, a new cost competitiveness indicator for the Austrian economy and the services industry, based on relative unit labor costs of the total economy. The revised set of indicators shows that Austria's price and cost competitiveness has improved continually over the past decade and a half, with manufacturing exporters experiencing stronger gains in competitiveness than other areas of the economy. Services providers have also become evidently more competitive since the beginning of 1999. Here, the improvement is found to be larger when we take into account changes in the HICP/CPI rather than total unit labor costs.

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## 1 Short-Term Price Competitiveness – A Prominent Measure in the Debate on Macroeconomic Imbalances

Benefiting from rising cross-border demand for goods but increasingly also for services, Austria has consistently run current account surpluses since 2002. The growing importance of services exports is not limited to classical travel and tourism exports but has also been fueled by the growing demand for knowledge-intensive services. Meanwhile, other euro area countries experienced rising current account deficits following their accession to monetary union until the onset of the global financial and economic crisis. Following

the outbreak of the crisis, current account imbalances, in particular imbalances among euro area countries, their causes and rebalancing measures that may be required moved to center stage in the economic debate. Such imbalances had been identified before the crisis hit, but they did not figure prominently in debates about economic policy. However, persistent increases in current account deficits are ultimately not sustainable, not even in a monetary union.

The diverging external trade performance of the euro area countries reflects, among other things, disparate developments of productivity, inflation, capital costs as well as labor costs – in other words, different changes in the

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short-term price and/or cost competitiveness of the individual countries. The divergent trade performance also results from the inability of the export industries to adjust fast enough to changes in demand patterns and globalization. Despite sweeping EU initiatives like the Lisbon 2010 agenda, policymakers paid too little attention to factors that have a *fundamental* influence on the international competitiveness of an economy, such as education, research or an economy's capacity for innovation. Like a country's tax system and its supply of public goods, its human capital portfolio (i.e. skills and knowledge), labor relations, the flexibility of labor markets and employment protection systems are key factors that define a country's attractiveness as a business location and its competitiveness in the medium to long term. Still, in the short run, competitiveness basically burns down to the price competitiveness of the external sector, which is driven by relative price changes reflecting the development of labor and capital costs, productivity gains or losses, and exchange rate changes.

To prevent the buildup of unsustainable current account imbalances in the future, the EU has developed a new alert mechanism for identifying and correcting macroeconomic imbalances. As this framework has been designed to pay particular attention to the development of competitiveness, the EU's scoreboard of macroeconomic indicators contains, among others, two indicators to measure short-term price/cost competitiveness and changes in market shares.

The usual approach to assessing the short-term (price and cost) competitiveness of a country is to analyze how its exchange rates and its domestic price

and cost indices have changed in relation to those of its trading partners. From a macro perspective it is the aggregate effect on an economy of all exchange rate changes that counts rather than the bilateral changes of parity. Therefore, an index calculated as the geometric weighted average of bilateral exchange rates – the *nominal effective exchange rate index* of a currency, say the euro – is a much more meaningful indicator of the economic impact of exchange rate changes than bilateral exchange rates. However, the nominal effective index shows only how the external value of a currency moves on average in relation to the currencies of a given country's trading partners. Thus, this index is useful mostly from a monetary policy perspective, for instance for assessing the effects of a depreciating or appreciating currency on the domestic inflation rate. Likewise, the national nominal effective competitiveness indices will show whether an appreciating or depreciating euro has had different effects on the individual euro area countries, taking into account country-specific differences in foreign trade patterns and the degree of openness of the economy.

However, it takes more than the nominal effective exchange rate index to arrive at a comprehensive assessment of the short-term price or cost competitiveness of a given economy. For this purpose, policymakers rely on *real effective exchange rate indices*, which are better suited to reflect changes in the competitiveness of producers on both home and external markets. Ideally, these indicators will relate to those areas where an economy faces international competition,<sup>2</sup> will adequately reflect country-specific trade patterns, and will build on reliable and inter-

<sup>2</sup> In other words, these indices must cover all internationally tradable goods and – ideally – services.

nationally comparable price and cost indices (Köhler-Töglhofer, 1999).

As an aggregate price/cost indicator for the euro area, the ECB's real effective exchange rate indices of the euro by definition mask differences in the price/cost competitiveness of individual euro area countries. Yet from a national perspective, such differences are a major yardstick for the performance of the individual member countries.<sup>3</sup> This is why *national price/cost competitiveness indicators* (i.e. *national real effective exchange rate indices*) have been calculated on the basis of a harmonized methodology and have been published for the individual euro area countries since 1999. All these indices are revised at regular intervals to keep reflecting trade relationships adequately.

The latest revision of the OeNB/WIFO price and cost competitiveness indicators for Austria in 2013 involved, first, adjusting/updating the list of the trading partners and competing countries and thus recalculating the individual country weights. Second, the set of indicators was also adjusted slightly. The existing indicator for the cost competitiveness of the Austrian manufacturing industry reflecting manufacturing unit labor costs was discontinued due to a lack of internationally comparable cost indices. To fill this gap, we now offer a new index tracking the price competitiveness of the manufacturing industry as deflated by the producer price index. Moreover, total unit labor costs are now used – alongside the HICP/CPI, as before – to measure the competitiveness of the total economy. The basic conceptual framework was left

unchanged, though: the Austrian competitiveness indicator continues to consist of four subindices, but a subindex for services was substituted for the existing subindex for travel and tourism.

Section 2 below presents the major changes resulting from the 2013 revision of the price competitiveness indicator, addressing, among other things, the informative value of the respective deflators. Section 3 provides a snapshot of the competitiveness of the Austrian economy based on the new and revised price and cost competitiveness indicators.

## 2 Revision of the Price Competitiveness Indicator for Austria

The euro area countries committed themselves in 1999 to use a harmonized methodology for calculating their national competitiveness indicators and to revise the indicators at regular intervals to catch up with changes in trade patterns. Past releases of the price competitiveness index for Austria have been consistent with the harmonized Euro-system methodology. The basic conceptual framework was left unchanged in the revision of 2013 in as much as the typical building blocks (see Hahn et al., 2001) have been retained except that the travel and tourism index was replaced by a services index. The competitiveness indicator compiled by the OeNB and WIFO can be characterized as follows:

- The aggregate index consists of four subindices calculated for manufactured goods, food, raw materials and energy products, and services.<sup>4</sup>

<sup>3</sup> See ECB (2000, 2003), Buldorini et al. (2002) and Schmitz et al. (2012) on calculating the nominal and real effective exchange rate indices for the euro.

<sup>4</sup> The country weights for the subindices for manufactured goods, raw materials and energy products, and food are based on the trade flows documented in these categories in line with the Standard International Trade Classification (SITC): manufactured goods (SITC Sections 5 to 8), raw materials and energy products (SITC Sections 2 to 4) and food (SITC Sections 0 and 1).

- The index is based on geometric weighting, i.e. it represents the weighted geometric average of a basket of bilateral exchange rates, which yields the price or cost competitiveness indicator when adjusted for the respective relative price or cost indices.
- For the *subindex for manufactured goods*, the individual country weights continue to be calculated on the basis of *single (bilateral) import and double (multilateral) export weights*. While single (bilateral) export weights are easy to calculate and intuitive, they neglect third-market effects, i.e. the effect of competition domestic exporters face in third markets, which increases in importance with expanding trade ties. The method of choice to catch third-market effects is to use “double export weights,” as they capture the effect of competition faced by Austrian exporters in foreign markets from both domestic producers and exporters from third countries (depicted in competition matrices; see annex). The drawback of double export weights is that they are more difficult to calculate<sup>5</sup> and less intuitive.
- The *index base period* was left unchanged at the first-quarter average (arithmetic mean) of 1999 (i.e. 1999 Q1 = 100), which is the base period established by the harmonized Euro-system framework.

## 2.1 Conceptual Changes and Adjustments to Changing Global Competition Patterns

### 2.1.1 Travel and Tourism Subindex Replaced by a Subindex for Services

During the 2013 revision of the OeNB/WIFO competitiveness indicator, the existing subindex for travel and tourism was replaced by a subindex for services. The country weights of the travel and tourism index corresponded to the weighted average of single (bilateral) import weights and double (multilateral) export weights, based on a competition matrix covering 30 countries.<sup>6</sup>

The travel and tourism index was replaced by the wider services index because there is a lack of sufficiently comprehensive internationally comparable data. This conceptual change coincides with the changing role of Austria as a provider of cross-border services: While in the past, travel and tourism services were the staple export of Austria's services industry, Austria is now exporting a broad range of state-of-the-art services. In recent years, innovative technology-based services (above all IT and information services and contract research; see Koller, 2012) have been accounting for increasing shares of Austrian services exports. In terms of revenue, the main services exports continue to be travel and tourism (2011: EUR 14.3 billion) and the

<sup>5</sup> Double export weights are calculated on the basis of complex competition matrices. These matrices also track any goods sold on the domestic market that were manufactured domestically and thus compete with imports from other countries. See box 1 in Köhler-Töglhofer et al. (2006). While the ECB takes net manufacturing output (gross manufacturing output less intermediate consumption by manufacturers) as the starting point for building the competition matrix for manufactured goods, the OeNB/WIFO use gross manufacturing output. The rationale behind this approach is that the OeNB considers only gross manufacturing output to be consistent with the foreign trade statistics derived from gross flows. Moreover, intermediate goods and services affect competitiveness. All other calculation steps are the same for both indicators. Given that gross manufacturing output exceeds net manufacturing output, the OeNB/WIFO indicator yields a higher share of domestic producers in a given market than the ECB indicator.

<sup>6</sup> The competition matrix for travel and tourism covered all countries with a share of at least 0.25% of Austria's travel and tourism revenues and expenditures (plus Finland and Luxembourg) as reported in the Austrian balance of payments.

traditional services industries, such as transportation, construction, wholesale and retail trade, operational leasing, agricultural and mining services (2011: EUR 15.6 billion). Exports of knowledge-intensive services,<sup>7</sup> however, grew at a particularly impressive rate from the mid-1990s up to 2008, with average annual growth rates of 13%. When exports collapsed in 2009 amid the global economic crisis, exports of knowledge-intensive services moreover proved to be fairly resilient to the crisis, dropping by just 6%, whereas goods exports suffered a 20% setback. Measured in terms of the absolute export revenues generated by knowledge-intensive business services, architecture, engineering and other technical services are the single most important category, followed by IT and information services (see Walter, 2011, p. 12). Reflecting the rising value added by services other than travel and tourism, a new subindex for services has been added to the Austrian competitiveness indicator. Given a lack of comparable international data on the gross output of services, it is not (yet) possible to calculate double export weights for the services subindex. The new services subindex reflects trade relations with Austria's 56 most important trading partners, who are also relevant for other subindices (see table A1 in the annex).

### 2.1.2 Fixed Country Weights Replaced by Variable Weights Based on Non-Overlapping Three-Year Periods

The Austrian competitiveness index used to be based on a *fixed* weighting system, consisting of single (bilateral) import weights, single (bilateral) export weights for food as well as raw materials and energy products, and double (multilateral) export weights for manufactured goods, and travel and tourism. The underlying country weights were fixed over the entire calculation period starting from 1999 with the trade weights established during the successive rounds of revision (three-year averages for external trade shares).<sup>8</sup>

An important *conceptual change* of the revision undertaken in 2013 is that the *fixed* country weights were dropped. Instead, the index is now calculated as a *chained index*.<sup>9</sup> At the time of writing, the most current set of comparable external trade data relates to the three-year period from 2007 to 2009. This leaves us with five sets of country weights based on successive three-year averages (1995 to 1997, 1998 to 2000, 2001 to 2003, 2004 to 2006 and 2007 to 2009). The effective exchange rate indices are obtained by chain-linking the indicators based on each of these five sets of trade weights at the end of each three-year period. The latest three-year period for which data could be compiled in 2013 determines the

<sup>7</sup> Knowledge-intensive services include telecommunications services; IT and information services; R&D services; licensing fees for patents and know-how; architecture, engineering and other technical services; legal consultancy fees; accounting and tax advisory services; business consulting; advertising and market research; personal services; culture and recreation services.

<sup>8</sup> The country weights established in the revision of 2001 related to the external trade patterns of the period from 1995 to 1997; the country weights established in the revision of 2006 were based on the three-year average for the period from 1999 to 2001.

<sup>9</sup> In some respects, the existing price competitiveness index was already a chained index, as the index for the period up to 1999 remained based on the sample of trading partners and competing countries underlying the revision of 2001, for which the weights were calculated on the basis of the 1995 to 1997 period. This procedure was chosen because it ensured a more adequate reflection of Austria's trade relations and thus of its competitiveness situation in the 1993 to 1998 period.

country weights for evaluating the price and cost competitiveness of Austria in the coming years, or until the next full three-year dataset becomes available.<sup>10</sup>

### 2.1.3 Changes in Country Coverage

To reflect changes in the pattern of Austrian exports, the *sample of trading and competing countries* was adjusted as well when the indicator was revised in 2013. The index is now based on a sample of 56 countries.<sup>11</sup>

An assessment of the changes in the country weights during the last decade and a half or so shows that the “ranking” of Austria’s main trading partners has in essence remained unchanged; at the same time, there have been slight changes in the *relative* importance of individual trading partners. Based on the weighting for the 2007 to 2009 period, the **aggregate index** (export- and import-

weighted across all subindices) continues to be characterized by a high foreign trade share of the countries that joined the EU before 2004 (56.9%), whereas the countries that acceded to the EU in 2004 and 2007 account for a share of 12.5%. Germany remains the country with the largest country weight (33.3%), followed by the U.S.A. (9.1%) and Italy (7.6%). France and Switzerland each have a weight of some 3½%, and the Czech Republic and the Netherlands a weight of about 3% each. The high weight of the U.S.A. – i.e. of the U.S. dollar – results above all from the raw materials and energy products subindex, as imports in this category are mostly denominated in U.S. dollars (see table A1 in the annex).

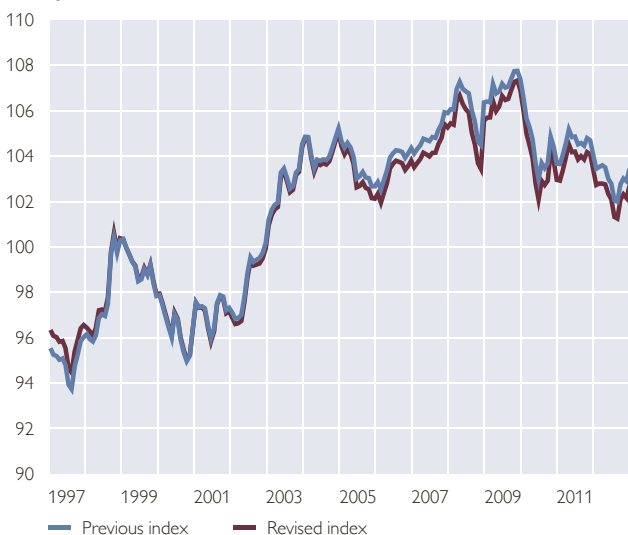
The price competitiveness patterns evident from the revised aggregate index broadly match that of the previous

Chart 1

## Chained Aggregate Index of Austria’s Price Competitiveness since 1997: Previous Index versus Revised Index

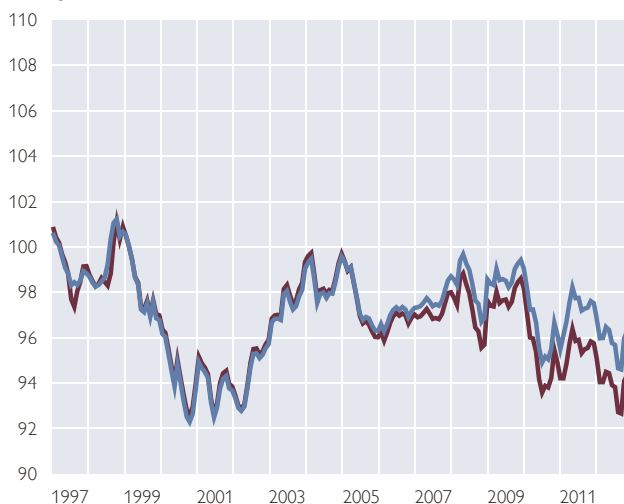
### Nominal

1999 Q1 = 100



### Real, deflated by the relative HICP/CPI

1999 Q1 = 100



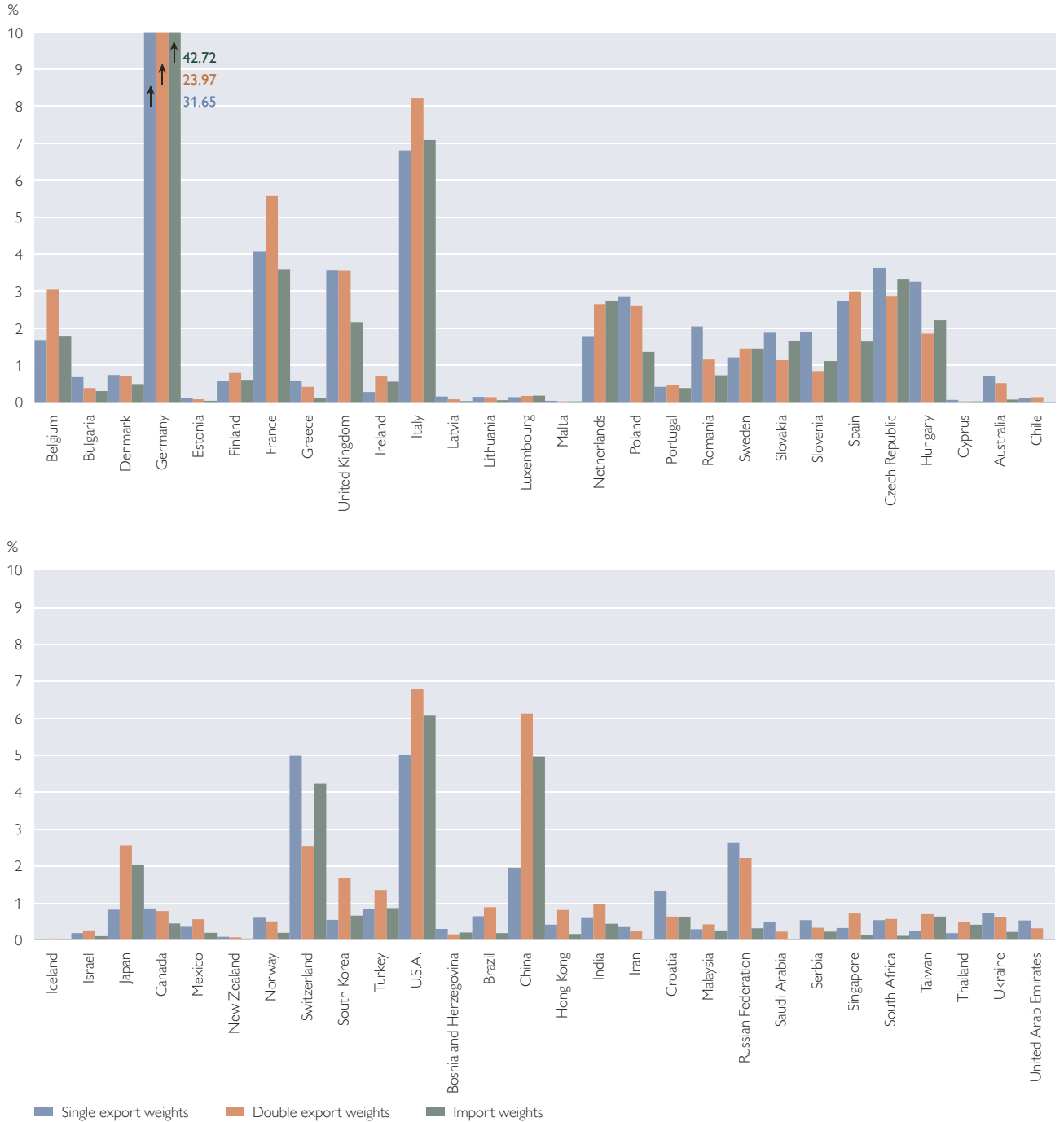
Source: OeNB/WIFO.

<sup>10</sup> The next update is due when the full dataset becomes available for the 2010 to 2012 period.

<sup>11</sup> Compared with the latest revision in 2006, the sample of trading partners and competing countries has been reduced by 6 countries.

Chart 2

Single and Double Export Weights in the Manufactured Goods Subindex (Period 2007 to 2009)



Source: OeNB/WIFO.

index. The slight shift in the level since 2007 evidently reflects the adjustment of trade weights based on the external trade data for the three-year period from 2007 to 2009.

As outlined above, the export weights for the **manufactured goods subindex** are calculated as **double export weights** reflecting third-market effects. An analysis of both double export weights and single export weights across the non-overlapping three-year periods produces some interesting insights: Germany's weight has shrunk significantly over time. Similarly, the weights of Switzerland, Italy, Japan and the U.S.A. have gone down. Conversely, the weights of some of the countries that joined the EU in 2004 or 2007 (such as Poland, Slovakia, the Czech Republic or Romania) have increased markedly. Overall, China and the Russian Federation stand out as the countries whose relevance for Austrian manufacturing exporters reflects the largest increases (see table A3 in the annex).

With regard to the impact of foreign competition on domestic industries in third markets, a cross-check of single and double export weights shows that in the case of Germany, Austria's single most important trading partner, the direct export weight is markedly larger than the export weight that includes competition for domestic exporters in third markets. The same holds true for Switzerland and many of the countries that joined the EU in 2004 as well as for the Russian Federation (see chart 2). The reverse is the case for China, the U.S.A., Japan, Turkey and most of the Asian emerging markets (e.g. South Korea, India, Hong Kong, Singapore or

Taiwan). These emerging countries and their staple exports constitute ever stronger competition for domestic exporters in third markets. Conversely, countries whose double export weight is below their single export weight are not as much of a competition for domestic exporters in third markets. This may be because they are targeting different regions with their exports, or because they export different goods and services. Germany, for instance, is the single most important export destination for Austrian manufacturing exporters, but in third markets, German exports appear to be less of a competition for Austrian exports.

In this evaluation of the short-term price competitiveness of Austrian manufactured goods exporters, the EU-27 aggregate now has a share of 65.8%. In other words, other EU countries continue to account for the lion's share of Austrian manufacturing exports; at the same time, this share has dropped by 8 percentage points in the last decade and a half. The weight of the euro area (now 51%) has also been decreasing. While exchange rate uncertainty has disappeared within the euro area, the 51% must not be misinterpreted as the share of Austrian exports that is no longer exposed to exchange rate risks. Competition in non-euro area markets,<sup>12</sup> as reflected by double export weights, causes bilateral exchange rate changes of the euro to other currencies to continue to exert an – indirect – influence on Austrian exports. Of course, the same holds true for Austria's competitors from other euro area countries. In addition, the competitiveness of domestic exporters relative to

<sup>12</sup> To give an example, the double export weights account for the competition between Austrian and German exports both in the German market and in all other euro area and non-euro area markets. In these non-euro area markets, exchange rate changes of the euro to the respective national currency matter for Austrian and German exporters alike.



those in other euro area countries also depends on the relative changes in cost and price levels.

The aggregate share of those EU countries that have not yet joined the euro area (14.8%) has remained broadly unchanged over time. Yet the aggregate masks a comparatively strong decline in the share of the United Kingdom and a rising importance of Poland, the Czech Republic and Romania for Austrian manufacturing exports. In addition, the weight of Switzerland has dropped markedly since the latter part of the 1990s, and so have the shares of the U.S.A. and Japan. Conversely, China has gained tremendous importance for domestic manufacturing exporters over the past 15 years. China's country weight has risen from 1.7% (1998 to 2000) to 6.2% (2007 to 2009) and is now almost on a par with that of the U.S.A., making China even more important for domestic manufacturing exporters than France, which is after all Austria's third-largest export trading partner within the EU.

Compared with exports of manufactured goods, domestic **services exports** continue to be more focused on EU markets (close to 76%; euro area: 59%). Again, Germany is Austria's single most important trading partner (with a share of 38.4%), followed by Switzerland (6.1%), Italy (5.5%), the United Kingdom (4.6%) and the Netherlands (4.4%).

In the **subindices for raw materials and energy, food and services**, the **U.S.A.** stands out. Its share appears to be astonishingly high at a first glance, because, in addition to the underlying imports and exports, corresponding imports and exports to and from coun-

tries not specified in the index<sup>13</sup> are billed in U.S. dollars and hence add to the weight of the U.S.A./the U.S. dollar.

## 2.2 Two New Competitiveness Indicators Added to Enhance Analysis

In the past, the measure **indicating the Austrian economy's price competitiveness** was based on an **HICP/CPI** deflator. The HICP/CPI deflator is the most widely used method for calculating real effective exchange rate indices and national competitiveness indicators. This method has its merits but also comes with some drawbacks: The key advantages are the *timely availability* and the *international comparability* of data, which are derived from standardized baskets of goods reflecting average living standards.

Yet the goods baskets underlying consumer price indices contain large amounts of nontradable goods,<sup>14</sup> which makes them an imperfect proxy for changes in tradable goods prices. At the same time, consumer prices may be "misleading indicators of the prices of traded goods" (Lafrance et al., 1998), as the exposed and protected sectors of an economy tend to have divergent productivity patterns. Moreover, HICP/CPI-deflated measures do not reflect changes in the prices of capital goods (which account for a large share of foreign trade), whereas import prices have a significant influence on the development of the HICP/CPI. Finally, the meaningfulness of the indicator may be distorted by indirect taxes on goods that are reimbursed upon export (unless goods are acquired directly by foreign households) and by export subsidies.

<sup>13</sup> Rest of the world.

<sup>14</sup> In the Austrian HICP, nontradable goods and services have a weight of 45%.

To provide a more robust assessment of the competitiveness of Austrian manufacturers, a new index was added when the set of competitiveness indicators was last revised in 2006 to show how competitive the Austrian manufacturing industry is in terms of unit labor costs in the manufacturing sector. Unit labor costs are, without doubt, a key determinant of manufactured goods sales prices and thus a key indicator of the short-term competitiveness of an economy. In view of the limited availability of internationally comparable data on manufacturing unit labor costs, the index was calculated for a comparatively narrow sample of competing countries and trading partners.<sup>15</sup> The data were derived from the OECD, which stopped updating the calculation of comparable unit labor costs for the manufacturing sector in 2012, however. Therefore, retaining the cost competitiveness indicator introduced in 2006 was not an option.

As a second-best solution, a new index of **manufacturing price competitiveness based on producer prices** was added when the set of competitiveness indicators was revised during the 2013 update. The rationale for using producer prices as a deflator is to take a deflator that is more relevant for tradable goods than the HICP/CPI. While producer prices reflect both products that sell well internationally and products that are marketed less successfully abroad, producer prices can be assumed to relate above all to internationally active industries, as they cover mainly

manufactured goods and intermediate goods used in the manufacturing process. Hence, producer prices are considered to be a “reasonable proxy for tradable goods prices” (Schmitz et al., 2012).<sup>16</sup> At the same time, producer price indices are characterized by country-specific differences in composition and compilation (Schmitz et al., 2012). The prices observed are factory sales prices excluding VAT, adjusted for discounts or rebates and excluding transportation costs: “Output producer prices can be described as indices designed to measure the average change in the price of goods and services as they leave the place of production valued at basis prices. They exclude any taxes, transport and trade margins that the purchaser may have to pay.” (OECD, 2010, p. 90). Since internationally comparable producer prices are not available for all relevant trading partners of Austria, the new index is based on only 26 competing countries.<sup>17</sup> Whereas consumer price indices are released monthly, deflators for analyzing cost competitiveness, such as total unit labor costs and producer price indices, are available only on a quarterly basis and are, moreover, subject to longer publication time lags.

The other new addition is an **indicator of cost competitiveness** based on total unit labor costs. Unlike in the past, the new indicator of cost competitiveness added during the 2013 revision does not relate to the manufacturing industry, but to the total **economy** and to **services**. As discussed in Köhler-Töglhofer (1999), the use of total unit

<sup>15</sup> Comparable data on manufacturing unit labor cost developments were available only for the member countries of the Organisation for Economic Co-operation and Development (OECD). Hence, the sample of competing countries and trading partners used for this indicator consisted of 24 countries (based on OECD membership in 2006, excluding Denmark, Luxembourg, Portugal, Slovakia and Turkey). Those countries covered 85% of all relevant exports from Austria, though.

<sup>16</sup> This assessment excludes nonindustrial goods, retail goods and services.

<sup>17</sup> France, Belgium, Luxembourg, the Netherlands, Germany, Italy, Ireland, Spain, Finland, Greece, the Czech Republic, Denmark, Estonia, Hungary, Poland, Sweden, Slovenia, Slovakia, the United Kingdom, Australia, Canada, Norway, Switzerland, the U.S.A., New Zealand and Chile.

labor costs as a deflator is fraught with crucial drawbacks, as total unit labor costs also reflect changes in labor costs and in the productivity of the nontradable sector of production. If we assume that labor costs for nontradable costs and personal services rise faster than labor costs in the tradable sector, cost competitiveness indicators based on such deflators must be subject to a certain bias. To the extent that nontradable goods or services constitute intermediate inputs to the products ultimately marketed by exporters, though, they exert a significant influence on competitiveness. Moreover, the use of *unit labor costs* as deflators, be it for manufacturing industries or for the total economy, is subject to methodological problems, such as the fact that these costs are sensitive to the business cycle. Unit labor costs are calculated by dividing the (hourly) compensation per employee by the (hourly) real value added per person employed in the manufacturing industry or in the total economy. Empirical evidence shows that labor productivity grows in boom phases but drops in economic downturns;<sup>18</sup> in other words, labor productivity follows the business cycle.<sup>19</sup> Furthermore, the transition from labor-intensive to capital-intensive production methods also reduces the usefulness of the cost competitiveness indicator. If labor productivity growth results from the substitution of capital for labor and

if declining unit labor costs go hand in hand with rising capital unit costs, the cost competitiveness indicator overstates the competitiveness gains. Another methodological problem consists in the fact that productivity growth as such is endogenous and that strong productivity gains need not necessarily imply an improvement in competitiveness, but may also imply that competitiveness problems existed in the first place.<sup>20</sup> The countries at the southern periphery of the euro area are a case in point. Their price competitiveness has improved simply on account of the fact that staff layoffs caused the productivity measures of those countries to improve for manufacturing and for the total economy. Since internationally comparable total unit labor costs are not available for all relevant trading partners of Austria, the new index is based on only 29 competing countries.<sup>21</sup> These 29 countries, however, account for more than 85% of Austria's foreign trade in goods and services.

### 3 What Do the Various Price Competitiveness Indicators Say?

#### 3.1 Marked Price Competitiveness Gains for Austrian Manufacturers since the Launch of the Euro

Following the establishment of the European monetary union in January 1999, **domestic manufacturing exporters'** price competitiveness improved by 6% in real

<sup>18</sup> Productivity decreases during pronounced economic setbacks or recessions. As a case in point, a quarterly analysis of productivity data for Austria shows five successive quarters of declining productivity for the total economy and four successive quarters of declining productivity for manufacturing in the crisis period 2008/09. The decline in manufacturing output was the driving force behind the development of total productivity.

<sup>19</sup> Consequently, unit labor costs will rise during economic downturns and drop during economic upswings. Therefore, an adequate assessment of changes in cost competitiveness requires these changes to be adjusted for cyclical components.

<sup>20</sup> When excessive wage increases make jobs unprofitable, layoffs or business closures cause jobs – typically those with the highest unit labor costs – to be destroyed. As a result, productivity will rise and unit labor costs will decline.

<sup>21</sup> France, Belgium, Luxembourg, the Netherlands, Germany, Italy, Ireland, Portugal, Spain, Finland, Greece, the Czech Republic, Denmark, Estonia, Hungary, Poland, Sweden, Slovenia, Slovakia, the United Kingdom, Australia, Canada, Japan, Norway, Switzerland, the U.S.A., South Korea, New Zealand and Israel.

terms up to the end of 2012, judging from the export-weighted competitiveness index as deflated by HICP/CPI. Taking into account also the underlying nominal effective appreciation by 3.7%, the relative improvement that is attributable solely to changes in price patterns was in fact close to 10%. A cross-check with the competitiveness indicator that is based on the producer price index confirms this uptrend. This indicator dropped by almost 8% in the period from the first quarter of 1999 up to the fourth quarter of 2012; here,  $\frac{1}{2}$  percentage point of the improvement can be traced to the underlying nominal effective depreciation.<sup>22</sup>

Based on the HICP/CPI-deflated competitiveness indicator, Austrian manufacturing exporters became more competitive in terms of prices by a measure of close to 9% from early 1999 until June 2001. In this respect, they benefited from the exchange rate movements of the euro against the U.S. dollar and the Japanese yen, which contributed to the nominal effective depreciation observed in this period (5%). Hence, it does not come as a surprise that domestic manufacturing exporters became more competitive especially relative to the U.S.A. and Japan in relation to which the real depreciation totaled almost 30% and 15%, respectively. While domestic manufacturing exporters made little headway in becoming more competitive in intra-euro area trade (about 1%), they experienced substantial price competitiveness gains compared with those EU countries which have not yet introduced the euro. Again, about 45% of the improvement was attributable to the underlying nominal exchange rate movements. However, relative to the U.S.A., the exchange rate

movements accounted for the entire improvement, and for most of the improvement relative to Japan.

All the price competitiveness gains domestic manufacturing exports made from mid-2001 onward were reversed until the end of 2004 on account of exchange rate changes, with the euro firming against the U.S. dollar, the Japanese yen and the pound sterling. While domestic exporters continued to improve their competitiveness against their euro area trading partners by a small margin, they lost competitiveness against all other destinations. However, part of the negative impact of the exchange rate developments relative to the non-euro area EU countries did not feed through to price competitiveness. The opposite was the case with Japan, where the strong exchange rate-related losses were accompanied by an even stronger loss of price competitiveness.

In the course of 2005, the tides turned again: domestic exporters regained almost 5% in price competitiveness, mostly on account of the underlying exchange rate movements, which were in turn largely attributable to the appreciating U.S. dollar. The improvement was only temporary. It was offset entirely between late 2005 and April 2008, again essentially as a result of exchange rate fluctuations (while the euro appreciated strongly against the U.S. dollar and the Japanese yen, it depreciated somewhat against the currencies of the non-euro area EU countries). Relative to Japan, the setback that Austrian exporters suffered in their price competitiveness was much sharper than the exchange rate-related fluctuations would have suggested. Against all other destinations, domestic producers managed to partly offset the

<sup>22</sup> *The divergence in the movements of the nominal effective exchange rate index is the result of diverging country samples and corresponding changes in the country weights.*

strong exchange rate-related losses thanks to comparatively more favorable HICP/CPI developments. The period until November 2008 saw another improvement, which was followed by yet another offsetting movement in the following months; in both cases, the underlying exchange rate movements were the driving force.

Starting in September 2009, Austrian manufacturers managed to regain competitiveness relative to their competitors until mid-2010, based on a real effective depreciation by 5½%, which was driven by a broadly corresponding nominal effective depreciation. In the course of the global economic crisis, the euro depreciated sharply against the U.S. dollar, the Japanese yen and the currencies of the non-EU countries. Some of this improvement was lost again in the following months, up to April 2011, but the loss was subsequently reversed in the period until August 2012. A regional breakdown shows that the sharp depreciation of the euro against the Japanese yen in the period from mid-2010 until the end of 2012

did not fully feed through to the real effective index. In the case of all other regions, the development of the real effective index was driven by nominal exchange rate changes. Finally, in the period from mid-2010 until the end of 2012, domestic manufacturers also lost the competitiveness gains they had made relative to their fellow euro area countries following the establishment of monetary union.

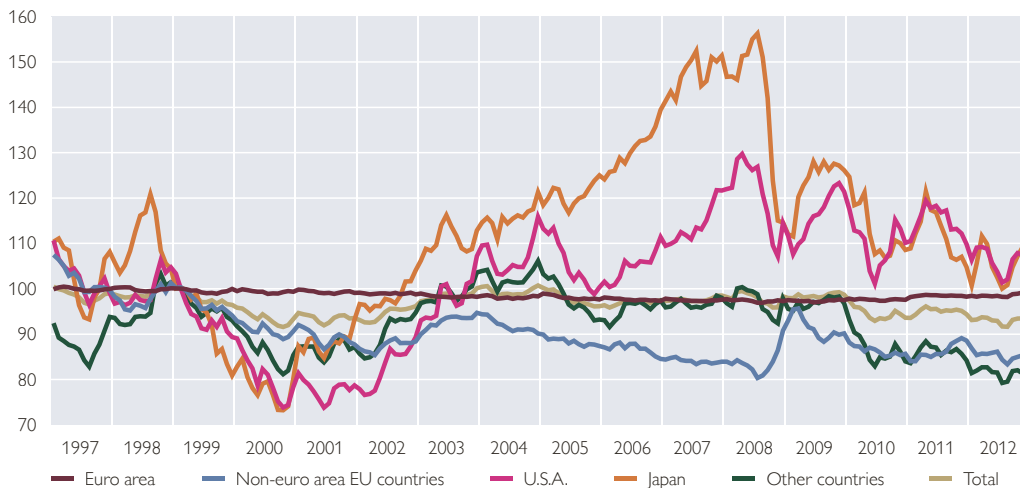
As measured by the HICP/CPI-deflated index, the price competitiveness of Austrian manufacturing exporters has been essentially determined by the changes in the nominal effective exchange rate index since mid-2001, and in particular since the onset of the global financial crisis, i.e. the collapse of Lehman Brothers.

The story told by the HICP/CPI-deflated price competitiveness index for the domestic manufacturing industry is confirmed by the new **PPI-deflated index** calculated for just 29 competing countries. This index reveals competitiveness gains for Austrian manufacturing exporters in the range of about 7%

Chart 3

### Export-Weighted Real Effective Exchange Rate Index for Manufactured Goods (Deflated by HICP/CPI) by Destinations

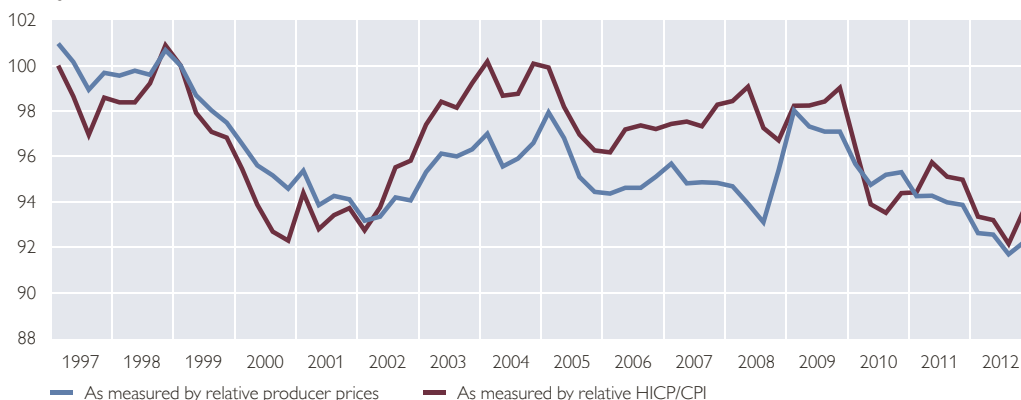
1999 Q1 = 100



Source: OeNB/WIFO.

**Export-Weighted Real Effective Exchange Rate Indices for Manufactured Goods**

1999 Q1 = 100



Source: OeNB/WIFO.

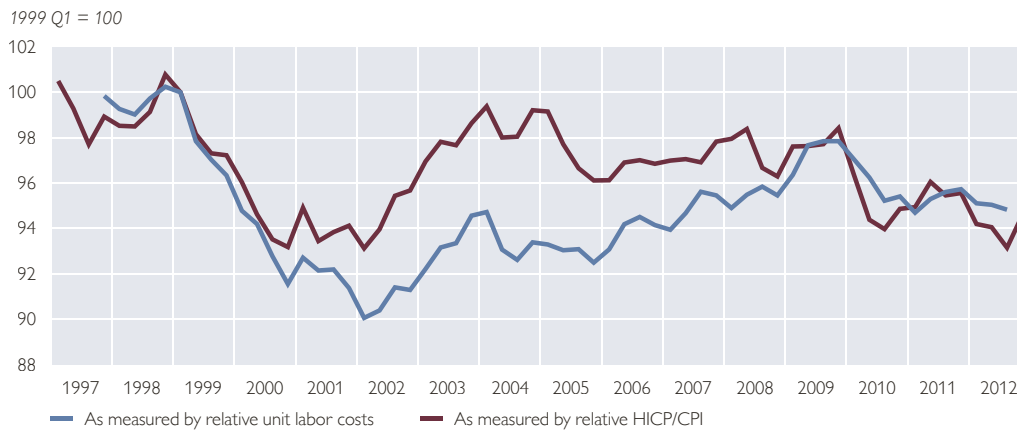
for the first three years following the establishment of monetary union, 4 percentage points of which were found to be attributable to the underlying nominal effective depreciation. The subsequent years were characterized by a steady (exchange rate-driven) real effective appreciation, which lasted until the first quarter of 2005 and was subsequently reversed until mid-2008. As the Austrian economy suffered a setback following the global financial crisis, the Austrian manufacturing industry temporarily (from the third quarter of 2008 to the end of 2009) lost more than 4% in price competitiveness. Half of this loss was attributable to the comparatively stronger increase of domestic producer prices. It took domestic manufacturers until the first quarter of 2012 to reverse these losses, largely supported by a nominal effective depreciation.

As measured by the (export-weighted only) price competitiveness index deflated by producer prices, domestic manufacturing exporters gained in competitiveness relative to their trading partners by a measure of 8% from early 1999 to late 2012; the nominal effective depreciation amounted to about ½% in this period.

### 3.2 Progressive Price and Cost Competitiveness Gains for Austrian Producers and Services Providers since Early 1999

As deflated by total unit labor costs, the (export-weighted as well as import- and export-weighted) index measuring the **cost competitiveness of Austrian producers and services providers (aggregate index)** shows competitiveness gains of 10% for the period from early 1999 until the first quarter of 2002, 40% of which were related to exchange rate developments. From the second quarter of 2002 until the first quarter of 2004, Austrian exporters suffered competitiveness losses, which were likewise driven by exchange rate developments. This period was followed by slight improvements, which were only temporary, though. From the fourth quarter of 2004 until the end of 2009, Austrian exporters' cost competitiveness fell by some 5%, mostly on account of labor cost developments, which developed less favorably in Austria than abroad. Since early 2010, Austrian producers and services providers have regained some competitiveness as a result of exchange rate developments.

Chart 5

**Real Effective Exchange Rate Indices (Aggregate Indicator)**

Source: OeNB/WIFO.

The international cost competitiveness of Austrian producers and services providers improved by a total of 5% from the start of monetary union until the fall of 2012; 2 percentage points thereof can be attributed to the changes of the nominal effective exchange rate index. Yet this indicator may very well underestimate the competitiveness of Austrian producers and service providers, as total unit labor costs are largely determined by nontradable, low-productivity services.

When cross-checking these figures with the HICP/CPI-deflated price competitiveness indicator with the cost competitiveness indicator, we see that the results do not fully match. Deflated by the HICP/CPI, the aggregate index shows price competitiveness to have improved by 7% in the first three years of monetary union, with almost half of the improvement attributable to exchange rate changes. The subsequent nominal effective appreciation by about 8% observed until the first quarter of 2004 did not feed through entirely to price competitiveness. This period was followed by (largely exchange rate-related) price competitiveness gains

until the first quarter 2006, which were, however, almost fully reversed until the end of 2009. When we look at the period from early 2004 until late 2009, we find Austrian exporters to have experienced marginal gains in price competitiveness despite the underlying nominal effective appreciation. This pattern is not consistent with the pattern reflected by the cost competitiveness indicator. The cost competitiveness indicator implies that the Austrian economy lost about 3% in competitiveness in this period, with half of the loss being driven by exchange rate developments. For the period from late 2009 until late 2012, the price competitiveness indicator and the cost competitiveness indicator coincide in showing a 3% recovery of competitiveness, albeit almost entirely on account of exchange rate movements. Finally, when we look at the entire period from early 1999 until late 2012 and cross-check the HICP/CPI-deflated indicator with the unit labor cost-deflated indicator, we also arrive at price competitiveness gains totaling 5%, of which only a small part was determined by exchange rate developments.

### 3.3 Austrian Services Providers Made Stronger Gains in Price Competitiveness than in Cost Competitiveness

When we look at the (export- and import-weighted) indices designed to reflect the **cost competitiveness of services providers** on the basis of total unit labor costs<sup>23</sup> we also find competitiveness gains in the first few years following the launch of the euro. Until the first quarter of 2002, the figures add up to a real effective depreciation of 11%, supported by a nominal effective depreciation of about 5%. In other words, domestic services providers benefited from more moderate wage policies and/or higher productivity gains. This compares with a real depreciation of 7% as measured by the relative changes of consumer prices, with half of the improvement observed on the basis of this indicator being attributable to exchange rate developments. For the next two years, both the index based on unit labor costs and the index based on HICP/CPI show a reversal of these gains, in both cases entirely on account of exchange rate developments. Up to the end of 2005, the two indicators coincide in showing renewed slight gains, roughly half of which were driven by exchange rate changes. The subsequent years, however, brought marked setbacks, in particular with regard to cost competitiveness. Exchange rate changes played some role in this respect, but the main driver was a comparatively sharp rise in unit labor costs. Cross-checking these results with the HICP/CPI-deflated competitiveness index, we find the loss of price competitiveness of services providers to have been triggered entirely by exchange rate changes until April 2008, the pass-through of which

to the real effective measures was limited, though. The slight improvement observed in the subsequent months on the basis of the HICP/CPI-deflated competitiveness index was, however, reversed once more as a result of the global crisis until the end of 2009.

The long-term patterns imply that domestic services providers made stronger gains in competitiveness in terms of total unit labor costs than they did in terms of consumer prices from early 1999 to early 2002. Yet they subsequently lost the competitive edge implied by the cost competitiveness indicator over the price competitiveness indicator until the end of 2009. When we look at the competitiveness gains during the entire period from early 1999 to late 2009, the results of the two indicators are more or less the same. But the matching headline results mask highly divergent underlying nominal effective exchange movements that result from the fact that the two indicators are based on different country samples and hence on different country weights. The nominal effective appreciation totaled 7% in the case of the price competitiveness indicator but only some 3% in the case of the cost competitiveness indicator. This implies that Austrian services providers benefited more strongly from changes in relative consumer prices than they did from changes in relative unit labor costs.

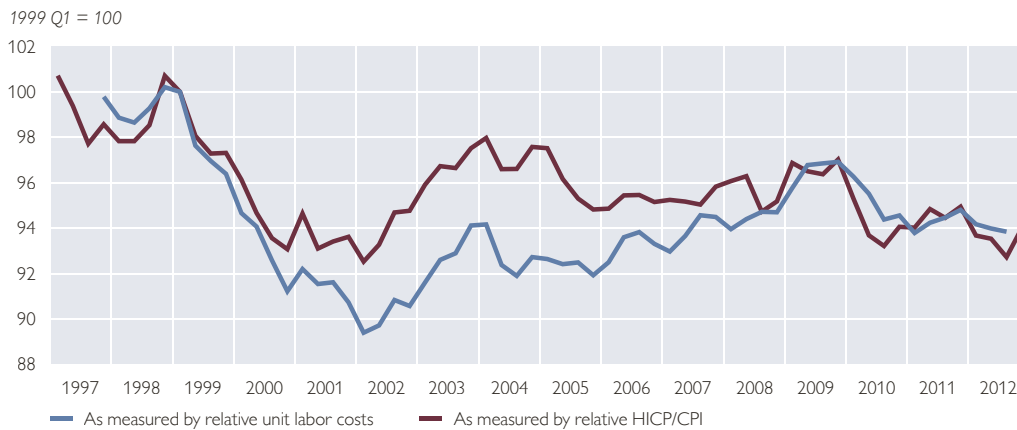
Since early 2010 until the fall of 2012, domestic services providers again experienced small gains in cost and price competitiveness as a result of exchange rate changes. However, given a comparatively stronger increase in unit labor costs and a comparatively stronger increase in HCPI/CPI inflation, the exchange rate changes did not suffice to offset the earlier losses.

<sup>23</sup> This indicator is based on 29 competing countries.



Chart 6

### Real Effective Exchange Rate Indices for Services



Source: OeNB/WIFO.

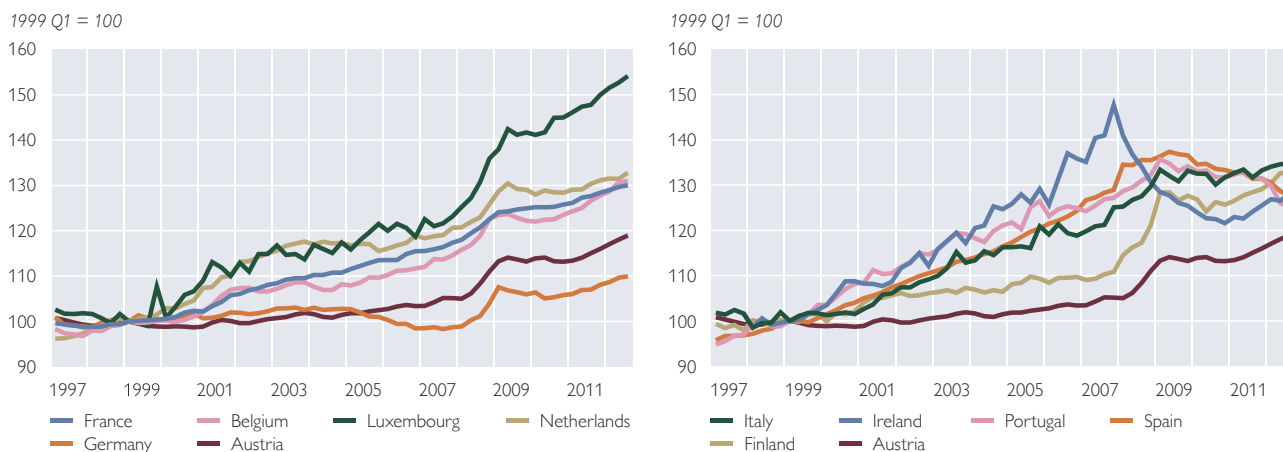
Over the full length of the review period – from early 1999 until late 2012 – domestic services providers were able to increase their price competitiveness by 6%. Given an underlying nominal effective appreciation of 3%, this improvement was not driven by exchange rate changes. A regional breakdown shows that Austrian services providers failed to outperform providers from other euro area countries in this period. Conversely, they gained significant ground in terms of price competitiveness relative to those EU countries which have not yet joined the euro area (13%), and they would have gained even more in the absence of adverse exchange rate developments. Supported by exchange rate developments, they also visibly gained competitiveness vis-à-vis the U.S.A. (11%). Conversely, Austrian services providers suffered significant losses vis-à-vis Japan (15%), benefiting at the same time from favorable exchange rate developments without which the loss would even have been much stronger.

### 3.4 Total Unit Labor Costs in Austria in Comparison to its Trading Partners

Unit labor costs in the Austrian total economy as a whole remained broadly stable from early 1999 until late 2004, thus developing even more moderately than total unit labor costs in Germany, which grew by 3% in this period compared to 16% in Italy and 5% in Switzerland. Even stronger increases were observed in Luxembourg (+17%), the Netherlands (+17%), Spain (+16%), Greece (+20%), Portugal (+21%) and especially Ireland (+25%). In the U.S.A., unit labor costs rose by 11%, whereas they declined by 15% in Japan. Some of the countries that had joined the EU in 2004 also reported particularly high increases, such as Hungary (+55%), Slovakia (+35%) and the Czech Republic (+23%). Poland was an outlier with a decrease by 6%.

The story is different, to some extent, for the period from late 2004 until the third quarter of 2008 (when the global economic crisis was set off by the collapse of Lehman Brothers). In this period, total unit labor costs in Austria rose gradually by 7%, which was still moderate, though, compared

### International Comparison of Total Unit Labor Costs (in Local Currencies)



Source: OeNB/WIFO.

with developments in other trading partner countries (the exception to this observation being Germany, because German unit labor costs decreased by some 2% in this period). Irish unit labor costs continued to rise by another 18% until the end of 2007, but shrank by 9% until the third quarter of 2008 after the real estate bubble burst. In Spain – which suffered a real estate bubble of its own – the increase in unit labor costs remained strong (+16%), but this was even topped by Greece (+18%). Strong unit labor cost increases were reported, again, for Hungary (+17%) and Slovakia (+10%) and now for Poland as well (+14%). Then there were a number of countries with increases of about 10%, namely France, Belgium, Luxembourg, Portugal, Finland and the United Kingdom.

During the global economic crisis (from the third quarter of 2008 until the third quarter of 2012), the increase of unit labor costs was substantial and more or less on a par in Austria (+10%) and Germany (+9%). This can be explained with the comparatively high wage increases agreed in wage negotia-

tions as well as with productivity losses resulting from the decline in economic output which went hand in hand with cuts in hours worked rather than sharp increases in layoffs. Those European countries which had built up comparatively high macroeconomic imbalances and/or unsustainable current account deficits by the time the economic crisis hit simply had to significantly improve their unit labor cost positions. Thus, Spain, Portugal and Greece reduced their total unit labor costs by about 5% each from the third quarter of 2008 until the third quarter of 2012; Ireland cut its unit labor costs by about 13% from late 2007 until the third quarter of 2012.

When we look at the period from early 1999 until the third quarter of 2012, total unit labor costs rose by 19% in Austria – compared with 10% for Germany, 35% for Italy, and some 30% each for France and Belgium. The Netherlands were affected to roughly the same degree, with an increase of about 33%. Those countries that were hit particularly hard by the global crisis plus, in some countries, the bursting

of a real estate bubble – namely Spain, Ireland, Greece and Portugal – have seen their unit labor costs rise by between 25% and 33% since 1999. Not surprisingly, even stronger increases were reported for some of the countries that joined the EU in 2004.

#### 4 Summary

The 2013 revision of the competitiveness indicators for Austria shows that domestic manufacturers have become more competitive internationally since the launch of the euro. A cross-check of different indices illustrates that indices deflated by producer prices reflect more significant gains than indices deflated by consumer prices (in the case of the latter, the improvements are, moreover, largely exchange rate-driven). When interpreting the diverging results, two arguments need to be borne in mind: First, it is safe to assume that producer price indices are a better proxy for price changes in tradable goods than consumer price indices. This would imply that domestic goods exporters have experienced marked competitiveness gains since the start of monetary union. Second, it must not be overlooked that the two indicators are based on different country samples with different country weights.

Furthermore, the aggregate price and cost competitiveness indicators (i.e. the aggregate results of the four subindices) reflect short-term gains in competitiveness for Austrian manufacturers and services providers from early 1999 until 2012, even if the improvements observed were not as strong for all economic areas as for the manufacturing industry.

Domestic providers of services have also been able to improve their competitiveness since the start of monetary union. With respect to services, the indicator of price competitiveness shows significantly higher competitiveness gains than the indicator of cost competitiveness, though. This becomes evident when we also take into account exchange rate changes, as the price competitiveness indicator reflects competitiveness gains despite an underlying nominal effective appreciation. Conversely, the improvement of cost competitiveness – as measured by the relative total unit labor costs – was supported somewhat by the underlying exchange rate changes. For Austria, we find total unit labor costs to have grown by 19% in the past 14 years. This is significantly below the corresponding results for Austria's major trading partners except Germany.

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## Appendix

Table A1

**Weighting Scheme of the New Exchange Rate Index**

Country weights in %, calculated for the period from 2007 to 2009

| Competing countries    | Austrian exports                        |   |        |        |          |        | Austrian imports           |   |        |        |          |        |
|------------------------|---|---|--------|--------|----------|--------|----------------------------|---|--------|--------|----------|--------|
|                        | Manu-<br>factured<br>goods <sup>1</sup> | Raw<br>materials,<br>energy<br>products | Food   | Goods  | Services | Total  | Manu-<br>factured<br>goods | Raw<br>materials,<br>energy<br>products | Food   | Goods  | Services | Total  |
| Belgium                | 3.04                                    | 0.25                                    | 0.98   | 2.73   | 1.86     | 2.49   | 1.79                       | 0.68                                    | 1.77   | 1.62   | 1.37     | 1.57   |
| Bulgaria               | 0.38                                    | 0.68                                    | 0.61   | 0.41   | 0.55     | 0.45   | 0.29                       | 0.04                                    | 0.16   | 0.24   | 0.72     | 0.34   |
| Denmark                | 0.70                                    | 0.22                                    | 0.48   | 0.66   | 0.78     | 0.69   | 0.48                       | 0.12                                    | 0.84   | 0.45   | 0.37     | 0.43   |
| Germany                | 23.97                                   | 27.42                                   | 31.95  | 24.71  | 38.36    | 28.44  | 42.72                      | 32.16                                   | 41.45  | 41.01  | 29.34    | 38.65  |
| Estonia                | 0.07                                    | 0.02                                    | 0.10   | 0.07   | 0.14     | 0.09   | 0.03                       | 0.02                                    | 0.04   | 0.03   | 0.14     | 0.05   |
| Finland                | 0.79                                    | 0.03                                    | 0.22   | 0.70   | 0.70     | 0.70   | 0.60                       | 0.25                                    | 0.05   | 0.51   | 0.69     | 0.55   |
| France                 | 5.59                                    | 1.13                                    | 2.19   | 5.08   | 2.41     | 4.36   | 3.59                       | 0.52                                    | 3.81   | 3.13   | 2.58     | 3.02   |
| Greece                 | 0.41                                    | 0.44                                    | 0.91   | 0.44   | 0.46     | 0.45   | 0.10                       | 0.07                                    | 0.66   | 0.14   | 1.55     | 0.42   |
| United Kingdom         | 3.57                                    | 0.96                                    | 1.73   | 3.28   | 4.56     | 3.63   | 2.16                       | 0.22                                    | 0.88   | 1.78   | 4.98     | 2.42   |
| Ireland                | 0.69                                    | 0.05                                    | 0.19   | 0.62   | 0.51     | 0.59   | 0.54                       | 0.03                                    | 0.85   | 0.49   | 0.68     | 0.52   |
| Italy                  | 8.23                                    | 18.50                                   | 16.00  | 9.38   | 5.50     | 8.32   | 7.08                       | 3.94                                    | 10.56  | 6.82   | 6.95     | 6.84   |
| Latvia                 | 0.07                                    | 0.01                                    | 0.11   | 0.07   | 0.16     | 0.10   | 0.02                       | 0.03                                    | 0.02   | 0.02   | 0.16     | 0.05   |
| Lithuania              | 0.13                                    | 0.05                                    | 0.18   | 0.13   | 0.09     | 0.12   | 0.05                       | 0.04                                    | 0.07   | 0.05   | 0.27     | 0.09   |
| Luxembourg             | 0.16                                    | 0.02                                    | 0.14   | 0.15   | 0.40     | 0.22   | 0.17                       | 0.00                                    | 0.04   | 0.14   | 0.58     | 0.23   |
| Malta                  | 0.02                                    | 0.06                                    | 0.07   | 0.02   | 0.11     | 0.05   | 0.02                       | 0.01                                    | 0.00   | 0.01   | 0.12     | 0.04   |
| Netherlands            | 2.64                                    | 0.75                                    | 2.65   | 2.53   | 4.43     | 3.04   | 2.72                       | 1.97                                    | 6.05   | 2.82   | 2.52     | 2.76   |
| Poland                 | 2.61                                    | 0.82                                    | 1.67   | 2.44   | 1.77     | 2.26   | 1.35                       | 2.40                                    | 3.39   | 1.65   | 2.58     | 1.83   |
| Portugal               | 0.46                                    | 0.04                                    | 0.16   | 0.41   | 0.21     | 0.36   | 0.37                       | 0.27                                    | 0.26   | 0.35   | 0.47     | 0.37   |
| Romania                | 1.15                                    | 1.04                                    | 1.79   | 1.19   | 1.69     | 1.32   | 0.72                       | 0.29                                    | 0.25   | 0.63   | 1.53     | 0.81   |
| Sweden                 | 1.44                                    | 0.17                                    | 0.87   | 1.33   | 1.48     | 1.37   | 1.44                       | 0.43                                    | 0.20   | 1.21   | 0.96     | 1.16   |
| Slovakia               | 1.13                                    | 3.90                                    | 1.37   | 1.32   | 1.54     | 1.38   | 1.64                       | 4.31                                    | 1.10   | 2.02   | 2.84     | 2.18   |
| Slovenia               | 0.84                                    | 3.89                                    | 3.78   | 1.22   | 1.23     | 1.22   | 1.10                       | 0.56                                    | 0.80   | 1.00   | 1.68     | 1.14   |
| Spain                  | 2.99                                    | 0.34                                    | 1.60   | 2.73   | 1.03     | 2.27   | 1.63                       | 0.25                                    | 3.43   | 1.53   | 1.97     | 1.62   |
| Czech Republic         | 2.86                                    | 6.31                                    | 2.99   | 3.08   | 2.29     | 2.87   | 3.31                       | 4.54                                    | 2.43   | 3.44   | 3.48     | 3.45   |
| Hungary                | 1.85                                    | 6.55                                    | 3.67   | 2.26   | 3.31     | 2.55   | 2.21                       | 3.58                                    | 4.04   | 2.54   | 4.15     | 2.86   |
| Cyprus                 | 0.01                                    | 0.02                                    | 0.14   | 0.02   | 0.28     | 0.09   | 0.02                       | 0.00                                    | 0.06   | 0.02   | 0.38     | 0.09   |
| Australia              | 0.51                                    | 0.16                                    | 0.66   | 0.50   | 0.29     | 0.44   | 0.06                       | 0.09                                    | 0.11   | 0.07   | 0.29     | 0.11   |
| Chile                  | 0.13                                    | 0.00                                    | 0.04   | 0.11   | 0.08     | 0.10   | 0.01                       | 0.03                                    | 0.28   | 0.03   | 0.04     | 0.03   |
| Iceland                | 0.03                                    | 0.00                                    | 0.02   | 0.03   | 0.05     | 0.03   | 0.01                       | 0.00                                    | 0.01   | 0.01   | 0.10     | 0.03   |
| Israel                 | 0.26                                    | 0.15                                    | 0.13   | 0.24   | 0.00     | 0.17   | 0.09                       | 0.01                                    | 0.22   | 0.09   | 0.00     | 0.07   |
| Japan                  | 2.57                                    | 1.18                                    | 0.88   | 2.37   | 0.57     | 1.88   | 2.05                       | 0.07                                    | 0.04   | 1.61   | 0.50     | 1.39   |
| Canada                 | 0.78                                    | 0.01                                    | 0.34   | 0.70   | 0.32     | 0.60   | 0.45                       | 0.07                                    | 0.07   | 0.36   | 0.42     | 0.37   |
| Mexico                 | 0.56                                    | 0.01                                    | 0.17   | 0.50   | 0.11     | 0.39   | 0.19                       | 0.03                                    | 0.10   | 0.16   | 0.11     | 0.15   |
| New Zealand            | 0.07                                    | 0.00                                    | 0.09   | 0.06   | 0.04     | 0.06   | 0.03                       | 0.01                                    | 0.34   | 0.05   | 0.13     | 0.06   |
| Norway                 | 0.50                                    | 0.03                                    | 0.16   | 0.45   | 0.43     | 0.44   | 0.19                       | 0.01                                    | 0.14   | 0.16   | 0.46     | 0.22   |
| Switzerland            | 2.55                                    | 3.12                                    | 3.35   | 2.64   | 6.10     | 3.58   | 4.25                       | 0.83                                    | 3.33   | 3.67   | 4.27     | 3.79   |
| South Korea            | 1.68                                    | 0.03                                    | 0.59   | 1.51   | 0.29     | 1.18   | 0.65                       | 0.08                                    | 0.01   | 0.52   | 0.14     | 0.44   |
| Turkey                 | 1.35                                    | 0.10                                    | 0.30   | 1.20   | 0.74     | 1.08   | 0.86                       | 0.18                                    | 1.27   | 0.78   | 1.39     | 0.90   |
| U.S.A.                 | 6.82                                    | 18.52                                   | 9.09   | 7.70   | 8.59     | 7.94   | 6.11                       | 37.14                                   | 5.39   | 10.85  | 8.84     | 10.45  |
| Bosnia and Herzegovina | 0.14                                    | 0.18                                    | 0.54   | 0.17   | 0.29     | 0.21   | 0.19                       | 0.24                                    | 0.04   | 0.19   | 0.23     | 0.20   |
| Brazil                 | 0.88                                    | 0.01                                    | 0.30   | 0.79   | 0.14     | 0.61   | 0.18                       | 0.22                                    | 1.72   | 0.29   | 0.26     | 0.28   |
| China                  | 6.16                                    | 0.23                                    | 0.10   | 5.39   | 0.78     | 4.13   | 4.99                       | 0.26                                    | 0.88   | 3.99   | 0.89     | 3.37   |
| Hong Kong              | 0.81                                    | 0.02                                    | 0.10   | 0.72   | 0.25     | 0.59   | 0.15                       | 0.00                                    | 0.00   | 0.12   | 0.54     | 0.21   |
| India                  | 0.96                                    | 0.04                                    | 0.07   | 0.84   | 0.29     | 0.69   | 0.43                       | 0.04                                    | 0.34   | 0.37   | 0.42     | 0.38   |
| Iran                   | 0.25                                    | 0.02                                    | 0.06   | 0.22   | 0.00     | 0.16   | 0.01                       | 0.74                                    | 0.05   | 0.13   | 0.00     | 0.10   |
| Croatia                | 0.63                                    | 1.21                                    | 1.47   | 0.72   | 1.02     | 0.80   | 0.61                       | 0.23                                    | 0.57   | 0.55   | 2.81     | 1.01   |
| Malaysia               | 0.42                                    | 0.01                                    | 0.01   | 0.37   | 0.06     | 0.28   | 0.25                       | 0.20                                    | 0.02   | 0.23   | 0.10     | 0.20   |
| Russian Federation     | 2.22                                    | 0.32                                    | 2.37   | 2.12   | 1.97     | 2.08   | 0.31                       | 1.13                                    | 0.07   | 0.42   | 2.38     | 0.82   |
| Saudi Arabia           | 0.22                                    | 0.10                                    | 0.38   | 0.22   | 0.00     | 0.16   | 0.02                       | 1.09                                    | 0.00   | 0.18   | 0.00     | 0.14   |
| Serbia                 | 0.32                                    | 0.23                                    | 0.73   | 0.34   | 0.69     | 0.44   | 0.22                       | 0.14                                    | 0.62   | 0.23   | 0.51     | 0.29   |
| Singapore              | 0.72                                    | 0.00                                    | 0.07   | 0.63   | 0.11     | 0.49   | 0.13                       | 0.00                                    | 0.01   | 0.10   | 0.16     | 0.11   |
| South Africa           | 0.57                                    | 0.01                                    | 0.40   | 0.52   | 0.14     | 0.42   | 0.10                       | 0.25                                    | 0.40   | 0.14   | 0.53     | 0.22   |
| Taiwan                 | 0.70                                    | 0.05                                    | 0.03   | 0.61   | 0.08     | 0.47   | 0.63                       | 0.00                                    | 0.00   | 0.49   | 0.12     | 0.42   |
| Thailand               | 0.48                                    | 0.01                                    | 0.01   | 0.42   | 0.11     | 0.33   | 0.41                       | 0.01                                    | 0.42   | 0.35   | 0.57     | 0.39   |
| Ukraine                | 0.62                                    | 0.37                                    | 0.65   | 0.61   | 0.63     | 0.61   | 0.21                       | 0.13                                    | 0.28   | 0.20   | 0.76     | 0.32   |
| United Arab Emirates   | 0.31                                    | 0.22                                    | 0.37   | 0.31   | 0.00     | 0.22   | 0.02                       | 0.02                                    | 0.00   | 0.02   | 0.00     | 0.02   |
| Total                  | 100.00                                  | 100.00                                  | 100.00 | 100.00 | 100.00   | 100.00 | 100.00                     | 100.00                                  | 100.00 | 100.00 | 100.00   | 100.00 |

Source: OeNB/WIFO.

<sup>1</sup> Double weights.

Table A1 continued

**Weighting Scheme of the New Exchange Rate Index**

Country weights in %, calculated for the period from 2007 to 2009

| Competing countries    | Exports and imports        |   |        |        |          | Total  |
|------------------------|----------------------------|---|--------|--------|----------|--------|
|                        | Manu-<br>factured<br>goods | Raw<br>materials,<br>energy<br>products | Food   | Goods  | Services |        |
| Belgium                | 2.43                       | 0.56                                    | 1.38   | 2.16   | 1.66     | 2.04   |
| Bulgaria               | 0.34                       | 0.22                                    | 0.39   | 0.33   | 0.62     | 0.40   |
| Denmark                | 0.59                       | 0.15                                    | 0.66   | 0.55   | 0.61     | 0.57   |
| Germany                | 33.00                      | 30.84                                   | 36.72  | 33.01  | 34.68    | 33.35  |
| Estonia                | 0.05                       | 0.02                                    | 0.07   | 0.05   | 0.14     | 0.07   |
| Finland                | 0.70                       | 0.19                                    | 0.13   | 0.61   | 0.70     | 0.63   |
| France                 | 4.63                       | 0.69                                    | 3.01   | 4.09   | 2.48     | 3.71   |
| Greece                 | 0.26                       | 0.18                                    | 0.79   | 0.29   | 0.90     | 0.43   |
| United Kingdom         | 2.89                       | 0.43                                    | 1.30   | 2.52   | 4.73     | 3.05   |
| Ireland                | 0.62                       | 0.04                                    | 0.52   | 0.55   | 0.58     | 0.56   |
| Italy                  | 7.67                       | 8.00                                    | 13.27  | 8.08   | 6.09     | 7.61   |
| Latvia                 | 0.05                       | 0.03                                    | 0.07   | 0.05   | 0.16     | 0.07   |
| Lithuania              | 0.09                       | 0.05                                    | 0.13   | 0.09   | 0.16     | 0.11   |
| Luxembourg             | 0.17                       | 0.01                                    | 0.09   | 0.14   | 0.47     | 0.22   |
| Malta                  | 0.02                       | 0.02                                    | 0.04   | 0.02   | 0.11     | 0.04   |
| Netherlands            | 2.68                       | 1.63                                    | 4.36   | 2.68   | 3.65     | 2.91   |
| Poland                 | 2.00                       | 1.96                                    | 2.54   | 2.03   | 2.10     | 2.05   |
| Portugal               | 0.42                       | 0.21                                    | 0.21   | 0.38   | 0.32     | 0.37   |
| Romania                | 0.95                       | 0.50                                    | 1.02   | 0.90   | 1.62     | 1.08   |
| Sweden                 | 1.44                       | 0.36                                    | 0.53   | 1.26   | 1.27     | 1.27   |
| Slovakia               | 1.38                       | 4.20                                    | 1.23   | 1.67   | 2.07     | 1.77   |
| Slovenia               | 0.96                       | 1.49                                    | 2.28   | 1.11   | 1.41     | 1.18   |
| Spain                  | 2.33                       | 0.27                                    | 2.52   | 2.12   | 1.42     | 1.96   |
| Czech Republic         | 3.08                       | 5.04                                    | 2.71   | 3.27   | 2.78     | 3.15   |
| Hungary                | 2.02                       | 4.41                                    | 3.86   | 2.40   | 3.65     | 2.70   |
| Cyprus                 | 0.02                       | 0.01                                    | 0.10   | 0.02   | 0.32     | 0.09   |
| Australia              | 0.29                       | 0.11                                    | 0.39   | 0.28   | 0.29     | 0.28   |
| Chile                  | 0.07                       | 0.02                                    | 0.16   | 0.07   | 0.06     | 0.07   |
| Iceland                | 0.02                       | 0.00                                    | 0.01   | 0.02   | 0.07     | 0.03   |
| Israel                 | 0.18                       | 0.05                                    | 0.17   | 0.16   | 0.00     | 0.13   |
| Japan                  | 2.32                       | 0.38                                    | 0.46   | 1.98   | 0.54     | 1.64   |
| Canada                 | 0.62                       | 0.05                                    | 0.20   | 0.53   | 0.36     | 0.49   |
| Mexico                 | 0.38                       | 0.02                                    | 0.13   | 0.32   | 0.11     | 0.27   |
| New Zealand            | 0.05                       | 0.01                                    | 0.22   | 0.05   | 0.08     | 0.06   |
| Norway                 | 0.35                       | 0.02                                    | 0.15   | 0.30   | 0.44     | 0.34   |
| Switzerland            | 3.37                       | 1.47                                    | 3.34   | 3.16   | 5.35     | 3.68   |
| South Korea            | 1.19                       | 0.07                                    | 0.30   | 1.01   | 0.23     | 0.82   |
| Turkey                 | 1.11                       | 0.16                                    | 0.79   | 0.99   | 1.00     | 0.99   |
| U.S.A.                 | 6.48                       | 31.94                                   | 7.23   | 9.31   | 8.69     | 9.15   |
| Bosnia and Herzegovina | 0.17                       | 0.23                                    | 0.29   | 0.18   | 0.27     | 0.20   |
| Brazil                 | 0.55                       | 0.16                                    | 1.02   | 0.53   | 0.19     | 0.45   |
| China                  | 5.60                       | 0.25                                    | 0.49   | 4.68   | 0.82     | 3.76   |
| Hong Kong              | 0.50                       | 0.01                                    | 0.05   | 0.41   | 0.37     | 0.40   |
| India                  | 0.71                       | 0.04                                    | 0.21   | 0.60   | 0.34     | 0.54   |
| Iran                   | 0.13                       | 0.54                                    | 0.06   | 0.17   | 0.00     | 0.13   |
| Croatia                | 0.62                       | 0.50                                    | 1.01   | 0.63   | 1.75     | 0.90   |
| Malaysia               | 0.34                       | 0.15                                    | 0.02   | 0.30   | 0.08     | 0.25   |
| Russian Federation     | 1.30                       | 0.90                                    | 1.21   | 1.25   | 2.14     | 1.47   |
| Saudi Arabia           | 0.12                       | 0.81                                    | 0.19   | 0.20   | 0.00     | 0.15   |
| Serbia                 | 0.27                       | 0.17                                    | 0.67   | 0.29   | 0.62     | 0.37   |
| Singapore              | 0.43                       | 0.00                                    | 0.04   | 0.36   | 0.13     | 0.31   |
| South Africa           | 0.34                       | 0.18                                    | 0.40   | 0.33   | 0.30     | 0.32   |
| Taiwan                 | 0.66                       | 0.02                                    | 0.02   | 0.55   | 0.10     | 0.44   |
| Thailand               | 0.45                       | 0.01                                    | 0.22   | 0.38   | 0.30     | 0.36   |
| Ukraine                | 0.42                       | 0.20                                    | 0.46   | 0.40   | 0.69     | 0.47   |
| United Arab Emirates   | 0.17                       | 0.07                                    | 0.18   | 0.16   | 0.00     | 0.12   |
| Total                  | 100.00                     | 100.00                                  | 100.00 | 100.00 | 100.00   | 100.00 |

Source: OeNB/WIFO.

Table A2

**Competition Matrix for Manufactured Goods Exports**

Market shares in %; calculated for the period from 2007 to 2009

| Competing countries    | Destinations |          |         |         |         |         |        |        |                |         |        |        |           |            |        |
|------------------------|--------------|----------|---------|---------|---------|---------|--------|--------|----------------|---------|--------|--------|-----------|------------|--------|
|                        | Belgium      | Bulgaria | Denmark | Germany | Estonia | Finland | France | Greece | United Kingdom | Ireland | Italy  | Latvia | Lithuania | Luxembourg | Malta  |
| Belgium                | 13.16        | 1.97     | 3.46    | 4.57    | 2.13    | 1.75    | 5.66   | 2.75   | 3.46           | 2.47    | 1.83   | 1.85   | 2.72      | 15.70      | 1.22   |
| Bulgaria               | 0.33         | 38.25    | 0.05    | 0.11    | 0.05    | 0.02    | 0.07   | 1.13   | 0.05           | 0.02    | 0.15   | 0.14   | 0.14      | 0.04       | 0.13   |
| Denmark                | 0.37         | 0.45     | 25.82   | 0.68    | 1.75    | 1.32    | 0.31   | 0.40   | 0.58           | 1.15    | 0.18   | 1.99   | 1.72      | 0.19       | 1.16   |
| Germany                | 18.53        | 10.26    | 17.97   | 54.16   | 12.82   | 7.77    | 10.95  | 8.84   | 10.06          | 6.53    | 6.76   | 12.07  | 12.35     | 16.34      | 5.37   |
| Estonia                | 0.03         | 0.02     | 0.25    | 0.03    | 18.52   | 1.08    | 0.01   | 0.01   | 0.02           | 0.02    | 0.01   | 5.61   | 2.11      | 0.01       | 0.01   |
| Finland                | 0.51         | 0.37     | 1.48    | 0.46    | 12.01   | 56.49   | 0.24   | 0.36   | 0.49           | 0.31    | 0.22   | 3.52   | 2.03      | 0.11       | 0.23   |
| France                 | 9.60         | 2.74     | 3.31    | 4.21    | 2.06    | 1.70    | 53.69  | 4.03   | 4.19           | 2.94    | 3.34   | 1.86   | 2.74      | 6.90       | 8.23   |
| Greece                 | 0.06         | 4.20     | 0.14    | 0.11    | 0.05    | 0.02    | 0.06   | 47.20  | 0.10           | 0.08    | 0.13   | 0.10   | 0.06      | 0.03       | 0.37   |
| United Kingdom         | 5.58         | 1.14     | 3.73    | 2.29    | 2.07    | 1.81    | 2.30   | 2.19   | 46.93          | 23.53   | 1.37   | 1.46   | 2.17      | 1.44       | 5.47   |
| Ireland                | 6.06         | 0.23     | 0.62    | 0.51    | 0.30    | 0.24    | 0.60   | 0.51   | 1.87           | 32.99   | 0.34   | 0.35   | 0.14      | 0.36       | 0.18   |
| Italy                  | 3.95         | 7.84     | 3.23    | 3.46    | 3.39    | 1.59    | 4.90   | 8.71   | 2.88           | 1.89    | 69.94  | 3.26   | 4.18      | 2.11       | 9.25   |
| Latvia                 | 0.02         | 0.03     | 0.25    | 0.03    | 5.93    | 0.09    | 0.01   | 0.01   | 0.02           | 0.05    | 0.01   | 23.22  | 4.64      | 0.01       | 0.02   |
| Lithuania              | 0.07         | 0.07     | 0.64    | 0.08    | 3.41    | 0.11    | 0.05   | 0.01   | 0.06           | 0.04    | 0.02   | 7.83   | 28.81     | 0.12       | 0.08   |
| Luxembourg             | 0.52         | 0.07     | 0.16    | 0.22    | 0.09    | 0.06    | 0.24   | 0.05   | 0.09           | 0.05    | 0.07   | 0.07   | 0.09      | 30.55      | 0.04   |
| Malta                  | 0.00         | 0.01     | 0.02    | 0.02    | 0.00    | 0.03    | 0.03   | 0.00   | 0.03           | 0.01    | 0.01   | 0.00   | 0.00      | 0.00       | 5.24   |
| Netherlands            | 9.20         | 1.78     | 4.61    | 3.88    | 2.54    | 2.11    | 2.63   | 2.38   | 3.24           | 3.00    | 1.58   | 2.30   | 2.46      | 3.48       | 1.96   |
| Poland                 | 1.10         | 1.58     | 2.37    | 2.09    | 4.65    | 0.67    | 0.87   | 0.66   | 1.01           | 0.44    | 0.85   | 6.30   | 8.32      | 0.91       | 0.21   |
| Portugal               | 0.32         | 0.10     | 0.33    | 0.38    | 0.13    | 0.09    | 0.52   | 0.15   | 0.29           | 0.24    | 0.13   | 0.16   | 0.07      | 0.21       | 0.18   |
| Romania                | 0.22         | 2.74     | 0.10    | 0.47    | 0.16    | 0.06    | 0.32   | 0.53   | 0.19           | 0.12    | 0.60   | 0.15   | 0.17      | 0.08       | 0.29   |
| Sweden                 | 1.93         | 0.54     | 9.50    | 0.85    | 8.25    | 5.83    | 0.65   | 0.60   | 0.99           | 0.66    | 0.42   | 3.25   | 2.82      | 0.40       | 0.25   |
| Slovakia               | 0.36         | 1.06     | 0.59    | 0.79    | 0.42    | 0.36    | 0.43   | 0.39   | 0.38           | 0.12    | 0.34   | 1.03   | 0.63      | 0.15       | 0.08   |
| Slovenia               | 0.09         | 0.81     | 0.26    | 0.32    | 0.23    | 0.06    | 0.19   | 0.11   | 0.08           | 0.04    | 0.24   | 0.25   | 0.43      | 0.16       | 0.06   |
| Spain                  | 1.94         | 1.23     | 1.48    | 1.44    | 0.85    | 0.52    | 3.95   | 2.58   | 1.85           | 1.12    | 1.57   | 0.73   | 0.92      | 1.09       | 1.96   |
| Czech Republic         | 1.10         | 2.00     | 1.10    | 2.33    | 1.34    | 0.53    | 0.68   | 0.46   | 0.78           | 0.34    | 0.52   | 1.60   | 1.90      | 0.61       | 0.26   |
| Hungary                | 0.44         | 2.69     | 0.70    | 1.46    | 0.76    | 0.29    | 0.41   | 0.42   | 0.53           | 0.41    | 0.38   | 1.06   | 1.01      | 0.32       | 0.08   |
| Cyprus                 | 0.00         | 0.04     | 0.00    | 0.01    | 0.01    | 0.00    | 0.00   | 0.25   | 0.01           | 0.01    | 0.00   | 0.01   | 0.02      | 0.00       | 0.06   |
| Australia              | 0.13         | 0.05     | 0.06    | 0.04    | 0.02    | 0.06    | 0.03   | 0.04   | 0.18           | 0.08    | 0.03   | 0.04   | 0.01      | 0.00       | 0.06   |
| Chile                  | 0.19         | 0.00     | 0.02    | 0.02    | 0.00    | 0.02    | 0.16   | 0.18   | 0.01           | 0.00    | 0.22   | 0.00   | 0.00      | 0.00       | 0.02   |
| Iceland                | 0.00         | 0.01     | 0.03    | 0.03    | 0.01    | 0.00    | 0.00   | 0.00   | 0.01           | 0.18    | 0.00   | 0.00   | 0.01      | 0.01       | 0.02   |
| Israel                 | 1.16         | 0.19     | 0.13    | 0.09    | 0.08    | 0.08    | 0.10   | 0.27   | 0.19           | 0.09    | 0.11   | 0.19   | 0.10      | 0.06       | 0.45   |
| Japan                  | 2.25         | 0.43     | 0.65    | 1.30    | 0.73    | 1.41    | 0.75   | 1.15   | 1.67           | 1.22    | 0.59   | 0.45   | 0.40      | 0.54       | 2.83   |
| Canada                 | 0.57         | 0.11     | 0.32    | 0.14    | 0.14    | 0.19    | 0.21   | 0.08   | 0.73           | 0.42    | 0.11   | 0.25   | 0.18      | 0.58       | 0.29   |
| Mexico                 | 0.21         | 0.04     | 0.09    | 0.26    | 0.02    | 0.26    | 0.05   | 0.02   | 0.10           | 0.19    | 0.03   | 0.00   | 0.08      | 0.03       | 0.02   |
| New Zealand            | 0.02         | 0.00     | 0.03    | 0.01    | 0.00    | 0.01    | 0.01   | 0.00   | 0.04           | 0.02    | 0.01   | 0.01   | 0.01      | 0.00       | 0.04   |
| Norway                 | 0.30         | 0.06     | 1.99    | 0.26    | 0.70    | 0.60    | 0.12   | 0.14   | 0.33           | 0.41    | 0.08   | 0.44   | 0.55      | 0.17       | 0.23   |
| Switzerland            | 1.10         | 0.99     | 1.25    | 2.16    | 0.60    | 0.65    | 1.40   | 1.49   | 1.14           | 0.79    | 1.25   | 1.52   | 0.64      | 0.97       | 1.50   |
| South Korea            | 0.86         | 0.52     | 0.51    | 0.67    | 0.62    | 1.05    | 0.35   | 2.26   | 0.71           | 0.74    | 0.34   | 0.83   | 0.49      | 0.08       | 18.38  |
| Turkey                 | 0.51         | 5.85     | 0.93    | 0.67    | 1.16    | 0.19    | 0.60   | 1.83   | 0.91           | 0.58    | 0.58   | 0.57   | 0.96      | 0.19       | 7.92   |
| U.S.A.                 | 7.44         | 0.91     | 2.42    | 2.79    | 1.36    | 1.78    | 2.26   | 1.72   | 4.86           | 8.14    | 1.04   | 2.04   | 2.64      | 3.40       | 1.86   |
| Bosnia and Herzegovina | 0.01         | 0.03     | 0.00    | 0.04    | 0.00    | 0.00    | 0.01   | 0.00   | 0.00           | 0.00    | 0.05   | 0.00   | 0.01      | 0.08       | 0.00   |
| Brazil                 | 0.42         | 0.02     | 0.14    | 0.23    | 0.20    | 0.12    | 0.12   | 0.08   | 0.19           | 0.17    | 0.17   | 0.04   | 0.17      | 0.08       | 0.03   |
| China                  | 4.08         | 3.08     | 5.30    | 3.34    | 4.06    | 4.60    | 2.17   | 3.78   | 4.27           | 4.00    | 2.18   | 5.26   | 4.27      | 11.36      | 11.81  |
| Hong Kong              | 0.66         | 0.21     | 0.91    | 0.72    | 0.87    | 0.79    | 0.45   | 0.31   | 1.19           | 0.40    | 0.40   | 0.65   | 0.30      | 0.35       | 0.34   |
| India                  | 1.21         | 0.21     | 0.58    | 0.33    | 0.25    | 0.15    | 0.24   | 0.37   | 0.70           | 0.30    | 0.33   | 0.30   | 0.23      | 0.04       | 0.60   |
| Iran                   | 0.09         | 0.06     | 0.01    | 0.01    | 0.00    | 0.00    | 0.01   | 0.03   | 0.01           | 0.00    | 0.04   | 0.00   | 0.00      | 0.00       | 0.00   |
| Croatia                | 0.02         | 0.15     | 0.04    | 0.08    | 0.02    | 0.01    | 0.03   | 0.02   | 0.03           | 0.02    | 0.16   | 0.04   | 0.06      | 0.03       | 2.51   |
| Malaysia               | 0.17         | 0.08     | 0.15    | 0.24    | 0.16    | 0.30    | 0.15   | 0.12   | 0.30           | 0.41    | 0.07   | 0.18   | 0.08      | 0.02       | 0.42   |
| Russian Federation     | 0.56         | 1.45     | 0.73    | 0.24    | 2.95    | 2.01    | 0.05   | 0.34   | 0.16           | 0.10    | 0.36   | 5.25   | 3.96      | 0.15       | 2.26   |
| Saudi Arabia           | 0.29         | 0.01     | 0.00    | 0.01    | 0.00    | 0.00    | 0.03   | 0.06   | 0.06           | 0.00    | 0.05   | 0.01   | 0.00      | 0.00       | 1.96   |
| Serbia                 | 0.02         | 0.60     | 0.01    | 0.05    | 0.02    | 0.01    | 0.02   | 0.12   | 0.02           | 0.01    | 0.09   | 0.07   | 0.07      | 0.00       | 0.01   |
| Singapore              | 0.64         | 0.03     | 0.10    | 0.33    | 0.00    | 0.19    | 0.30   | 0.05   | 0.58           | 1.70    | 0.04   | 0.05   | 0.04      | 0.08       | 2.81   |
| South Africa           | 0.41         | 0.02     | 0.04    | 0.24    | 0.03    | 0.04    | 0.09   | 0.08   | 0.42           | 0.11    | 0.07   | 0.03   | 0.02      | 0.16       | 0.08   |
| Taiwan                 | 0.34         | 0.51     | 0.65    | 0.48    | 0.77    | 0.47    | 0.35   | 0.29   | 0.60           | 0.83    | 0.24   | 0.34   | 0.36      | 0.19       | 0.79   |
| Thailand               | 0.46         | 0.08     | 0.51    | 0.16    | 0.31    | 0.29    | 0.14   | 0.29   | 0.33           | 0.46    | 0.13   | 0.17   | 0.48      | 0.05       | 0.15   |
| Ukraine                | 0.04         | 2.02     | 0.18    | 0.09    | 0.95    | 0.03    | 0.02   | 0.08   | 0.04           | 0.01    | 0.17   | 1.03   | 1.04      | 0.01       | 0.09   |
| United Arab Emirates   | 0.34         | 0.05     | 0.02    | 0.02    | 0.02    | 0.07    | 0.02   | 0.03   | 0.05           | 0.03    | 0.04   | 0.06   | 0.17      | 0.06       | 0.14   |
| Total                  | 100.00       | 100.00   | 100.00  | 100.00  | 100.00  | 100.00  | 100.00 | 100.00 | 100.00         | 100.00  | 100.00 | 100.00 | 100.00    | 100.00     | 100.00 |
| Single export weights  | 1.56         | 0.63     | 0.68    | 29.61   | 0.10    | 0.54    | 3.81   | 0.54   | 3.34           | 0.25    | 6.36   | 0.14   | 0.13      | 0.12       | 0.03   |

Source: OeNB/WIFO.

**Competition Matrix for Manufactured Goods Exports**

Market shares in %; calculated for the period from 2007 to 2009

| Competing countries    | Destinations |        |          |         |        |          |          |        |                |         |        |           |        |         |
|------------------------|--------------|--------|----------|---------|--------|----------|----------|--------|----------------|---------|--------|-----------|--------|---------|
|                        | Netherlands  | Poland | Portugal | Romania | Sweden | Slovakia | Slovenia | Spain  | Czech Republic | Hungary | Cyprus | Australia | Chile  | Iceland |
| Belgium                | 9.83         | 2.55   | 2.21     | 1.64    | 2.56   | 1.69     | 2.31     | 2.02   | 2.40           | 2.15    | 1.73   | 0.54      | 0.83   | 1.81    |
| Bulgaria               | 0.05         | 0.12   | 0.02     | 1.13    | 0.04   | 0.23     | 0.33     | 0.05   | 0.08           | 0.17    | 0.25   | 0.00      | 0.01   | 0.01    |
| Denmark                | 0.86         | 0.71   | 0.26     | 0.24    | 3.49   | 0.43     | 0.33     | 0.31   | 0.38           | 0.54    | 0.41   | 0.18      | 0.27   | 7.73    |
| Germany                | 18.34        | 18.16  | 8.65     | 12.27   | 11.02  | 17.89    | 17.45    | 7.84   | 21.52          | 20.99   | 7.55   | 2.74      | 3.93   | 10.83   |
| Estonia                | 0.04         | 0.07   | 0.01     | 0.01    | 0.58   | 0.03     | 0.02     | 0.01   | 0.03           | 0.03    | 0.02   | 0.00      | 0.00   | 0.39    |
| Finland                | 1.21         | 0.68   | 0.36     | 0.30    | 2.88   | 0.28     | 0.54     | 0.31   | 0.30           | 0.46    | 1.54   | 0.19      | 0.46   | 1.12    |
| France                 | 4.53         | 3.45   | 5.30     | 4.42    | 3.03   | 4.58     | 5.72     | 5.90   | 2.88           | 3.80    | 2.69   | 1.20      | 1.68   | 1.63    |
| Greece                 | 0.10         | 0.08   | 0.10     | 1.01    | 0.06   | 0.06     | 0.15     | 0.06   | 0.05           | 0.10    | 9.48   | 0.01      | 0.02   | 0.05    |
| United Kingdom         | 4.73         | 1.84   | 1.70     | 1.42    | 3.39   | 1.21     | 1.29     | 2.01   | 1.75           | 1.58    | 5.24   | 1.46      | 0.79   | 5.32    |
| Ireland                | 1.09         | 0.36   | 0.42     | 0.42    | 0.43   | 0.16     | 0.14     | 0.67   | 0.31           | 0.26    | 0.36   | 0.31      | 0.10   | 0.49    |
| Italy                  | 2.96         | 5.20   | 4.57     | 9.10    | 2.14   | 4.31     | 13.74    | 4.11   | 3.27           | 4.56    | 8.02   | 1.12      | 1.62   | 2.42    |
| Latvia                 | 0.03         | 0.11   | 0.00     | 0.02    | 0.13   | 0.05     | 0.02     | 0.00   | 0.03           | 0.02    | 0.08   | 0.00      | 0.00   | 0.61    |
| Lithuania              | 0.07         | 0.30   | 0.03     | 0.05    | 0.26   | 0.05     | 0.05     | 0.02   | 0.09           | 0.07    | 0.03   | 0.00      | 0.00   | 0.45    |
| Luxembourg             | 0.23         | 0.11   | 0.06     | 0.08    | 0.10   | 0.10     | 0.13     | 0.06   | 0.11           | 0.09    | 0.07   | 0.01      | 0.02   | 0.13    |
| Malta                  | 0.01         | 0.01   | 0.01     | 0.00    | 0.00   | 0.00     | 0.00     | 0.00   | 0.01           | 0.02    | 0.03   | 0.00      | 0.00   | 0.08    |
| Netherlands            | 4.57         | 2.93   | 2.29     | 1.90    | 2.70   | 1.83     | 2.27     | 1.80   | 3.58           | 3.02    | 2.00   | 0.46      | 0.77   | 7.35    |
| Poland                 | 1.45         | 42.50  | 0.46     | 2.23    | 1.88   | 4.46     | 1.62     | 0.57   | 4.41           | 3.79    | 1.12   | 0.07      | 0.08   | 1.26    |
| Portugal               | 0.30         | 0.14   | 47.46    | 0.27    | 0.18   | 0.13     | 0.11     | 1.55   | 0.16           | 0.18    | 0.29   | 0.02      | 0.18   | 0.11    |
| Romania                | 0.29         | 0.39   | 0.10     | 39.42   | 0.14   | 0.75     | 0.78     | 0.14   | 0.44           | 1.95    | 0.20   | 0.01      | 0.04   | 0.08    |
| Sweden                 | 1.74         | 1.26   | 0.53     | 0.46    | 51.86  | 0.48     | 0.68     | 0.52   | 0.68           | 0.61    | 0.76   | 0.57      | 0.69   | 5.36    |
| Slovakia               | 0.57         | 1.41   | 0.20     | 1.32    | 0.45   | 22.90    | 1.61     | 0.25   | 4.23           | 3.05    | 0.44   | 0.04      | 0.10   | 0.11    |
| Slovenia               | 0.13         | 0.37   | 0.07     | 0.55    | 0.11   | 0.65     | 26.01    | 0.06   | 0.45           | 0.80    | 0.12   | 0.01      | 0.01   | 0.09    |
| Spain                  | 1.59         | 1.25   | 16.14    | 1.55    | 0.82   | 1.04     | 2.07     | 62.00  | 1.16           | 1.29    | 2.36   | 0.40      | 2.11   | 1.46    |
| Czech Republic         | 1.40         | 2.85   | 0.41     | 2.05    | 1.00   | 14.80    | 2.24     | 0.48   | 38.18          | 3.46    | 0.39   | 0.07      | 0.11   | 0.64    |
| Hungary                | 0.72         | 1.41   | 0.39     | 4.48    | 0.41   | 6.01     | 2.41     | 0.42   | 2.11           | 25.83   | 0.31   | 0.06      | 0.03   | 0.26    |
| Cyprus                 | 0.00         | 0.00   | 0.00     | 0.04    | 0.00   | 0.00     | 0.00     | 0.00   | 0.01           | 0.00    | 14.01  | 0.00      | 0.00   | 0.01    |
| Australia              | 0.14         | 0.01   | 0.01     | 0.01    | 0.04   | 0.01     | 0.04     | 0.02   | 0.01           | 0.01    | 0.05   | 62.29     | 0.21   | 0.05    |
| Chile                  | 0.64         | 0.00   | 0.00     | 0.00    | 0.03   | 0.00     | 0.00     | 0.09   | 0.00           | 0.00    | 0.00   | 0.10      | 39.06  | 0.00    |
| Iceland                | 0.37         | 0.00   | 0.00     | 0.00    | 0.01   | 0.01     | 0.00     | 0.00   | 0.00           | 0.01    | 0.00   | 0.00      | 0.01   | 34.00   |
| Israel                 | 0.35         | 0.08   | 0.08     | 0.23    | 0.06   | 0.04     | 0.27     | 0.14   | 0.09           | 0.13    | 4.18   | 0.17      | 0.18   | 0.07    |
| Japan                  | 5.06         | 0.74   | 0.63     | 0.40    | 0.75   | 0.70     | 0.66     | 0.66   | 1.67           | 2.40    | 4.63   | 4.24      | 3.34   | 1.73    |
| Canada                 | 0.60         | 0.10   | 0.10     | 0.09    | 0.15   | 0.04     | 0.19     | 0.10   | 0.12           | 0.23    | 0.10   | 0.40      | 0.86   | 1.05    |
| Mexico                 | 0.41         | 0.04   | 0.03     | 0.04    | 0.03   | 0.01     | 0.03     | 0.07   | 0.05           | 0.15    | 0.02   | 0.16      | 2.42   | 0.03    |
| New Zealand            | 0.03         | 0.00   | 0.00     | 0.00    | 0.01   | 0.00     | 0.01     | 0.01   | 0.00           | 0.00    | 0.01   | 0.99      | 0.06   | 0.02    |
| Norway                 | 0.98         | 0.31   | 0.20     | 0.17    | 1.73   | 0.09     | 0.05     | 0.16   | 0.09           | 0.08    | 0.18   | 0.06      | 0.19   | 4.55    |
| Switzerland            | 1.52         | 0.84   | 0.85     | 0.96    | 0.71   | 0.84     | 1.27     | 0.98   | 1.07           | 1.09    | 0.63   | 0.58      | 0.43   | 0.46    |
| South Korea            | 0.89         | 1.77   | 0.39     | 0.89    | 0.38   | 5.61     | 2.27     | 0.46   | 0.62           | 1.88    | 10.17  | 1.31      | 3.47   | 0.57    |
| Turkey                 | 0.68         | 0.59   | 0.45     | 4.05    | 0.35   | 0.44     | 2.11     | 0.56   | 0.40           | 0.67    | 4.83   | 0.07      | 0.17   | 0.17    |
| U.S.A.                 | 8.31         | 1.15   | 1.51     | 0.73    | 1.89   | 0.67     | 0.79     | 1.18   | 0.75           | 1.34    | 1.17   | 5.70      | 14.59  | 4.47    |
| Bosnia and Herzegovina | 0.01         | 0.01   | 0.01     | 0.02    | 0.01   | 0.03     | 1.30     | 0.00   | 0.01           | 0.12    | 0.00   | 0.00      | 0.00   | 0.00    |
| Brazil                 | 0.94         | 0.08   | 0.42     | 0.07    | 0.13   | 0.03     | 0.13     | 0.16   | 0.03           | 0.08    | 0.05   | 0.18      | 5.97   | 0.02    |
| China                  | 12.13        | 3.36   | 1.87     | 3.22    | 2.16   | 2.89     | 3.09     | 2.66   | 3.51           | 6.06    | 8.15   | 6.49      | 11.93  | 1.67    |
| Hong Kong              | 1.66         | 0.28   | 0.23     | 0.31    | 0.46   | 0.27     | 0.24     | 0.34   | 0.45           | 1.18    | 0.37   | 1.54      | 0.84   | 0.22    |
| India                  | 0.72         | 0.18   | 0.35     | 0.42    | 0.23   | 0.07     | 0.46     | 0.31   | 0.12           | 0.33    | 0.53   | 0.36      | 0.69   | 0.27    |
| Iran                   | 0.06         | 0.01   | 0.01     | 0.07    | 0.00   | 0.00     | 0.03     | 0.02   | 0.00           | 0.00    | 0.01   | 0.01      | 0.00   | 0.00    |
| Croatia                | 0.04         | 0.04   | 0.01     | 0.08    | 0.04   | 0.10     | 2.66     | 0.01   | 0.07           | 0.17    | 0.59   | 0.00      | 0.00   | 0.01    |
| Malaysia               | 1.34         | 0.13   | 0.10     | 0.06    | 0.12   | 0.20     | 0.06     | 0.09   | 0.12           | 0.40    | 0.19   | 1.15      | 0.16   | 0.05    |
| Russian Federation     | 2.09         | 0.52   | 0.44     | 0.37    | 0.22   | 0.71     | 0.22     | 0.06   | 0.36           | 0.61    | 2.44   | 0.02      | 0.04   | 0.06    |
| Saudi Arabia           | 0.17         | 0.02   | 0.01     | 0.01    | 0.02   | 0.00     | 0.00     | 0.04   | 0.01           | 0.00    | 0.09   | 0.09      | 0.01   | 0.01    |
| Serbia                 | 0.04         | 0.05   | 0.02     | 0.36    | 0.01   | 0.24     | 1.31     | 0.01   | 0.07           | 0.20    | 0.05   | 0.00      | 0.00   | 0.01    |
| Singapore              | 1.56         | 0.12   | 0.10     | 0.04    | 0.06   | 0.08     | 0.10     | 0.06   | 0.29           | 0.80    | 0.30   | 1.60      | 0.10   | 0.00    |
| South Africa           | 0.35         | 0.12   | 0.11     | 0.06    | 0.13   | 0.00     | 0.09     | 0.14   | 0.05           | 0.04    | 0.04   | 0.35      | 0.13   | 0.09    |
| Taiwan                 | 0.89         | 0.52   | 0.13     | 0.22    | 0.37   | 1.89     | 0.47     | 0.30   | 0.83           | 1.85    | 0.37   | 0.83      | 0.69   | 0.49    |
| Thailand               | 0.95         | 0.17   | 0.14     | 0.09    | 0.19   | 0.24     | 0.08     | 0.14   | 0.45           | 0.38    | 0.33   | 1.80      | 0.50   | 0.11    |
| Ukraine                | 0.12         | 0.49   | 0.01     | 0.59    | 0.03   | 0.65     | 0.06     | 0.04   | 0.13           | 0.92    | 0.61   | 0.01      | 0.11   | 0.02    |
| United Arab Emirates   | 0.08         | 0.01   | 0.00     | 0.05    | 0.01   | 0.00     | 0.01     | 0.01   | 0.02           | 0.03    | 0.42   | 0.04      | 0.01   | 0.01    |
| Total                  | 100.00       | 100.00 | 100.00   | 100.00  | 100.00 | 100.00   | 100.00   | 100.00 | 100.00         | 100.00  | 100.00 | 100.00    | 100.00 | 100.00  |
| Single export weights  | 1.66         | 2.67   | 0.38     | 1.91    | 1.13   | 1.75     | 1.77     | 2.56   | 3.39           | 3.04    | 0.06   | 0.65      | 0.09   | 0.02    |

Source: OeNB/WIFO.



Table A2 continued

**Competition Matrix for Manufactured Goods Exports**

Market shares in %; calculated for the period from 2007 to 2009

| Competing countries    | Destinations |        |        |        |             |        |             |             |        |        |                        |        |        |           |        |
|------------------------|--------------|--------|--------|--------|-------------|--------|-------------|-------------|--------|--------|------------------------|--------|--------|-----------|--------|
|                        | Israel       | Japan  | Canada | Mexico | New Zealand | Norway | Switzerland | South Korea | Turkey | U.S.A. | Bosnia and Herzegovina | Brazil | China  | Hong Kong | India  |
| Belgium                | 4.30         | 0.12   | 0.49   | 0.24   | 0.46        | 1.35   | 2.83        | 0.13        | 1.26   | 0.41   | 1.02                   | 0.36   | 0.11   | 0.73      | 1.01   |
| Bulgaria               | 0.05         | 0.00   | 0.01   | 0.00   | 0.00        | 0.03   | 0.06        | 0.00        | 0.34   | 0.00   | 0.65                   | 0.01   | 0.00   | 0.01      | 0.01   |
| Denmark                | 0.15         | 0.03   | 0.11   | 0.05   | 0.30        | 4.04   | 0.37        | 0.05        | 0.15   | 0.10   | 0.23                   | 0.06   | 0.04   | 0.06      | 0.04   |
| Germany                | 4.86         | 0.72   | 1.45   | 2.03   | 2.38        | 7.72   | 23.70       | 1.25        | 5.84   | 1.84   | 12.79                  | 1.82   | 1.16   | 1.64      | 1.52   |
| Estonia                | 0.01         | 0.00   | 0.00   | 0.00   | 0.00        | 0.27   | 0.01        | 0.00        | 0.01   | 0.00   | 0.01                   | 0.01   | 0.00   | 0.00      | 0.00   |
| Finland                | 0.27         | 0.03   | 0.07   | 0.05   | 0.17        | 1.95   | 0.35        | 0.08        | 0.24   | 0.09   | 0.09                   | 0.14   | 0.07   | 0.05      | 0.09   |
| France                 | 2.11         | 0.27   | 0.54   | 0.53   | 0.85        | 1.56   | 6.44        | 0.41        | 2.20   | 0.57   | 1.25                   | 0.73   | 0.28   | 0.88      | 0.61   |
| Greece                 | 0.16         | 0.00   | 0.01   | 0.00   | 0.01        | 0.03   | 0.13        | 0.00        | 0.16   | 0.01   | 0.39                   | 0.01   | 0.00   | 0.01      | 0.01   |
| United Kingdom         | 2.99         | 0.27   | 0.79   | 0.30   | 1.41        | 3.33   | 3.76        | 0.31        | 1.13   | 0.91   | 0.47                   | 0.42   | 0.17   | 1.55      | 0.72   |
| Ireland                | 0.36         | 0.11   | 0.09   | 0.16   | 0.24        | 0.38   | 2.08        | 0.06        | 0.17   | 0.47   | 0.23                   | 0.05   | 0.05   | 0.26      | 0.03   |
| Italy                  | 2.99         | 0.23   | 0.50   | 0.72   | 1.09        | 1.61   | 8.76        | 0.37        | 2.72   | 0.53   | 10.04                  | 0.70   | 0.23   | 1.23      | 0.59   |
| Latvia                 | 0.01         | 0.00   | 0.00   | 0.00   | 0.01        | 0.15   | 0.02        | 0.00        | 0.00   | 0.00   | 0.01                   | 0.00   | 0.00   | 0.00      | 0.00   |
| Lithuania              | 0.01         | 0.00   | 0.00   | 0.00   | 0.01        | 0.33   | 0.03        | 0.00        | 0.01   | 0.00   | 0.01                   | 0.00   | 0.00   | 0.00      | 0.02   |
| Luxembourg             | 0.03         | 0.00   | 0.01   | 0.02   | 0.01        | 0.05   | 0.11        | 0.01        | 0.04   | 0.01   | 0.02                   | 0.01   | 0.01   | 0.02      | 0.01   |
| Malta                  | 0.01         | 0.00   | 0.00   | 0.00   | 0.00        | 0.00   | 0.01        | 0.00        | 0.00   | 0.01   | 0.00                   | 0.00   | 0.00   | 0.05      | 0.00   |
| Netherlands            | 2.00         | 0.11   | 0.22   | 0.20   | 0.48        | 2.77   | 2.49        | 0.30        | 1.26   | 0.28   | 1.33                   | 0.21   | 0.10   | 0.33      | 0.26   |
| Poland                 | 0.37         | 0.01   | 0.10   | 0.04   | 0.05        | 2.04   | 0.56        | 0.03        | 0.49   | 0.04   | 1.13                   | 0.05   | 0.03   | 0.04      | 0.03   |
| Portugal               | 0.13         | 0.01   | 0.02   | 0.04   | 0.02        | 0.09   | 0.16        | 0.00        | 0.06   | 0.03   | 0.15                   | 0.03   | 0.00   | 0.02      | 0.01   |
| Romania                | 0.14         | 0.00   | 0.01   | 0.01   | 0.00        | 0.40   | 0.13        | 0.01        | 0.53   | 0.01   | 1.06                   | 0.01   | 0.00   | 0.01      | 0.05   |
| Sweden                 | 0.47         | 0.07   | 0.23   | 0.15   | 0.35        | 10.95  | 0.70        | 0.10        | 0.44   | 0.20   | 0.50                   | 0.20   | 0.09   | 0.14      | 0.23   |
| Slovakia               | 0.06         | 0.00   | 0.02   | 0.02   | 0.03        | 0.12   | 0.27        | 0.01        | 0.25   | 0.02   | 0.97                   | 0.01   | 0.02   | 0.01      | 0.01   |
| Slovenia               | 0.04         | 0.00   | 0.01   | 0.01   | 0.01        | 0.05   | 0.12        | 0.00        | 0.06   | 0.01   | 9.76                   | 0.01   | 0.00   | 0.01      | 0.01   |
| Spain                  | 1.24         | 0.05   | 0.14   | 0.71   | 0.31        | 0.70   | 1.62        | 0.06        | 1.23   | 0.15   | 0.64                   | 0.32   | 0.06   | 0.17      | 0.15   |
| Czech Republic         | 0.52         | 0.02   | 0.03   | 0.05   | 0.08        | 0.50   | 1.01        | 0.03        | 0.24   | 0.05   | 2.13                   | 0.05   | 0.02   | 0.09      | 0.09   |
| Hungary                | 0.37         | 0.02   | 0.04   | 0.06   | 0.04        | 0.20   | 0.45        | 0.03        | 0.39   | 0.04   | 2.73                   | 0.02   | 0.03   | 0.05      | 0.02   |
| Cyprus                 | 0.01         | 0.00   | 0.00   | 0.00   | 0.00        | 0.00   | 0.00        | 0.00        | 0.00   | 0.00   | 0.01                   | 0.00   | 0.00   | 0.00      | 0.00   |
| Australia              | 0.10         | 0.10   | 0.07   | 0.05   | 12.30       | 0.03   | 0.07        | 0.23        | 0.04   | 0.09   | 0.00                   | 0.03   | 0.06   | 0.38      | 0.10   |
| Chile                  | 0.01         | 0.02   | 0.15   | 0.26   | 0.02        | 0.01   | 0.04        | 0.21        | 0.09   | 0.08   | 0.00                   | 0.37   | 0.16   | 0.03      | 0.01   |
| Iceland                | 0.00         | 0.00   | 0.00   | 0.00   | 0.00        | 0.05   | 0.03        | 0.00        | 0.00   | 0.00   | 0.00                   | 0.00   | 0.00   | 0.00      | 0.00   |
| Israel                 | 39.04        | 0.02   | 0.12   | 0.06   | 0.11        | 0.04   | 0.57        | 0.07        | 0.34   | 0.37   | 0.03                   | 0.14   | 0.02   | 0.98      | 0.27   |
| Japan                  | 2.37         | 86.71  | 1.74   | 2.06   | 4.33        | 0.96   | 1.16        | 5.37        | 0.78   | 2.49   | 0.03                   | 0.82   | 2.66   | 9.26      | 0.93   |
| Canada                 | 0.50         | 0.09   | 49.24  | 0.78   | 0.64        | 0.31   | 0.37        | 0.12        | 0.11   | 3.63   | 0.05                   | 0.22   | 0.11   | 0.25      | 0.17   |
| Mexico                 | 0.10         | 0.04   | 1.05   | 56.46  | 0.07        | 0.03   | 0.07        | 0.04        | 0.01   | 3.40   | 0.01                   | 0.46   | 0.03   | 0.07      | 0.06   |
| New Zealand            | 0.03         | 0.04   | 0.01   | 0.01   | 54.08       | 0.03   | 0.01        | 0.02        | 0.00   | 0.02   | 0.00                   | 0.01   | 0.01   | 0.04      | 0.01   |
| Norway                 | 0.05         | 0.04   | 0.03   | 0.01   | 0.05        | 49.74  | 0.15        | 0.17        | 0.08   | 0.05   | 0.04                   | 0.04   | 0.04   | 0.04      | 0.07   |
| Switzerland            | 1.30         | 0.28   | 0.41   | 0.27   | 0.47        | 0.62   | 27.39       | 0.19        | 0.65   | 0.36   | 0.92                   | 0.34   | 0.13   | 1.48      | 0.31   |
| South Korea            | 1.28         | 0.92   | 0.66   | 1.88   | 1.35        | 1.20   | 0.20        | 77.42       | 1.12   | 0.84   | 0.24                   | 0.80   | 2.08   | 4.90      | 1.06   |
| Turkey                 | 2.24         | 0.01   | 0.06   | 0.03   | 0.10        | 0.30   | 0.27        | 0.01        | 68.82  | 0.06   | 3.42                   | 0.05   | 0.01   | 0.05      | 0.05   |
| U.S.A.                 | 15.69        | 1.88   | 35.67  | 26.24  | 4.94        | 2.11   | 5.50        | 2.65        | 1.27   | 74.23  | 0.30                   | 4.21   | 1.17   | 5.18      | 2.04   |
| Bosnia and Herzegovina | 0.00         | 0.00   | 0.00   | 0.00   | 0.00        | 0.01   | 0.01        | 0.00        | 0.00   | 0.00   | 23.83                  | 0.00   | 0.00   | 0.00      | 0.00   |
| Brazil                 | 0.13         | 0.07   | 0.17   | 0.85   | 0.08        | 0.07   | 0.33        | 0.11        | 0.11   | 0.30   | 0.04                   | 83.04  | 0.06   | 0.10      | 0.08   |
| China                  | 5.48         | 4.25   | 3.49   | 2.94   | 5.43        | 2.06   | 1.84        | 6.15        | 3.02   | 4.81   | 0.81                   | 2.55   | 82.61  | 51.29     | 4.10   |
| Hong Kong              | 2.10         | 0.68   | 0.60   | 0.37   | 1.23        | 0.29   | 1.09        | 0.69        | 0.21   | 0.91   | 0.03                   | 0.25   | 4.35   | 4.91      | 0.89   |
| India                  | 2.00         | 0.06   | 0.20   | 0.13   | 0.40        | 0.21   | 0.32        | 0.14        | 0.43   | 0.38   | 0.06                   | 0.22   | 0.08   | 1.83      | 80.01  |
| Iran                   | 0.00         | 0.01   | 0.00   | 0.00   | 0.00        | 0.01   | 0.02        | 0.04        | 0.16   | 0.00   | 0.02                   | 0.00   | 0.03   | 0.00      | 0.10   |
| Croatia                | 0.01         | 0.00   | 0.00   | 0.00   | 0.00        | 0.02   | 0.05        | 0.00        | 0.02   | 0.01   | 11.07                  | 0.00   | 0.00   | 0.00      | 0.00   |
| Malaysia               | 0.00         | 0.39   | 0.14   | 0.30   | 1.14        | 0.08   | 0.09        | 0.28        | 0.17   | 0.43   | 0.01                   | 0.09   | 0.29   | 2.00      | 0.36   |
| Russian Federation     | 0.63         | 0.10   | 0.02   | 0.09   | 0.01        | 0.31   | 1.97        | 0.11        | 1.35   | 0.10   | 0.12                   | 0.23   | 0.12   | 0.04      | 0.49   |
| Saudi Arabia           | 0.00         | 0.01   | 0.00   | 0.00   | 0.23        | 0.01   | 0.05        | 0.06        | 0.18   | 0.02   | 0.00                   | 0.01   | 0.04   | 0.13      | 0.15   |
| Serbia                 | 0.02         | 0.00   | 0.00   | 0.00   | 0.00        | 0.01   | 0.02        | 0.00        | 0.01   | 0.00   | 10.26                  | 0.00   | 0.00   | 0.00      | 0.00   |
| Singapore              | 0.67         | 0.54   | 0.39   | 0.29   | 1.89        | 0.06   | 0.31        | 1.22        | 0.09   | 0.46   | 0.00                   | 0.24   | 0.64   | 6.92      | 1.21   |
| South Africa           | 0.67         | 0.24   | 0.06   | 0.03   | 0.20        | 0.05   | 0.85        | 0.08        | 0.07   | 0.13   | 0.00                   | 0.07   | 0.04   | 0.11      | 0.12   |
| Taiwan                 | 0.92         | 0.75   | 0.62   | 1.26   | 1.15        | 0.54   | 0.32        | 1.10        | 0.50   | 0.70   | 0.26                   | 0.40   | 2.49   | 0.00      | 0.31   |
| Thailand               | 0.74         | 0.60   | 0.15   | 0.19   | 1.33        | 0.10   | 0.45        | 0.22        | 0.23   | 0.31   | 0.01                   | 0.15   | 0.29   | 2.30      | 0.40   |
| Ukraine                | 0.26         | 0.00   | 0.02   | 0.04   | 0.01        | 0.11   | 0.04        | 0.04        | 0.83   | 0.02   | 0.81                   | 0.05   | 0.01   | 0.01      | 0.11   |
| United Arab Emirates   | 0.00         | 0.03   | 0.01   | 0.00   | 0.11        | 0.01   | 0.30        | 0.01        | 0.06   | 0.02   | 0.02                   | 0.01   | 0.01   | 0.31      | 1.10   |
| Total                  | 100.00       | 100.00 | 100.00 | 100.00 | 100.00      | 100.00 | 100.00      | 100.00      | 100.00 | 100.00 | 100.00                 | 100.00 | 100.00 | 100.00    | 100.00 |
| Single export weights  | 0.16         | 0.76   | 0.79   | 0.33   | 0.08        | 0.56   | 4.69        | 0.51        | 0.77   | 4.71   | 0.28                   | 0.60   | 1.83   | 0.38      | 0.55   |

Source: OeNB/WIFO.

**Competition Matrix for Manufactured Goods Exports**

Market shares in %; calculated for the period from 2007 to 2009

| Competing countries    | Destinations |         |          |                    |              |        |           |              |        |          |         |                      |                   | Double export weights |
|------------------------|--------------|---------|----------|--------------------|--------------|--------|-----------|--------------|--------|----------|---------|----------------------|-------------------|-----------------------|
|                        | Iran         | Croatia | Malaysia | Russian Federation | Saudi Arabia | Serbia | Singapore | South Africa | Taiwan | Thailand | Ukraine | United Arab Emirates | Rest of the world |                       |
| Belgium                | 0.41         | 1.02    | 0.25     | 0.66               | 1.15         | 1.09   | 0.34      | 0.99         | 0.17   | 0.48     | 0.77    | 1.45                 | 1.57              | 3.04                  |
| Bulgaria               | 0.04         | 0.23    | 0.01     | 0.08               | 0.01         | 2.17   | 0.00      | 0.00         | 0.00   | 0.01     | 0.16    | 0.01                 | 0.13              | 0.38                  |
| Denmark                | 0.12         | 0.49    | 0.05     | 0.18               | 0.18         | 0.25   | 0.24      | 0.14         | 0.05   | 0.11     | 0.25    | 0.17                 | 0.86              | 0.70                  |
| Germany                | 4.44         | 12.95   | 3.19     | 6.57               | 5.99         | 10.67  | 3.55      | 6.30         | 1.87   | 1.85     | 7.40    | 5.49                 | 11.41             | 23.97                 |
| Estonia                | 0.00         | 0.01    | 0.00     | 0.26               | 0.01         | 0.01   | 0.00      | 0.00         | 0.00   | 0.00     | 0.13    | 0.01                 | 0.03              | 0.07                  |
| Finland                | 0.14         | 0.29    | 0.13     | 1.47               | 0.66         | 0.26   | 0.17      | 0.39         | 0.11   | 0.10     | 0.70    | 0.53                 | 0.73              | 0.79                  |
| France                 | 1.99         | 1.88    | 1.20     | 1.41               | 2.58         | 1.92   | 2.65      | 1.40         | 0.51   | 0.82     | 1.21    | 2.91                 | 4.88              | 5.59                  |
| Greece                 | 0.01         | 0.23    | 0.00     | 0.06               | 0.04         | 1.29   | 0.02      | 0.04         | 0.00   | 0.00     | 0.08    | 0.15                 | 0.21              | 0.41                  |
| United Kingdom         | 0.64         | 1.16    | 0.92     | 0.98               | 3.20         | 0.85   | 2.18      | 2.47         | 0.37   | 0.68     | 0.93    | 3.48                 | 2.04              | 3.57                  |
| Ireland                | 0.04         | 0.22    | 0.75     | 0.06               | 0.35         | 0.37   | 0.35      | 0.28         | 0.11   | 0.12     | 0.05    | 0.25                 | 0.24              | 0.69                  |
| Italy                  | 2.65         | 11.98   | 0.60     | 2.26               | 3.71         | 8.10   | 1.08      | 1.24         | 0.37   | 0.73     | 2.75    | 3.82                 | 4.96              | 8.23                  |
| Latvia                 | 0.00         | 0.01    | 0.00     | 0.10               | 0.00         | 0.01   | 0.00      | 0.00         | 0.00   | 0.00     | 0.11    | 0.00                 | 0.05              | 0.07                  |
| Lithuania              | 0.00         | 0.02    | 0.01     | 0.37               | 0.00         | 0.02   | 0.00      | 0.00         | 0.00   | 0.00     | 0.27    | 0.01                 | 0.15              | 0.13                  |
| Luxembourg             | 0.02         | 0.03    | 0.01     | 0.03               | 0.04         | 0.04   | 0.01      | 0.02         | 0.01   | 0.01     | 0.02    | 0.04                 | 0.05              | 0.16                  |
| Malta                  | 0.00         | 0.01    | 0.01     | 0.00               | 0.01         | 0.00   | 0.19      | 0.00         | 0.00   | 0.01     | 0.00    | 0.01                 | 0.02              | 0.02                  |
| Netherlands            | 0.46         | 1.80    | 0.36     | 1.12               | 1.43         | 1.91   | 1.05      | 1.09         | 0.57   | 0.52     | 1.41    | 1.49                 | 1.79              | 2.64                  |
| Poland                 | 0.11         | 1.44    | 0.09     | 1.15               | 0.20         | 1.05   | 0.06      | 0.21         | 0.03   | 0.05     | 5.02    | 0.31                 | 0.67              | 2.61                  |
| Portugal               | 0.03         | 0.06    | 0.24     | 0.03               | 0.07         | 0.04   | 0.41      | 0.05         | 0.01   | 0.01     | 0.03    | 0.05                 | 0.45              | 0.46                  |
| Romania                | 0.14         | 0.23    | 0.01     | 0.14               | 0.04         | 1.72   | 0.04      | 0.03         | 0.01   | 0.01     | 0.44    | 0.12                 | 0.30              | 1.15                  |
| Sweden                 | 0.44         | 0.68    | 0.29     | 0.56               | 0.89         | 0.85   | 0.46      | 0.65         | 0.11   | 0.21     | 0.59    | 0.36                 | 0.81              | 1.44                  |
| Slovakia               | 0.01         | 0.84    | 0.02     | 0.37               | 0.04         | 1.88   | 0.02      | 0.06         | 0.01   | 0.01     | 0.73    | 0.07                 | 0.32              | 1.13                  |
| Slovenia               | 0.06         | 6.65    | 0.01     | 0.18               | 0.02         | 4.87   | 0.01      | 0.02         | 0.00   | 0.01     | 0.32    | 0.04                 | 0.28              | 0.84                  |
| Spain                  | 0.54         | 1.06    | 0.21     | 0.46               | 1.01         | 0.80   | 0.28      | 0.60         | 0.11   | 0.21     | 0.41    | 0.77                 | 2.10              | 2.99                  |
| Czech Republic         | 0.04         | 1.99    | 0.04     | 0.58               | 0.16         | 1.94   | 0.07      | 0.21         | 0.02   | 0.05     | 1.25    | 0.37                 | 0.74              | 2.86                  |
| Hungary                | 0.03         | 3.29    | 0.03     | 0.57               | 0.23         | 4.31   | 0.10      | 0.21         | 0.01   | 0.03     | 1.75    | 0.40                 | 0.54              | 1.85                  |
| Cyprus                 | 0.01         | 0.00    | 0.00     | 0.00               | 0.01         | 0.06   | 0.00      | 0.00         | 0.00   | 0.00     | 0.01    | 0.01                 | 0.02              | 0.01                  |
| Australia              | 0.06         | 0.01    | 0.80     | 0.01               | 0.92         | 0.01   | 0.62      | 0.62         | 0.51   | 0.95     | 0.01    | 0.50                 | 0.53              | 0.51                  |
| Chile                  | 0.00         | 0.00    | 0.02     | 0.00               | 0.01         | 0.00   | 0.04      | 0.05         | 0.46   | 0.04     | 0.00    | 0.00                 | 0.43              | 0.13                  |
| Iceland                | 0.00         | 0.00    | 0.00     | 0.00               | 0.00         | 0.00   | 0.00      | 0.00         | 0.00   | 0.00     | 0.00    | 0.02                 | 0.00              | 0.03                  |
| Israel                 | 0.00         | 0.07    | 0.03     | 0.08               | 0.00         | 0.19   | 0.22      | 0.24         | 0.12   | 0.25     | 0.13    | 0.02                 | 0.42              | 0.26                  |
| Japan                  | 1.48         | 0.23    | 8.25     | 1.92               | 6.24         | 0.10   | 8.85      | 2.77         | 12.56  | 15.47    | 1.31    | 5.35                 | 6.87              | 2.57                  |
| Canada                 | 0.11         | 0.20    | 0.30     | 0.15               | 0.42         | 0.05   | 0.35      | 0.31         | 0.18   | 0.22     | 0.11    | 0.42                 | 0.63              | 0.78                  |
| Mexico                 | 0.01         | 0.01    | 0.06     | 0.02               | 0.11         | 0.01   | 0.15      | 0.10         | 0.06   | 0.07     | 0.01    | 0.06                 | 1.27              | 0.56                  |
| New Zealand            | 0.01         | 0.00    | 0.05     | 0.00               | 0.03         | 0.00   | 0.09      | 0.04         | 0.03   | 0.04     | 0.00    | 0.03                 | 0.09              | 0.07                  |
| Norway                 | 0.03         | 0.25    | 0.08     | 0.04               | 0.12         | 0.04   | 0.55      | 0.05         | 0.03   | 0.03     | 0.03    | 0.20                 | 0.23              | 0.50                  |
| Switzerland            | 0.55         | 0.96    | 0.32     | 0.44               | 1.26         | 1.15   | 0.98      | 0.46         | 0.41   | 0.57     | 0.49    | 1.33                 | 1.36              | 2.55                  |
| South Korea            | 3.61         | 0.44    | 3.21     | 1.34               | 4.07         | 0.26   | 5.62      | 0.92         | 3.49   | 2.97     | 1.39    | 2.90                 | 5.65              | 1.68                  |
| Turkey                 | 1.51         | 0.92    | 0.04     | 0.72               | 1.27         | 2.98   | 0.11      | 0.18         | 0.02   | 0.04     | 1.40    | 2.44                 | 2.21              | 1.35                  |
| U.S.A.                 | 0.07         | 0.56    | 6.34     | 1.05               | 9.34         | 0.56   | 11.28     | 3.21         | 5.86   | 3.89     | 1.03    | 7.01                 | 9.64              | 6.82                  |
| Bosnia and Herzegovina | 0.00         | 1.93    | 0.00     | 0.00               | 0.00         | 1.63   | 0.00      | 0.00         | 0.00   | 0.00     | 0.01    | 0.00                 | 0.04              | 0.14                  |
| Brazil                 | 0.16         | 0.03    | 0.12     | 0.06               | 0.32         | 0.02   | 0.37      | 0.75         | 0.19   | 0.30     | 0.07    | 0.32                 | 3.09              | 0.88                  |
| China                  | 7.30         | 5.54    | 11.46    | 4.77               | 8.57         | 1.98   | 14.81     | 5.37         | 7.04   | 8.14     | 6.26    | 12.62                | 15.11             | 6.16                  |
| Hong Kong              | 0.09         | 0.18    | 1.89     | 0.17               | 0.48         | 0.12   | 3.24      | 0.52         | 2.01   | 2.32     | 0.21    | 1.70                 | 1.54              | 0.81                  |
| India                  | 0.90         | 0.22    | 1.08     | 0.14               | 2.00         | 0.06   | 1.77      | 0.85         | 0.18   | 0.87     | 0.35    | 8.74                 | 2.15              | 0.96                  |
| Iran                   | 61.63        | 0.01    | 0.04     | 0.02               | 0.31         | 0.02   | 0.02      | 0.01         | 0.00   | 0.09     | 0.03    | 0.23                 | 0.43              | 0.25                  |
| Croatia                | 0.00         | 37.71   | 0.00     | 0.03               | 0.01         | 2.45   | 0.04      | 0.03         | 0.00   | 0.00     | 0.05    | 0.02                 | 0.15              | 0.63                  |
| Malaysia               | 0.29         | 0.07    | 31.86    | 0.07               | 0.63         | 0.03   | 8.78      | 0.31         | 0.94   | 4.17     | 0.08    | 1.75                 | 1.14              | 0.42                  |
| Russian Federation     | 2.43         | 0.16    | 0.11     | 66.95              | 0.17         | 1.51   | 0.06      | 0.01         | 0.24   | 0.35     | 8.19    | 0.16                 | 1.63              | 2.22                  |
| Saudi Arabia           | 0.31         | 0.00    | 0.09     | 0.00               | 37.44        | 0.00   | 0.68      | 0.17         | 1.95   | 0.25     | 0.01    | 2.63                 | 0.03              | 0.22                  |
| Serbia                 | 0.03         | 1.05    | 0.00     | 0.07               | 0.01         | 39.18  | 0.00      | 0.00         | 0.00   | 0.00     | 0.11    | 0.01                 | 0.14              | 0.32                  |
| Singapore              | 0.34         | 0.03    | 17.46    | 0.07               | 0.68         | 0.00   | 17.90     | 0.30         | 2.64   | 6.74     | 0.09    | 2.14                 | 3.90              | 0.72                  |
| South Africa           | 0.12         | 0.01    | 0.15     | 0.01               | 0.22         | 0.01   | 0.13      | 64.82        | 0.21   | 0.17     | 0.01    | 0.34                 | 0.96              | 0.57                  |
| Taiwan                 | 0.00         | 0.46    | 3.93     | 0.25               | 0.40         | 0.26   | 6.38      | 0.64         | 55.64  | 3.34     | 0.17    | 0.67                 | 0.01              | 0.70                  |
| Thailand               | 0.52         | 0.08    | 3.81     | 0.08               | 1.40         | 0.01   | 3.33      | 0.72         | 0.71   | 42.41    | 0.13    | 1.46                 | 2.13              | 0.48                  |
| Ukraine                | 0.43         | 0.29    | 0.01     | 1.80               | 0.16         | 0.88   | 0.14      | 0.01         | 0.02   | 0.14     | 51.20   | 0.35                 | 1.09              | 0.62                  |
| United Arab Emirates   | 5.65         | 0.01    | 0.06     | 0.07               | 1.35         | 0.02   | 0.19      | 0.11         | 0.02   | 0.16     | 0.34    | 24.27                | 1.78              | 0.31                  |
| Total                  | 100.00       | 100.00  | 100.00   | 100.00             | 100.00       | 100.00 | 100.00    | 100.00       | 100.00 | 100.00   | 100.00  | 100.00               | 100.00            | 100.00                |
| Single export weights  | 0.32         | 1.25    | 0.27     | 2.48               | 0.44         | 0.50   | 0.30      | 0.50         | 0.22   | 0.17     | 0.68    | 0.49                 | 6.46              | 100.00                |

Source: OeNB/WIFO.

Table A3

## Comparison of the Weights for Manufactured Goods across Different Calculation Periods

| Competing countries    | 1998 to 2000                      |                                   |                  |        | 2001 to 2003                      |                                   |                  |        | 2004 to 2006                      |                                   |                  |        | 2007 to 2009                                    |                                   |                  |        |
|------------------------|-----------------------------------|-----------------------------------|------------------|--------|-----------------------------------|-----------------------------------|------------------|--------|-----------------------------------|-----------------------------------|------------------|--------|---|-----------------------------------|------------------|--------|
|                        | Austrian exports (single weights) | Austrian exports (double weights) | Austrian imports | Total  | Austrian exports (single weights) | Austrian exports (double weights) | Austrian imports | Total  | Austrian exports (single weights) | Austrian exports (double weights) | Austrian imports | Total  | Austrian exports (single weights <sup>1</sup> ) | Austrian exports (double weights) | Austrian imports | Total  |
|                        | %                                 |                                   |                  |        |                                   |                                   |                  |        |                                   |                                   |                  |        |   |                                   |                  |        |
| Belgium                | 1.82                              | 2.77                              | 2.21             | 2.48   | 1.72                              | 2.88                              | 1.89             | 2.38   | 1.73                              | 2.96                              | 1.71             | 2.35   | 1.67  | 3.04                              | 1.79             | 2.43   |
| Bulgaria               | 0.34                              | 0.19                              | 0.11             | 0.15   | 0.38                              | 0.20                              | 0.17             | 0.18   | 0.52                              | 0.28                              | 0.28             | 0.28   | 0.68  | 0.38                              | 0.29             | 0.34   |
| Denmark                | 0.86                              | 0.80                              | 0.64             | 0.72   | 0.77                              | 0.76                              | 0.59             | 0.68   | 0.74                              | 0.69                              | 0.55             | 0.63   | 0.73  | 0.70                              | 0.48             | 0.59   |
| Germany                | 36.82                             | 29.95                             | 43.28            | 36.86  | 33.43                             | 27.23                             | 42.28            | 34.85  | 31.93                             | 25.25                             | 43.07            | 33.89  | 31.65   | 23.97                             | 42.72            | 33.00  |
| Estonia                | 0.05                              | 0.04                              | 0.03             | 0.03   | 0.08                              | 0.06                              | 0.03             | 0.04   | 0.18                              | 0.09                              | 0.03             | 0.06   | 0.11  | 0.07                              | 0.03             | 0.05   |
| Finland                | 0.62                              | 0.91                              | 1.12             | 1.02   | 0.59                              | 0.86                              | 1.11             | 0.99   | 0.58                              | 0.81                              | 1.06             | 0.93   | 0.57  | 0.79                              | 0.60             | 0.70   |
| France                 | 4.75                              | 6.61                              | 5.22             | 5.89   | 4.69                              | 6.52                              | 4.23             | 5.36   | 4.12                              | 5.87                              | 4.17             | 5.04   | 4.07  | 5.59                              | 3.59             | 4.63   |
| Greece                 | 0.45                              | 0.34                              | 0.15             | 0.24   | 0.59                              | 0.41                              | 0.13             | 0.27   | 0.52                              | 0.38                              | 0.12             | 0.25   | 0.58  | 0.41                              | 0.10             | 0.26   |
| United Kingdom         | 4.71                              | 5.47                              | 3.37             | 4.38   | 4.95                              | 5.16                              | 2.67             | 3.90   | 4.43                              | 4.51                              | 2.28             | 3.43   | 3.57  | 3.57                              | 2.16             | 2.89   |
| Ireland                | 0.32                              | 0.82                              | 0.75             | 0.78   | 0.31                              | 0.90                              | 1.27             | 1.08   | 0.48                              | 0.80                              | 0.86             | 0.83   | 0.26  | 0.69                              | 0.54             | 0.62   |
| Italy                  | 6.85                              | 8.74                              | 7.80             | 8.25   | 6.93                              | 8.83                              | 7.22             | 8.02   | 7.15                              | 8.60                              | 7.07             | 7.85   | 6.80  | 8.23                              | 7.08             | 7.67   |
| Latvia                 | 0.06                              | 0.03                              | 0.02             | 0.03   | 0.10                              | 0.05                              | 0.03             | 0.04   | 0.13                              | 0.07                              | 0.02             | 0.05   | 0.15  | 0.07                              | 0.02             | 0.05   |
| Lithuania              | 0.08                              | 0.06                              | 0.04             | 0.05   | 0.11                              | 0.09                              | 0.04             | 0.06   | 0.15                              | 0.12                              | 0.04             | 0.08   | 0.14  | 0.13                              | 0.05             | 0.09   |
| Luxembourg             | 0.20                              | 0.18                              | 0.17             | 0.18   | 0.19                              | 0.18                              | 0.17             | 0.17   | 0.23                              | 0.19                              | 0.23             | 0.21   | 0.13  | 0.16                              | 0.17             | 0.17   |
| Malta                  | 0.02                              | 0.02                              | 0.01             | 0.02   | 0.02                              | 0.02                              | 0.01             | 0.02   | 0.11                              | 0.02                              | 0.01             | 0.02   | 0.03  | 0.02                              | 0.02             | 0.02   |
| Netherlands            | 2.45                              | 2.40                              | 2.95             | 2.68   | 2.26                              | 2.46                              | 2.78             | 2.62   | 1.83                              | 2.52                              | 2.74             | 2.62   | 1.78  | 2.64                              | 2.72             | 2.68   |
| Poland                 | 1.69                              | 1.61                              | 0.76             | 1.17   | 1.80                              | 1.82                              | 0.96             | 1.39   | 2.24                              | 2.21                              | 1.12             | 1.68   | 2.86  | 2.61                              | 1.35             | 2.00   |
| Portugal               | 0.49                              | 0.58                              | 0.56             | 0.57   | 0.50                              | 0.57                              | 0.61             | 0.59   | 0.45                              | 0.48                              | 0.49             | 0.48   | 0.41  | 0.46                              | 0.37             | 0.42   |
| Romania                | 0.68                              | 0.50                              | 0.42             | 0.46   | 1.24                              | 0.69                              | 0.74             | 0.72   | 1.79                              | 0.96                              | 0.94             | 0.95   | 2.04  | 1.15                              | 0.72             | 0.95   |
| Sweden                 | 1.22                              | 1.58                              | 1.49             | 1.53   | 1.12                              | 1.44                              | 1.42             | 1.43   | 1.10                              | 1.42                              | 1.46             | 1.44   | 1.21  | 1.44                              | 1.44             | 1.44   |
| Slovakia               | 1.11                              | 0.78                              | 1.07             | 0.93   | 1.45                              | 0.90                              | 1.46             | 1.18   | 1.67                              | 1.00                              | 1.46             | 1.22   | 1.87  | 1.13                              | 1.64             | 1.38   |
| Slovenia               | 1.68                              | 0.93                              | 1.00             | 0.97   | 1.74                              | 0.98                              | 1.19             | 1.09   | 1.79                              | 0.89                              | 1.19             | 1.04   | 1.90  | 0.84                              | 1.10             | 0.96   |
| Spain                  | 3.06                              | 3.15                              | 1.41             | 2.25   | 2.87                              | 3.15                              | 1.53             | 2.33   | 2.99                              | 3.15                              | 1.57             | 2.38   | 2.73  | 2.99                              | 1.63             | 2.33   |
| Czech Republic         | 2.78                              | 2.14                              | 2.13             | 2.14   | 3.12                              | 2.39                              | 2.72             | 2.56   | 3.22                              | 2.63                              | 3.11             | 2.86   | 3.63  | 2.86                              | 3.31             | 3.08   |
| Hungary                | 4.93                              | 2.50                              | 3.02             | 2.77   | 4.46                              | 2.22                              | 3.24             | 2.74   | 3.62                              | 1.93                              | 2.38             | 2.15   | 3.25  | 1.85                              | 2.21             | 2.02   |
| Cyprus                 | 0.05                              | 0.02                              | 0.00             | 0.01   | 0.09                              | 0.02                              | 0.00             | 0.01   | 0.04                              | 0.01                              | 0.01             | 0.01   | 0.06  | 0.01                              | 0.02             | 0.02   |
| Australia              | 0.50                              | 0.41                              | 0.03             | 0.22   | 0.54                              | 0.44                              | 0.05             | 0.24   | 0.67                              | 0.52                              | 0.07             | 0.30   | 0.70  | 0.51                              | 0.06             | 0.29   |
| Chile                  | 0.05                              | 0.07                              | 0.01             | 0.04   | 0.05                              | 0.07                              | 0.01             | 0.04   | 0.08                              | 0.11                              | 0.01             | 0.06   | 0.10  | 0.13                              | 0.01             | 0.07   |
| Iceland                | 0.03                              | 0.03                              | 0.02             | 0.02   | 0.02                              | 0.02                              | 0.01             | 0.02   | 0.04                              | 0.03                              | 0.00             | 0.02   | 0.03  | 0.03                              | 0.01             | 0.02   |
| Israel                 | 0.23                              | 0.29                              | 0.15             | 0.22   | 0.17                              | 0.26                              | 0.12             | 0.19   | 0.13                              | 0.23                              | 0.09             | 0.16   | 0.18  | 0.26                              | 0.09             | 0.18   |
| Japan                  | 1.03                              | 3.14                              | 2.97             | 3.05   | 1.02                              | 2.88                              | 2.66             | 2.77   | 1.07                              | 2.87                              | 2.52             | 2.70   | 0.82  | 2.57                              | 2.05             | 2.32   |
| Canada                 | 0.76                              | 0.68                              | 0.55             | 0.61   | 0.85                              | 0.78                              | 0.47             | 0.62   | 1.00                              | 0.91                              | 0.43             | 0.68   | 0.85  | 0.78                              | 0.45             | 0.62   |
| Mexico                 | 0.23                              | 0.41                              | 0.14             | 0.27   | 0.21                              | 0.44                              | 0.19             | 0.31   | 0.24                              | 0.49                              | 0.16             | 0.33   | 0.35  | 0.56                              | 0.19             | 0.38   |
| New Zealand            | 0.07                              | 0.05                              | 0.01             | 0.03   | 0.08                              | 0.06                              | 0.01             | 0.04   | 0.09                              | 0.07                              | 0.02             | 0.05   | 0.08  | 0.07                              | 0.03             | 0.05   |
| Norway                 | 0.47                              | 0.44                              | 0.15             | 0.29   | 0.40                              | 0.40                              | 0.12             | 0.26   | 0.42                              | 0.41                              | 0.18             | 0.30   | 0.60  | 0.50                              | 0.19             | 0.35   |
| Switzerland            | 6.24                              | 3.68                              | 3.39             | 3.53   | 6.04                              | 3.34                              | 3.61             | 3.47   | 5.26                              | 2.72                              | 3.69             | 3.19   | 5.01  | 2.55                              | 4.25             | 3.37   |
| South Korea            | 0.34                              | 0.96                              | 0.51             | 0.73   | 0.41                              | 1.12                              | 0.73             | 0.92   | 0.49                              | 1.44                              | 1.02             | 1.24   | 0.54  | 1.68                              | 0.65             | 1.19   |
| Turkey                 | 0.78                              | 0.94                              | 0.54             | 0.73   | 0.73                              | 1.01                              | 0.78             | 0.89   | 0.86                              | 1.23                              | 0.88             | 1.06   | 0.83  | 1.35                              | 0.86             | 1.11   |
| U.S.A.                 | 4.93                              | 7.32                              | 6.86             | 7.08   | 5.71                              | 7.67                              | 6.72             | 7.19   | 6.28                              | 7.63                              | 5.60             | 6.65   | 5.04  | 6.82                              | 6.11             | 6.48   |
| Bosnia and Herzegovina | –                                 | –                                 | –                | –      | 0.21                              | 0.10                              | 0.04             | 0.07   | 0.24                              | 0.12                              | 0.12             | 0.12   | 0.30  | 0.14                              | 0.19             | 0.17   |
| Brazil                 | 0.42                              | 0.55                              | 0.13             | 0.33   | 0.31                              | 0.46                              | 0.10             | 0.28   | 0.30                              | 0.58                              | 0.18             | 0.39   | 0.64  | 0.88                              | 0.18             | 0.55   |
| China                  | 0.74                              | 1.71                              | 1.66             | 1.68   | 1.41                              | 2.99                              | 2.26             | 2.62   | 1.42                              | 4.27                              | 3.65             | 3.97   | 1.96  | 6.16                              | 4.99             | 5.60   |
| Hong Kong              | 0.57                              | 0.88                              | 0.34             | 0.60   | 0.70                              | 0.88                              | 0.34             | 0.61   | 0.52                              | 0.83                              | 0.21             | 0.53   | 0.41  | 0.81                              | 0.15             | 0.50   |
| India                  | 0.17                              | 0.38                              | 0.24             | 0.30   | 0.22                              | 0.48                              | 0.27             | 0.37   | 0.37                              | 0.67                              | 0.34             | 0.51   | 0.59  | 0.96                              | 0.43             | 0.71   |
| Iran                   | 0.32                              | 0.30                              | 0.03             | 0.16   | 0.37                              | 0.30                              | 0.02             | 0.16   | 0.37                              | 0.27                              | 0.02             | 0.14   | 0.34  | 0.25                              | 0.01             | 0.13   |
| Croatia                | 0.98                              | 0.51                              | 0.34             | 0.42   | 1.26                              | 0.62                              | 0.50             | 0.56   | 1.35                              | 0.66                              | 0.65             | 0.65   | 1.34  | 0.63                              | 0.61             | 0.62   |
| Malaysia               | 0.13                              | 0.35                              | 0.31             | 0.33   | 0.13                              | 0.37                              | 0.62             | 0.50   | 0.25                              | 0.43                              | 0.33             | 0.38   | 0.28  | 0.42                              | 0.25             | 0.34   |
| Russian Federation     | 0.92                              | 1.03                              | 0.29             | 0.64   | 1.45                              | 1.35                              | 0.28             | 0.81   | 2.08                              | 1.95                              | 0.27             | 1.13   | 2.65  | 2.22                              | 0.31             | 1.30   |
| Saudi Arabia           | 0.27                              | 0.17                              | 0.01             | 0.09   | 0.25                              | 0.18                              | 0.01             | 0.10   | 0.36                              | 0.26                              | 0.01             | 0.14   | 0.47  | 0.22                              | 0.02             | 0.12   |
| Serbia                 | –                                 | –                                 | –                | –      | –                                 | –                                 | –                | –      | 0.17                              | 0.16                              | 0.05             | 0.11   | 0.53  | 0.32                              | 0.22             | 0.27   |
| Singapore              | 0.28                              | 0.54                              | 0.20             | 0.37   | 0.29                              | 0.61                              | 0.27             | 0.44   | 0.27                              | 0.75                              | 0.17             | 0.47   | 0.32  | 0.72                              | 0.13             | 0.43   |
| South Africa           | 0.38                              | 0.41                              | 0.07             | 0.23   | 0.47                              | 0.50                              | 0.07             | 0.28   | 0.56                              | 0.59                              | 0.10             | 0.35   | 0.53  | 0.57                              | 0.10             | 0.34   |
| Taiwan                 | 0.37                              | 0.90                              | 0.94             | 0.92   | 0.31                              | 0.84                              | 0.82             | 0.83   | 0.33                              | 0.78                              | 0.70             | 0.74   | 0.23  | 0.70                              | 0.63             | 0.66   |
| Thailand               | 0.20                              | 0.31                              | 0.26             | 0.28   | 0.15                              | 0.35                              | 0.28             | 0.32   | 0.15                              | 0.39                              | 0.37             | 0.38   | 0.18  | 0.48                              | 0.41             | 0.45   |
| Ukraine                | 0.29                              | 0.32                              | 0.12             | 0.22   | 0.41                              | 0.43                              | 0.17             | 0.30   | 0.55                              | 0.54                              | 0.20             | 0.37   | 0.72  | 0.62                              | 0.21             | 0.42   |
| United Arab Emirates   | 0.22                              | 0.10                              | 0.01             | 0.05   | 0.32                              | 0.23                              | 0.01             | 0.12   | 0.34                              | 0.24                              | 0.03             | 0.14   | 0.52  | 0.31                              | 0.02             | 0.17   |
| Total                  | 100.00                            | 100.00                            | 100.00           | 100.00 | 100.00                            | 100.00                            | 100.00           | 100.00 | 100.00                            | 100.00                            | 100.00           | 100.00 | 100.00  | 100.00                            | 100.00           | 100.00 |

Source: OeNB/WIFO.

<sup>1</sup> The single export weight measures for the 2007 to 2009 period given in table A3 do not match the respective figures in table A2 as the figures in table A3 do not include the share of exports to the rest of the world because it is not possible to calculate double weights for the latter.