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## Potential Markets for Austrian Exports

**Even though trade with the Central and Eastern European countries has been substantially intensified, Austrian exports still concentrate chiefly on Western Europe. Yet in order to more fully exploit their export potential Austrian exporters would be wise to extend their efforts to dynamic countries outside Austria's traditional markets. Based on an analysis of 81 countries outside Western Europe, WIFO has identified a major export potential, especially regarding the new EU member states among the CEECs, the Balkans and, for some sectors, parts of Latin America, North America, the Near and Far East.**

This article summarises key findings of a WIFO study: Yvonne Wolfmayr, Jan Stankovsky, *Interessante Absatzmärkte und Exportpotentiale für die österreichische Industrie*, commissioned by Oesterreichische Kontrollbank AG (project co-ordination: Yvonne Wolfmayr, December 2003, 214 pages, € 70.00, Download € 56.00: [http://publikationen.wifo.ac.at/pls/wifosite/wifosite.wifo\\_search.get\\_abstract\\_type?p\\_language=1&pubid=24851](http://publikationen.wifo.ac.at/pls/wifosite/wifosite.wifo_search.get_abstract_type?p_language=1&pubid=24851)) • Jan Stankovsky and Yvonne Wolfmayr are economists at WIFO. The authors are grateful to Fritz Breuss and Markus Marterbauer for useful and constructive comments. The data were processed and analysed with the assistance of Irene Langer • E-mail address: [Yvonne.Wolfmayr@wifo.ac.at](mailto:Yvonne.Wolfmayr@wifo.ac.at) • JEL Code: F14, F13, F17

Over the past decade, Austria's foreign trade has presented a predominately favourable picture: between 1993 and 2003, exports grew by an average of 8.7 per cent per year, more than doubling over the period (+131 percent). At a growth of 6.9 percent p.a., imports went up at a slightly less dynamic rate (a plus of altogether 94.5 percent). Viewing the trade balances from a long-term perspective, we find a sustained trend towards improvement, with the deficit down from € -7.1 billion to € -1.4 billion, i.e., a decline from -4.5 percent of GDP to just -0.6 percent.

In spite of this beneficial overall development, Austria's international trade is still characterised by two structural weaknesses: too strong a concentration of exports into Europe, and in particular the German market, and too much specialisation on sectors of medium to low tech level. In both areas, an improvement was observed but there are still plenty of margins for raising exports and improving competitiveness.

The structure of a country's national production capacities impacts directly on its competitiveness – in the long term, competitiveness can be sustained and boosted only through a structural change towards more advanced, innovative and technologically sophisticated products. Even though such a structural change is taking place in Austria, its economy is still lagging behind the EU countries chosen as a "benchmark" (Hutschenreiter – Peneder, 1997, Peneder, 2002, Wolfmayr, 2004B).

Economic policy can encourage this process of restructuring, mainly by offering an efficient research and technology policy, because the gap between technological development levels is a key source for achieving a national competitive edge. However, it is difficult to identify "growth sectors" because productive decisions can take place solely at the individual company level – experience has shown that political recommendations rarely benefit affected companies, much less the economy as such. What's more, a "sectoral industrial policy" would be difficult to reconcile with the EU's principles of economic promotion.

Apart from responding to the need for improving the sectoral structure of exports, refocusing the regional export structure onto dynamic markets of great potential would be an option to make better use of the Austrian export potential. A regional approach offers an advantage in that economic policy measures generally succeed more easily and more quickly than does an adjustment of the goods structure which requires a long-term approach in terms of human capital as well as R&D.

*Further gains in export market share appear to be within range only if technological competitiveness is strengthened and exports are more regionally diversified by directing exporters' attention to promising new markets.*

Throughout the 1990s, with the CEECs integrating in the international economy, there were distinct signs that Austrian foreign trade was re-orienting itself: its fixation on Western Europe waned, but Austrian manufacturers continued to play a substantially lesser role in some of the key prospective overseas markets (such as the Far East) than comparable small-scale industrialised countries in Western Europe (Egger – Stankovsky, 1998). In 2003, fully 59.5 percent of Austrian exports went to the EU 15, more than half of them (31.9 percent) to Germany. With the rest of Western Europe weighing in at 6.8 percent and the CEECs at 16.1 percent, just 17.6 percent of sales went to buyers outside Europe; of this, one third each was sold to the USA and the Far East (including Japan and China), respectively. Latin American countries were of marginal importance only.

WIFO examined the opportunities for Austrian exporters to focus on markets outside Western Europe which, subject to intense marketing efforts, promise above-average success rates (Wolfmayr – Stankovsky, 2003). This approach is based on the premise that synergy effects can be achieved by bundling Austrian supply and aiming the available range of export promotion and market development tools specifically at promising markets. This applies to all aspects that can be shared by exporters, including infrastructural facilities (foreign trade organisations, consulting from banks and other financial services, etc.), as well as co-operation at the enterprise level, the joint organisation of staff training activities or the sharing of fixed costs that arise from setting up representative offices abroad. Synergy effects can be found not just through the number of companies and co-operations in a given country, but also with regard to the business volume of a given enterprise: the greater the number and amount of sales contracts, the more will the yield per input unit (return to scales) rise, due to the business management knowledge obtained but also in terms of fixed costs arising from the establishment of distribution networks and advertising activities.

Accordingly, a given input of export promotion funds should achieve the maximum possible success for Austrian exports in the short to medium run. In view of the limited resources available to Austrian business, it is advisable to keep to a reasonable number of selected focus markets. 81 countries outside Western Europe, each of them of a minimum economic size, were examined for their suitability as focus markets for Austrian exports. The analysis was restricted to exports of industrial goods and did not cover opportunities for exports of services or agricultural goods<sup>1</sup>.

The focus countries were selected on the basis of findings from four analytical steps:

- selection of countries based on market size, demand dynamics and matching between Austrian supply and demand in the potential export markets (structural matching),
- evaluation of a business survey on key export obstacles and interesting markets,
- calculation of export potentials based on econometric estimations of a gravity model for Austrian exports,
- analysis of the market position held by Austrian companies in the sales markets.

In a first step, two analytical indicators were combined: a structural match index and a demand index (for their calculation see the boxes "Structural Match Index" and "Demand Index"). The structural match index compares the goods structure on the export supply side with the demand structure in the potential export markets, thus pointing out short-term export opportunities because it starts out from the current production and export potential in Austria. The demand index, on the other hand, identifies dynamic markets. The countries thus obtained therefore meet both criteria: "high growth potential" and "export opportunities", i.e., excellent structural match.

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## The selection method

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### Structural match and demand acting as selection criteria

<sup>1</sup> A comparable analysis of the trade in services is very difficult to perform, in view of the incomplete and deficient statistical data available.

### Structural Match Index

Provided that compatibility in terms of price and technology is present, Austrian exporters will as a rule be successful in all those countries that import a large volume of such goods as are produced in and exported from Austria. The export goods structure mirrors the revealed comparative advantages. Consequently, comparing the Austrian export structure with the import structure of potential sales markets will provide indications which countries offer good prerequisites to realise existing competitive advantages enjoyed by Austria. This approach applies especially in the short to medium view, such as this study concentrates on. In the longer term, export successes can be expected when Austrian producers improve their technological and price edge: they need to constantly bring up their supply to changes in demand, develop new products and improve their product quality.

The match between the goods structure of Austrian exports and that of imports by the partner country is measured using a structural match index. This index is calculated by measuring the angle between two vectors. For each partner country, a vector of industrial goods imports<sup>1</sup> ( $m_{jk}$ ) is constructed, and the angle to the vector of Austrian exports ( $x_{ji}$ ) is calculated by the following formula:

$$c_{jk} = \arccos \frac{\sum_{j=1}^n x_{ji} m_{jk}}{\sqrt{\sum_{j=1}^n x_{ji}^2} \sqrt{\sum_{j=1}^n m_{jk}^2}},$$

$i$  . . . exporting country (Austria),  $j$  . . . goods classes ( $n = 166$ ),  $k$  . . . partner country,  $x$  . . . exports,  $m$  . . . imports. The index provides no information on the similarity of structures, but rather on the degree of dissimilarity between countries. The question of whether, e.g., China's import structure is more similar to the Austrian export structure than is India's can be answered by the measure used.

The lower the index value, the better will the structure of import demand in the partner country match the Austrian export supply. If the goods structure of Austrian exports matches the foreign import structure, the index value is 0; but if Austria exports only types of goods that are not imported by the partner country, the index value is 100. A full match naturally does not mean that the buyer country would take all of its imports from Austria: rather than showing the actual match of the two countries' bilateral trade structures, the structural match index only indicates an "export potential".

<sup>1</sup> Three-digit SITC numbers for groups 5 to 8, altogether 166 groups.

Supplementary to selecting countries along the lines of their demand dynamism and structural match, a survey was organised among Austrian industries to identify the chief factors that promote and inhibit trade with newly developed markets, as well as those markets that, in the companies' view, showed the greatest promise<sup>2</sup>. The enterprises named the countries for which they had concrete export development plans and listed three markets which, for them, were the most interesting markets not yet considered for export.

Taking the selection of potential destinations by objective criteria (demand index and structural match), the survey compares this choice with the subjective view of companies, thus illuminating the extent to which enterprises are likely to be willing to develop markets, as well as other potential focus countries.

The importance of the factors that inhibit or promote trade as named by the companies needs to be seen either in terms of the destination country (geographical distance, customs regime, legal uncertainty, etc.) or the surveyed company itself (small-scale structure, etc.). These factors supplement the spectrum of indicators encompassed by the structural match index and demand index.

<sup>2</sup> For detailed data on this survey see Wolfmayr (2004A).

### Survey of export motivations and obstacles

### Demand Index

Serving as a parameter for the demand potential, the demand index accounts for both the level and the dynamism of demand. It is made up of the following seven macroeconomic parameters for export destinations:

*Parameters for the demand level ("market size"):*

- gross domestic product in 2000, at 1995 prices, in million US\$ (real GDP);
- gross domestic product in 2000, at 1995 prices, per capita in US\$ (real per capita GDP);
- nominal goods imports in 2000, in million US\$;
- population in 2000, in million heads.

*Parameters for demand dynamism:*

- GDP growth rate<sup>1</sup> in 1993-2000, real, at 1995 prices;
- GDP growth rate<sup>1</sup> in 1993-2000, real, per capita, at 1995 prices;
- growth rate<sup>1</sup> of imports of goods and services in 1993-2000, real, at 1995 prices.

Emulating a former WIFO study (Url, 1991), the demand index was calculated from standardised values by way of the Euclidian distance measure<sup>2</sup>:

$$e_{ij} = \sqrt{\sum_{j=1}^n (x_{ji} - x_{jk})^2},$$

$i \dots$  country,  $x_j \dots$  macroeconomic parameter ( $n = 7$ ),  $k \dots$  reference country.

For use as reference country, the country with the lowest value is taken for each parameter  $x_j$ . Where the attribute of the characteristic is identical with the value of the reference country  $k$ , we find the maximum possible similarity and the Euclidian distance equals zero. The more distant a combination of characteristics for a given country is from the reference country, the greater will be the distance measure. In this way, the relative distance of a country in all parameters is transferred to the overall index. Thus, a country having a relatively low per-capita GDP may make up for this disadvantage by a relatively high value for economic growth.

While level factors (demand size, e.g., per-capita GDP) usually remain relatively constant even in the medium term, information on the dynamics tend to be uncertain and differ considerably between countries. Considering that no uniform and reliable mid- and long-term forecasts are available for all countries studied, the demand index is based on dynamic growth data from the recent past (1990s), assuming that the underlying economic and political structures have since been stable.

<sup>1</sup> Average year-to-year percentage change 1993-2000; the period of 1993-2000 was weighted at 70 percent. – <sup>2</sup> Measure for similarities in an overall structure, described by a large number of characteristics.

To round off the selection of focus countries, a panel-based econometric analysis (gravity model) was used to identify a pattern to explain Austrian exports. The model is not limited to the macroeconomic demand indicators but takes several more factors into account. The gravity model used for estimation had fixed import country effects at an aggregate level and sector level (see box "The Gravity Model"). The fixed import country effects measure the characteristics of a given country that may affect the volume of Austrian exports, including geographical distance, shared borders, cultural affinity, historical relationships, country-specific customs regime, as well as non-observable factors: after all, the degree to which Austrian companies are able to exploit opportunities offered by booming destination markets or whether they will export at all will, not least, depend on their personal initiative and networking capabilities. A model of country effects therefore needs to cover both observable and non-observable differences between import countries and account for them in estimating the export volume.

### Econometric estimation of export potentials

### The Gravity Model

The gravity model traces bilateral trade linkages between countries in terms of their respective national GDP (or population) and a number of factors that inhibit or stimulate trade. Among the inhibiting factors are, chiefly, the (distance-dependent) costs of transport and communication; the stimulating factors include cultural affinity, a common language, historical relationships and membership in regional free trade zones. Using a country-specific approach for Austrian exports, we obtain the following specification for the gravity model:

$$(1) \quad \ln EX_{ijt} = \beta_0 + \beta_1 \ln \left( \frac{GDP}{K} \right)_{jt} + \beta_2 \ln BEV_{jt} - \beta_3 \ln DIST_{ij} + \sum_k \beta^k D_{ijk} + v_{ijt},$$

$EX$ ... exports,  $\beta_0$ ... constant,  $\left( \frac{GDP}{K} \right)$ ... per-capita income,  $BEV$ ... population,  $DIST$ ... geographical distance,  $D$ ... dummy for the  $k$ -th factor promoting or inhibiting trade,  $v$ ... error term,  $i$ ... exporting country (Austria),  $j$ ... importing country,  $k$ ... factors promoting or inhibiting trade,  $t$ ... time.

The specific structure of the data (two-dimensional panel varying over both time and import countries) makes it possible to specify a model with fixed import country effects, such as is preferable also from an econometric point of view (Mátyás, 1997, Egger, 1999, 2001):

$$(2) \quad \ln EX_{ijt} = \beta_0 + \lambda_j + \beta_1 \ln \left( \frac{GDP}{K} \right)_{jt} + \beta_2 \ln BEV_{jt} + v_{ijt},$$

$\lambda_j$ ... fixed (time-invariant) import country effects.

The fixed import country effects measure all observable and non-observable country-specific characteristics that may impact on the volume of Austrian exports. Dummy variables for the factors promoting or inhibiting trade, as well as the distance variable of equation (1) will be included in the fixed import country effect.

Regressions were computed based on Austrian exports to 117 destination countries outside the EU 15 during 1992-2000. The countries were chosen for the completeness of their data for all key variables. The calculations were performed at an aggregate level as well as sectoral level (ÖNACE 15 to 36). The data for GDP and population were taken from the IMF (International Financial Statistics) and the World Bank (World Development Indicators), data for exports from the UN World Trade Statistics. Throughout, nominal values were used on a dollar basis, mainly because no suitable deflators are available for exports (in the aggregate, and especially at the sectoral level).

In order to calculate the medium-term development of Austrian exports to selected countries, it was necessary to forecast the exogenous variables (population and nominal GDP) on a dollar basis for 2001-2008. GDP figures were extrapolated, using data current at the time of calculation up to 2002, and the IMF's medium-term forecasts, some forecasts by the World Bank, OECD and the Oxford forecast models up to 2008. For extrapolating population figures, the World Bank's forecasts (World Development Indicators 2003) were used.

Using such statistics as a basis as well as the coefficients estimated by the gravity model, projections were made of the level of Austrian exports to individual countries at an aggregate level and sector level.

The coefficients estimated by this gravity model and medium-term growth projections developed by international organisations were then used to calculate the export potential open to Austrian manufacturers in selected countries<sup>3</sup> up to 2008: the focus countries chosen through the demand index and structural match index, the markets named as particularly interesting in the survey, and all other CEECs. Yet even for these selected countries, growth forecasts are, at least in part, subject to considerable uncertainties, so that the growth potential for Austrian exports as identified on the basis of these forecasts needs to be interpreted with caution.

An analysis of Austria's competitive position in the potential focus countries confirmed the choices made and pinpointed deficits in canvassing these markets in general and in particular sectors, so that export opportunities could be better assessed. To this end, Austria's market share was compared with that of major competitors.

As a result of the various analytical steps it was found that the CEECs in particular are highly suitable as focus countries for Austrian exports, the consequence, on the one hand, of their geographical proximity and the excellent market position enjoyed by Austrian exporters in parts of the CEECs, and, on the other hand, of effects expected to derive from their new EU member state status or the prospect of mem-

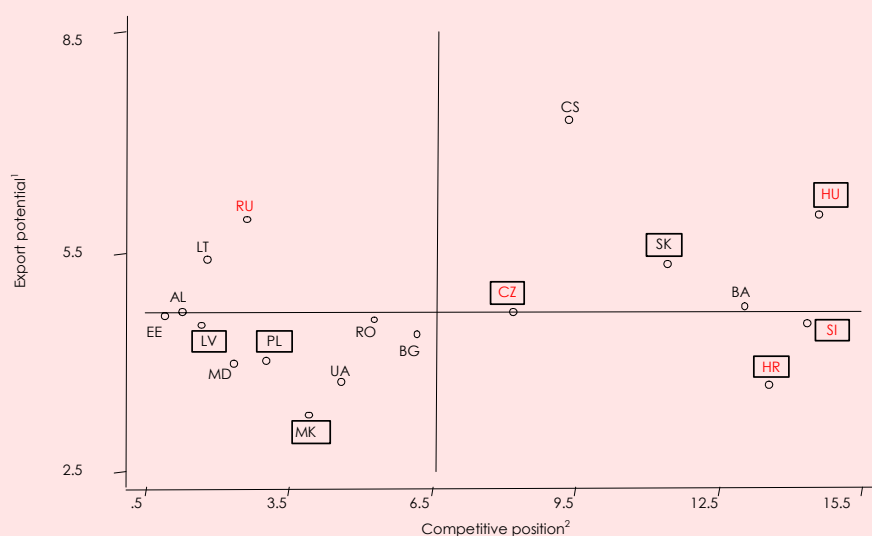
### Analysis of the competitive position

### Recommendations for the selection of focus countries

<sup>3</sup> In view of the fact that comparable growth forecasts are available only for some of the countries studied, the estimate of export potential was restricted to this selection of countries.

bership or association in the near future. In view of these particularities, the CEECs were evaluated separately.

Figure 1: Competitive position and export potentials in Central and Eastern Europe



Source: UN World Trade Statistics, WIFO calculations. – Red ... interesting market as identified in the survey, boxes ... selected due to excellent structural match and demand. – <sup>1</sup> Average annual percentage change of Austrian exports 2002-2008. – <sup>2</sup> Average market share of Austrian exports as a percentage of OECD exports in 1999-2000.

Figure 1 summarises the results of the series of analytical steps for all CEECs. Estimations for the average annual rate of change of Austrian exports up to 2008 range between +3 percent and +7.3 percent<sup>4</sup>. The mean values of the two indicators delimit four quadrants; with regard to the countries plotted in the upper right-hand quadrant, Austria already enjoys a good market position and an above-average export potential. The upper left-hand quadrant means good export growth prospects, however, low market shares which need to be boosted. The countries chosen by the demand index and structural match index are boxed in, and the markets indicated as particularly interesting in the survey are marked out in red<sup>5</sup>.

The CEE countries identified as focus countries by the demand index and structural match index are similarly listed by the enterprises as particularly interesting markets. In contrast to the evaluation based on market size and demand dynamics, many companies also perceive Russia, the Ukraine, Romania, Estonia and Lithuania as being of interest. Enterprises that already supply these markets also tend to have a positive view of export growth prospects.

Based on the demand index and structural match index, eight countries of the region (Hungary, Slovenia, Croatia, Slovakia, the Czech Republic, Macedonia, Poland and Latvia) were selected as candidates for focus markets. In the medium run, exports to Hungary and Slovakia should grow strongest, followed by those to the Czech Republic, Slovenia and Latvia. The companies of the survey gave priority to Hungary, the Czech Republic and Slovenia as potentially attractive markets. With Austrian industries already enjoying a good market position in these countries (with

The CEECs are particularly suitable as focus countries for Austrian exports.

## Central and Eastern Europe

Hungary, Slovenia, Croatia, Slovakia, the Czech Republic, Macedonia, Poland and Latvia recommend themselves as focus countries for Austrian exports.

<sup>4</sup> These estimations are obtained with the "fixed effects" model, the coefficients of which may be interpreted as short-term effects of a change in exogenous variables (per-capita GDP, population). The growth rates need to be seen as a hypothetical lower limit because dynamic effects (i.e., the effect of a change in per-capita GDP not just during this period but also in the future) are not considered: the export potential is underestimated. In Wolfmayr – Stankovsky (2003), export potentials were also calculated on the basis of a model that estimates growth effects from the differences between countries ("between effects" model), thus accounting for the long-term dynamic effects. According to this, the growth potential for exports to CEECs ranges between +8 percent and +18 percent.

<sup>5</sup> The calculations and analysis at a disaggregate level found further interesting markets for some sectors, which are not indicated in the figure in order not to clutter the picture.

the exception of Latvia), the outlook is good. With regard to Croatia, our calculations found medium-term growth prospects for Austrian exports to be below average, yet this is in contrast to excellent findings for market position, market share growth, structural matching and the survey findings: Croatia is among the group of most frequently listed countries with regard to concrete export plans and as an interesting sales market.

Table 1: Market shares in selected CEE countries

Average 1999-2000

	Austria	Austria	Germany	The Netherlands	Sweden	Finland	Norway	Denmark	Switzerland	Hungary
	Market share of OECD exports in percent		Standardised market shares <sup>1</sup>							
Hungary	14.63	100.0	34.1	8.0	9.1	13.7	1.0	5.1	10.2	
Czech Republic	8.27	100.0	71.2	15.6	21.0	0.8	13.3	11.3	19.6	55.0
Slovakia	11.50	100.0	49.7	11.8	12.0	14.6	3.4	8.0	13.8	96.6
Slovenia	14.42	100.0	22.3	8.4	12.9	5.1	1.3	5.5	12.2	58.8
Poland	3.10	100.0	151.7	66.2	117.3	105.8	44.8	101.6	52.5	133.6
Estonia	0.98	100.0	146.1	116.3	1,243.9	6,740.4	173.6	468.0	46.4	162.1
Latvia	1.74	100.0	172.5	120.4	480.6	1,086.7	139.9	384.7	88.6	169.7
Lithuania	1.87	100.0	206.8	94.1	331.8	536.1	103.1	618.5	71.5	250.7
Croatia	13.61	100.0	24.0	9.5	13.2	6.2	8.5	10.2	10.3	69.6
Serbia-Montenegro	9.41	100.0	28.7	14.8	23.9	4.2	7.2	23.8	36.3	221.3
Albania	1.33	100.0	60.3	64.1	29.3	86.1	48.3	83.9	35.7	286.4
Macedonia	3.99	100.0	53.4	33.2	34.0	17.2	3.6	51.8	60.2	189.2
Bosnia-Herzegovina	13.11	100.0	25.7	12.5	12.3	2.9	3.2	20.8	10.9	275.0
Romania	5.35	100.0	59.9	27.3	31.6	11.3	4.3	14.1	24.8	292.2
Bulgaria	6.23	100.0	43.7	23.7	21.4	32.8	3.3	25.0	31.3	77.7
Russia	2.71	100.0	121.8	80.3	80.4	483.6	40.7	96.1	40.7	177.9
Ukraine	4.65	100.0	83.4	31.4	54.7	80.2	34.7	42.0	31.0	213.4
Moldavia	2.43	100.0	193.0	95.5	50.7	39.3	22.0	27.0	32.1	464.6
World	1.70	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ø 1993/94 = 100										
Hungary	87.8	100.0	145.6	110.9	83.0	78.6	91.7	87.7	87.2	
Czech Republic	79.6	100.0	137.8	144.8	182.5	45.0	259.2	94.5	115.9	73.9
Slovakia	71.2	100.0	170.5	163.7	185.2	80.8	134.8	104.1	130.9	60.9
Slovenia	110.9	100.0	84.3	118.8	203.2	82.6	64.2	127.3	111.0	52.2
Poland	88.5	100.0	127.0	128.5	169.1	85.9	58.6	103.6	151.2	86.9
Estonia	142.2	100.0	50.4	51.3	55.5	–	125.1	53.7	79.2	35.3
Latvia	175.3	100.0	47.9	84.6	54.7	59.0	101.2	77.9	166.8	33.5
Lithuania	232.7	100.0	37.1	37.4	64.3	36.6	70.6	91.0	54.8	4.7
Croatia	158.4	100.0	56.7	44.2	63.3	74.3	121.7	54.2	121.8	44.5
Serbia-Montenegro	92.3	100.0	140.4	36.1	53.2	20.0	49.0	44.9	90.9	49.6
Albania	129.6	100.0	85.3	174.5	115.6	1,677.1	2,421.6	191.8	58.0	91.3
Macedonia	67.4	100.0	101.6	120.8	300.0	214.0	695.9	386.6	86.9	127.1
Bosnia-Herzegovina	226.4	100.0	46.4	36.0	106.4	21.5	25.2	59.8	101.1	57.3
Romania	165.7	100.0	58.9	75.8	138.4	48.0	44.6	50.9	59.0	42.6
Bulgaria	119.0	100.0	80.6	96.9	125.5	76.6	60.9	101.1	88.7	76.2
Russia	99.7	100.0	101.3	137.4	168.3	123.3	172.7	156.3	143.7	27.5
Ukraine	195.5	100.0	45.0	68.5	174.4	61.6	82.8	63.2	53.3	14.6
Moldavia	264.3	100.0	44.3	129.3	140.7	24.3	–	22.7	12.8	13.4
World	108.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: UN World Trade Statistics. – <sup>1</sup> Double-standardised market share:  $\frac{Ma_{ij}}{Ma_{\delta j}} \bigg/ \frac{Ma_{iw}}{Ma_{\delta w}}$ ,  $Ma \dots$  market share,  $i \dots$  exporting country,  $j \dots$  importing country,  $w \dots$  world,  $\delta \dots$  Austria.

At 14 percent each, the highest market share for Austria is found in Hungary, Slovenia and Croatia, which puts Austria among the chief trading partners of these countries. In Poland, Austria holds a market share of some 3 percent. For a better comparison between Austria and its competitors, the market shares in Table 1 are standardised on the basis of the Austrian market share and the world market share<sup>6</sup>.

<sup>6</sup> Germany's market share of global exports is about eight times higher than Austria's, and Switzerland is in about the same league as Austria. The double-standardised market share indicator is set at 100 when the

Measured by this indicator, Austria enjoys a better relative market position in the neighbouring CEECs and Croatia than all its competitors. Only Germany and Hungary have reached similar levels. All other competitors together have relative market shares of just 20 percent of the Austrian level. The situation is different in Poland where Austria has no clear edge over its competitors – here Germany and Hungary have won out.

Measured by the standardised change of market shares on the key CEE markets (Hungary, Czech Republic, Slovakia, Poland), most competitors surpass Austria. Throughout, Austria lost ground on a scale between 10 and 20 percent (almost 30 percent in Slovakia). Nevertheless this decline cannot be solely interpreted as a failure: during the years immediately following the political transformation of Eastern Europe, Austrian exports to this region grew at an extraordinary pace. Once suppliers from other western countries entered the field, it was partly unavoidable for Austria to fall behind. In Croatia (which for a long time was less exposed to international competition due to the relatively high political risk), as well as Slovenia and Latvia, Austria continued to gain market share throughout the 1990s.

The list of potential focus countries should furthermore include Russia, Lithuania and Estonia, considering their excellent growth prospects for Austrian exports and the survey findings, even though the market position enjoyed by Austria in these countries is still rather weak.

Thanks to an excellent match between its demand structure and the export range offered by Austrian companies, Latvia can be grouped with Lithuania and Estonia as a regional focus. Starting out from a very low level of bilateral trade, exports of Austrian goods to the Baltics grew at a highly dynamic rate, and the market position could be expanded substantially in all three countries (Table 1). Still, Austria's market share is lower than that of the Nordic countries Finland, Sweden, Denmark and, in part, Norway – obviously due to neighbourhood effects. Similarly, German exporters are better positioned in Lithuania than their Austrian counterparts. In Estonia and Latvia, Austria has the lead over Italy and the Netherlands, but the situation is different in Lithuania. With the Baltics having joined the EU, Austria's trade relationship with these countries should finally take off.

Excellent economic growth prospects from the EU stabilisation and association programme, the proximity to Austria, as well as close cultural and personal links are the factors that make the western Balkan countries another potential focus region, an assessment that is confirmed by the findings at each step of this study.

Measured by the market share held by Austrian exporters, the outlook is good for Croatia as well as for Bosnia-Herzegovina and Serbia-Montenegro. The very high medium-term growth potential pinpointed for Austrian exports to Serbia-Montenegro is the effect of a rapid catching-up process that began in 2001 after the war-driven collapse. However, caution is advisable in view of the current political instability.

A relatively high export potential overall is found for Bosnia-Herzegovina and Albania; in some sectors, they are ranked among the top three in terms of growth potential. The demand index was calculated on the basis of the economic development in the 1990s, which fails to reflect the momentum from the EU stabilisation and association programme, especially for the south-eastern European countries.

Among the promising markets outside Western, Eastern and Central Europe (Figure 2), China is the only country (remote as it is in both a geographical and cultural sense) that shows similarly good results as the CEECs. On a secondary level, both Vietnam and (for selected sectors) India and South Korea are suitable as focus markets<sup>7</sup>. Generally, there is an inadequate match between Austrian supply and the demand structure in Asia, which has in part further deteriorated since the early 1990s and is compounded by a weak relative market position held by Austrian suppliers. With regard to Vietnam, the products offered by Austrian exporters appear to be

*Austrian exporters have achieved a strong market position in the neighbouring CEECs and Croatia, although some market share has been lost.*

*Russia is similarly suitable as a focus country. A regional focus can be recommended in the Baltics.*

*The western Balkan countries offer another potential for a regional focus.*

## Focus countries outside Europe

competitor's market share in the country examined shows the same ratio vis-à-vis the Austrian market share as does the market share of such country vis-à-vis world exports.

<sup>7</sup> For a detailed description of export potentials broken down by sectors see Wolfmayr – Stankovsky (2003).



well matched in the short run to Vietnam's need for imports, and Austrian exporters are on a relatively solid ground: only Switzerland is better based, while the positions of Sweden and Hungary are about equal to that of Austria. As to China and South Korea, Austrian exporters have lost market shares (Figure 2).

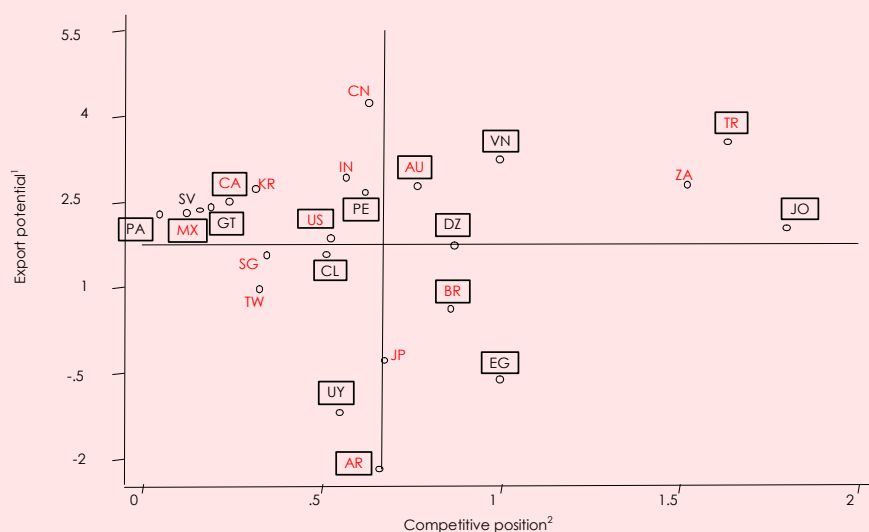
Turkey and Jordan are given good evaluations in the respective subanalyses, as is South Africa. It is in these three markets that Austria has the best launch position in terms of its market share. In the Near East, Germany and Switzerland are better positioned, and Finland, Sweden and Denmark are still slightly in front of Austria. During the 1990s, Austria gained market shares in these countries, achieving its greatest success over these competitors in Turkey.

In the North-African region, Algeria is particularly suitable as a focus country. Both there and in the Near East, Austria could benefit from the EU's Mediterranean policy to create a European-Mediterranean zone of political stability and security based on a comprehensive free trade zone by 2020 (Stankovsky – Wolfmayr-Schnitzer, 1996).

Viewed from the angle of demand dynamics and the matching of the Austrian supply structure to import demand, several Latin-American countries offer potential focus markets. Promising results are obtained specifically by the structural match index. Nevertheless, clear weaknesses are pinpointed for several countries in terms of market position, the survey findings and the gravity estimation. The Austrian market share is markedly lower than that of comparable competitors, and Austria's position typically weakened during the 1990s (Table 2).

Regarding countries outside Europe, potential focus markets could be found in China, Vietnam, India, South Korea, Turkey, Jordan, Algeria, South Africa, Brazil, Argentina, Guatemala, El Salvador, Peru, Mexico, the USA, Canada and Australia.

Figure 2: Competitive position and export potentials for overseas markets



Source: UN World Trade Statistics, WIFO calculations. – Red ... interesting market as identified in the survey; boxes ... selected due to excellent structural match and demand. – <sup>1</sup> Average annual percentage change of Austrian exports 2002-2008. – <sup>2</sup> Average market share of Austrian exports as a percentage of OECD exports in 1999-2000.

In a similar vein, enterprises polled in the survey showed little interest in the markets of this region, with the exception of Brazil and, in part, Argentina. These two are currently the chief markets for Austrian industries in South America. The calculations forecast little dynamism in the medium run for Austrian exports to Argentina and Uruguay: both countries have been undergoing a recession since 1999, which impacts on the estimation.

Table 2: Market shares in selected countries outside Europe

Average 1999-2000

	Austria	Austria	Germany	The Netherlands	Sweden	Finland	Norway	Denmark	Switzerland	Hungary
	Market share of OECD exports in percent	Standardised market shares <sup>1</sup>								
Australia	0.77	100.0	129.9	66.9	262.5	193.4	40.0	120.9	174.3	21.0
Canada	0.25	100.0	98.7	55.0	171.0	108.2	764.4	82.1	124.9	18.4
USA	0.53	100.0	210.6	94.7	167.1	158.7	162.0	102.1	266.5	109.0
Japan	0.68	100.0	165.9	83.3	213.6	133.3	167.6	246.4	327.6	34.9
China	0.64	100.0	214.7	60.1	305.8	396.5	114.1	103.3	135.9	32.1
India	0.58	100.0	208.6	130.8	197.0	305.2	61.6	135.4	269.8	40.2
Turkey	1.64	100.0	165.8	100.7	170.1	161.9	41.9	45.8	130.0	65.7
Jordan	1.81	100.0	121.6	85.6	114.6	58.2	12.6	98.4	124.4	30.3
Singapore	0.35	100.0	229.6	169.5	234.1	192.0	150.0	193.2	401.0	282.2
South Korea	0.32	100.0	191.4	138.7	173.8	217.3	246.4	176.1	192.2	46.7
Taiwan	0.33	100.0	232.7	216.7	235.0	202.7	83.3	96.2	312.9	78.3
Vietnam	1.00	100.0	83.9	40.0	102.0	80.8	18.3	98.5	111.4	99.2
Egypt	1.00	100.0	162.0	110.7	200.4	219.2	41.9	164.3	188.2	54.7
Algeria	0.88	100.0	108.4	79.0	67.2	172.0	12.8	49.9	100.1	45.0
South Africa	1.53	100.0	159.8	93.0	118.2	182.5	17.5	57.3	111.2	25.4
Argentina	0.67	100.0	183.9	89.8	288.6	197.4	23.0	113.0	270.5	28.2
Brazil	0.86	100.0	199.3	59.2	224.6	155.4	74.1	79.7	212.1	49.9
Chile	0.52	100.0	193.5	132.8	528.0	261.9	82.2	182.2	223.8	27.3
Costa Rica	0.24	100.0	163.9	240.7	132.9	119.3	117.7	245.2	253.4	14.1
El Salvador	0.17	100.0	430.5	139.9	580.4	1,154.7	29.2	294.9	325.0	24.5
Guatemala	0.20	100.0	268.8	134.9	488.8	353.3	136.3	157.8	268.2	26.7
Mexico	0.13	100.0	379.9	91.7	373.6	183.1	40.6	71.4	322.7	111.1
Panama	0.05	100.0	561.1	226.6	402.9	730.5	1,596.3	328.8	2,249.3	20.8
Peru	0.63	100.0	135.4	89.1	223.9	209.1	42.0	89.7	172.1	25.4
Uruguay	0.56	100.0	180.9	150.2	188.6	145.1	35.0	160.4	469.9	61.2
World	1.70	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ø 1993/94 = 100										
Australia	153.4	100.0	70.7	70.8	76.5	56.4	58.7	95.0	76.4	37.4
Canada	105.1	100.0	101.7	99.8	103.9	100.0	177.0	121.6	115.5	39.4
USA	134.6	100.0	93.5	86.8	71.2	72.6	84.9	74.7	101.4	89.7
Japan	106.6	100.0	100.4	147.0	132.4	111.9	139.3	107.8	140.2	59.3
China	93.0	100.0	107.8	106.8	162.0	232.4	153.1	213.3	108.0	73.2
India	103.0	100.0	77.5	124.5	100.5	141.6	71.8	92.4	97.9	21.3
Turkey	133.2	100.0	75.2	95.9	181.2	180.9	99.6	73.3	89.0	53.6
Jordan	121.7	100.0	116.2	98.8	152.3	84.6	252.1	98.3	145.9	18.7
Singapore	100.5	100.0	131.0	117.9	100.6	79.7	105.8	181.8	107.0	846.4
South Korea	82.7	100.0	96.4	177.4	116.4	90.0	385.0	138.1	120.9	126.9
Taiwan	114.8	100.0	88.4	140.6	105.5	131.2	106.6	103.1	110.6	322.5
Vietnam	100.3	100.0	91.7	115.1	104.3	23.5	38.5	44.9	162.7	36.6
Egypt	113.8	100.0	103.4	103.1	125.5	103.4	102.7	113.0	160.3	37.8
Algeria	44.3	100.0	346.2	282.5	258.2	668.6	57.6	390.0	381.1	188.5
South Africa	151.6	100.0	69.7	107.2	156.0	141.8	65.8	96.0	51.0	70.5
Argentina	102.3	100.0	104.5	130.5	155.5	127.3	57.2	109.0	128.7	50.2
Brazil	153.5	100.0	65.2	46.1	111.2	108.7	41.5	91.0	76.3	81.1
Chile	95.6	100.0	107.6	133.5	292.6	88.1	77.1	120.7	109.0	76.0
Costa Rica	74.1	100.0	118.1	207.2	212.3	239.8	217.1	333.4	110.1	22.3
El Salvador	73.1	100.0	201.8	82.4	394.1	127.1	138.9	153.6	89.0	56.0
Guatemala	88.0	100.0	101.7	73.4	347.8	215.1	72.0	113.7	77.8	61.6
Mexico	80.6	100.0	123.1	80.5	206.3	220.1	111.4	55.7	122.4	810.9
Panama	150.3	100.0	115.9	88.3	184.5	456.6	21.6	72.4	67.5	3.5
Peru	125.3	100.0	75.4	70.1	106.2	309.1	51.5	47.3	63.1	16.4
Uruguay	87.8	100.0	131.8	190.6	190.6	257.3	219.7	113.9	212.1	19.0
World	108.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: UN World Trade Statistics. – <sup>1</sup>) Double standardised market share:  $\frac{Ma_{ij}}{Ma_{\delta j}} \bigg/ \frac{Ma_{iw}}{Ma_{\delta w}}$ ,  $Ma \dots$  market share,  $i \dots$  exporting country,  $j \dots$

importing country,  $w \dots$  world,  $\delta \dots$  Austria.

The highest growth potential in South America is found in Peru. Guatemala in particular, as well as Peru and Mexico offer relatively good expansion prospects for some sectors, and the market share analysis points at clear position gains by Austrian

companies in these fields. In addition, trade relations with Latin America are promoted by the EU<sup>8</sup>.

Based on their demand dynamics and structural match, the USA, Canada and Australia (the latter having the highest growth potential) are suitable as export focus countries. As the technological leader in many fields, the USA is a key market: companies present in these markets enjoy an information edge that they can transpose to other markets. Austria's market position is relatively weak in each of the three countries. In the USA, almost all competitors have the advantage over Austria, whereas the gap is narrower in Canada and Australia. Measured by the market share development, Austria nevertheless shows the best performance (jointly with Switzerland) both in the USA and in Australia.

In spite of brisk expansion rates achieved for CEE markets, Austrian exports continue to be focused on Western Europe. In order to better exploit export opportunities, it would be desirable to aim at diversifying exports by expanding into dynamic countries outside the European Union. WIFO investigated 81 non-EU countries for their suitability as focus markets for Austrian exports. The effort yielded 30 countries that recommend themselves as focus markets: 13 CEECs (Hungary, Slovakia, the Czech Republic, Poland, Slovenia, Croatia, Serbia-Montenegro, Bosnia-Herzegovina, Albania, Macedonia, Latvia, Lithuania, Estonia); 14 promising markets outside Europe (China, Vietnam, India, South Korea, Jordan, Turkey, Algeria, South Africa, Brazil, Argentina, El Salvador, Peru, Guatemala, Mexico); and 3 overseas OECD countries (USA, Canada and Australia).

By bundling the Austrian range of products and focusing on selected focus markets that show great promise, synergy effects should be achieved through the utilisation of the numerous existing schemes and tools of market development and export promotion. Austrian economic policy offers an extensive range of export promotion tools to support and facilitate the difficult development of new export markets. Since these tools come under the responsibility of several government authorities and institutions, it would be advisable to co-ordinate such focus markets with all institutions and agencies involved, in order to realise the putative synergy effects.

With a view to achieving a sustainable market position, direct sales-based tools of export promotion should be supplemented by measures in other policy fields (such as education or research) that improve the international competitiveness of domestic enterprises and create a framework that enables export structures to respond with even greater versatility to the demand structure of rapidly growing markets.

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<sup>8</sup> Relations between the EU and Latin America are promoted both at bilateral level (Rio Group: founded in 1986, it is a strategic partnership between the EU, Latin America and the Caribbean) and through a specialised dialogue with subregional groups such as Mercosur, the Andes Group, etc. The EU is the second most important trading partner of Latin America and its biggest investor. Economic co-operation between the EU and Latin America is supported by a large number of programmes (AL-Invest encourages investment by European companies in Latin American enterprises; Alfa is a co-operative venture in the field of higher education; Alure promotes the efficient use of energy; Atlas facilitates economic co-operation between Europe and Latin America through a network of chambers of industry and trade; for more details see [http://europa.eu.int/comm/external\\_relations/la/index.htm](http://europa.eu.int/comm/external_relations/la/index.htm)).

## Summary and economic policy conclusions

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### *Potential Markets for Austrian Exports – Summary*

Austrian exports continue to be focused on Western Europe, in spite of brisk expansion rates achieved for Central and Eastern European markets. In order to better exploit opportunities offered to Austrian exporters, it would therefore be desirable to aim at diversifying exports by expanding into dynamic countries outside the traditional markets. The study presents looks at 81 countries outside Western Europe and investigates them for their suitability as focus markets for Austrian exports. They were chosen based on indicators of market size, demand development and degree to which their import structure matches the Austrian export structure, as well as a business survey of motivations and obstacles to exports, market share analyses and an econometric estimate of medium-term export potentials.

A total of 30 countries were identified as potential focus countries (13 CEECs, 14 non-European potential markets and 3 overseas industrialised countries). The list includes the eight new EU members in Central Europe, with the best export growth opportunities identified in Hungary, the Czech Republic and Slovakia. Russia should also be included. Promising regional focus markets are pinpointed in the Western Balkans (Croatia, Bosnia-Herzegovina, Serbia, Albania, Macedonia). As to markets outside Europe, prospects in Asia are excellent with regard to China and Vietnam and – in specific sectors – India and South Korea, whereas Turkey, Jordan, South Africa and Algeria are potential candidates in the Near East and Africa. In Latin America, sales prospects are excellent in Brazil, Argentina, Guatemala, El Salvador, Peru and Mexico. Furthermore, the industrialised states overseas continue to be important export markets: the USA, but also Canada and Australia are recommended as potential focus countries.