Statistics

in focus

EXTERNAL TRADE

THEME 6 – 6/2001

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eurostat

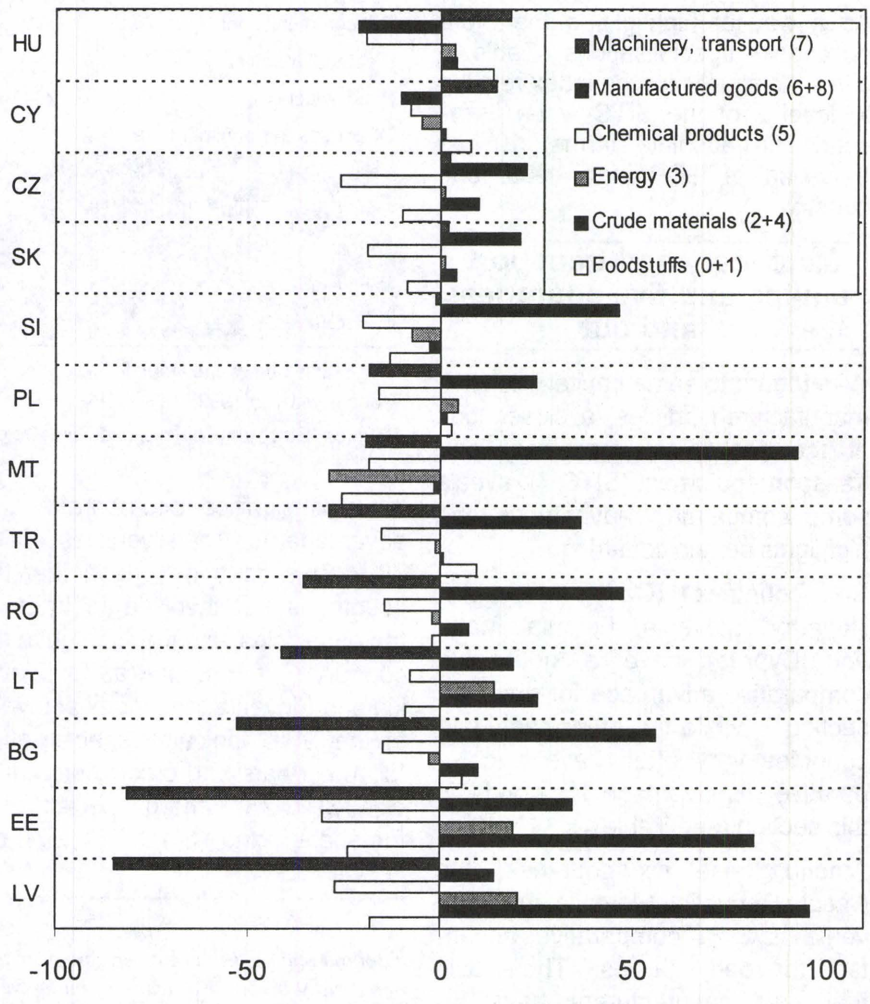
Manuscript completed on: 27.06.2001
ISSN 1024-6878
Catalogue number: KS-NO-01-006-EN-C

Specialisation of candidate countries in relation to EU

Tim Allen

In order to measure the comparative advantages of the 13 candidate countries (CC-13) in relation to the European Union, a "contribution to trade balance" indicator was calculated (see methodological note, page 3). The results show that most of the candidate countries tend to specialise in miscellaneous manufactured articles (such as clothing or furniture) but import machinery and vehicles. However, there are some countries - such as the Czech Republic, Slovakia, Hungary, Slovenia, Estonia or Malta - that also seem to specialise in capital-intensive manufactured products.

Specialisation of candidate countries in relation to EU in 1999. "Contribution to trade balance" index in thousandths of GDP



Source: Eurostat (Comext) and Eurostat calculations.

Specialisation of candidate countries

In order to compare each country's specialisation in relation to the EU, we calculated an index for "contribution to trade balance" with the EU for 1999 (see note, page 3). "Specialisation" (competitive advantage) occurs when a country exports a major part of its production. The "contribution to trade balance" indicator is then positive. Conversely, there is "despecialisation" (comparative disadvantage) when a country imports a major proportion of a certain type of product in order to satisfy domestic demand. The "contribution to trade balance" indicator is then negative. Thanks to this indicator, it is possible to identify a country's strengths and weaknesses in relation to specific products and compare them with those of its competitors.

Applying the index to SITC categories (see graph p. 1) shows that most the candidate countries have a comparative advantage for manufactured goods classified by raw material and miscellaneous manufactured articles (SITC 6+8, articles tending to be labour-intensive) and a comparative disadvantage for machinery and transport equipment (SITC 7, goods tending to be capital-intensive). But this is not true of all countries. Hungary and Cyprus, for instance, have a fairly significant comparative advantage in the case of machinery and transport equipment (SITC 7).

As a way of highlighting the more noticeable specialisations, Table 5 gives the figures for the index relating to level 2 of the SITC when it exceeds (in absolute terms) 10 per thousand of GDP in at least one country.

Table 1 - Specialisation of candidate countries in relation to EU: "contribution to trade balance" index in thousandths of GDP*

SITC-Rev. 3 division		PL	CZ	SK	HU	RO	BG	TR	SI	EE	LV	LT	MT	CY
Crude materials, except fuels														
Cork and wood	24	2	7	6	3	4	3	0	2	**72**	**97**	**13**	0	-1
Metalliferous ores	28	1	3	0	2	2	1	0	-1	**15**	4	**16**	1	1
Energy														
Petroleum	33	-2	-3	1	3	-2	-3	-1	-7	**14**	**18**	**12**	**-28**	-5
Chemical products														
Fertilizers	56	1	1	1	0	0	3	0	0	2	0	**13**	0	0
Manufactured goods classified by material														
Rubber manufactures	62	1	4	0	1	1	0	1	3	-2	-2	-2	**11**	-1
Cork & wood manufact.	63	5	3	1	1	2	2	0	7	**16**	**20**	4	-1	-1
Textile yarn, fabrics	65	-6	-2	**-10**	**-12**	**-31**	**-19**	7	-8	-3	-1	-6	-3	-2
Iron & steel	67	1	1	11	-3	5	**18**	2	-2	-8	3	-2	-3	-1
Non-ferrous metals	68	4	-3	5	2	6	**20**	0	7	1	3	-1	0	1
Machinery and transport equipment														
Power gener. machinery	71	0	0	-9	**43**	1	1	-2	-1	-1	-4	-2	-3	5
Machinery specialized	72	-6	-3	-7	-9	**-11**	-9	-5	-7	-9	**-13**	-8	-7	-2
Gen. industry machinery	74	-7	-4	**-11**	**-15**	-5	-5	-5	-4	**-13**	**-14**	**-11**	-7	-3
Office machines	75	-4	-7	-2	**17**	-3	-5	-3	-6	-5	**-10**	-5	-1	-2
Telecommunication	76	-1	-9	-7	**11**	-7	-9	-5	-7	**37**	**-10**	-4	-2	-3
Electrical machinery	77	1	-3	-3	-1	-6	-7	-3	**15**	**-62**	**-14**	-3	**16**	-3
Road vehicles	78	-2	**26**	**40**	**-26**	-7	**-16**	-4	**11**	**-24**	**-19**	-9	**-12**	9
Oher transport equiment	79	2	2	4	1	3	-2	0	-2	-1	-1	1	-2	**13**
Miscellaneous manufactured articles														
Furniture, bedding	82	**11**	9	3	2	**10**	2	0	**21**	**24**	6	6	1	-1
Clothing	84	**13**	6	**18**	**16**	**55**	**42**	**31**	**15**	**27**	**25**	**36**	**52**	5
Footwear	85	1	2	7	4	**15**	6	0	1	2	-1	1	**10**	-1
Scientific material	87	-2	-4	-6	-3	-3	-3	-2	1	-3	-4	-3	**11**	1

* The table shows the index figures when they exceed 10 per 1000 of GDP in at least one country in 1999.

Sources: Eurostat (Comext) and Eurostat calculations.

Machinery and transport equipment: five countries stand out

With regard to some capital-intensive manufactured articles, a closer look at the section of machinery and transport equipment (SITC 7) reveals some comparative advantages and highlights certain countries.

Six countries (Czech Republic, Hungary, Slovenia, Estonia, Malta and Cyprus) have a noticeable comparative advantage for goods in section 7, while the other candidate countries very often have a comparative disadvantage for goods in this section (see Table 1).

Among these six countries, the Czech Republic, Slovakia and Slovenia have a comparative advantage for road vehicles. The fact is that car manufacturers have invested in a number of Central European countries in order to benefit from their skilled but relatively cheap labour. Exports to the EU soared during the 1990s.

At the other extreme, Hungary has the most significant comparative disadvantage for road vehicles (SITC 78). This does not mean that the country is not involved in trade in motor vehicles with the EU - quite the contrary. For Hungary (as for Slovakia and Slovenia), the index at level 3 of the SITC indicates specialisation for motor cars and other motor vehicles (SITC 781) and despecialisation for spare parts (SITC 784)[1]. This suggests that cars are assembled in these countries using imported parts and exported to the EU.

Slovenia and Malta seem to be specialised in electrical machinery (SITC 77), whereas Latvia and especially Estonia are apparently despecialised. At a more detailed level, Malta has a comparative advantage for electronic products (SITC 7764), which accounted for about half of its exports in 1999.

Specialisation in telecommunications equipment is an interesting feature with regard to Estonia and Hungary. Estonia has apparently been selected as a manufacturing and assembly centre by high-tech Scandinavian and western firms.

[1] *Poland and Turkey are other countries that are greatly involved in trade in motor vehicles with the EU, even though the table seems to indicate some despecialisation in these products. In the case of Poland and Turkey, the rapid simultaneous rise in imports and exports in relation to the EU for product division 78 suggests that there may be intra-branch trade.*

Hungary also stands out because it is the only country with a comparative advantage for two other products in section 7: office machines (SITC 75) and power generating machinery and equipment (SITC 71). On the other, every candidate country has a comparative disadvantage in the case of industrial machinery (SITC 72 + 74).

Candidate countries: clothing

The section of miscellaneous manufactured articles (SITC 8) generally covers labour-intensive manufactured goods. All the candidate countries have a comparative advantage with regard to clothing and accessories (SITC 84). Similarly, Malta and Romania are specialised in footwear. Several countries specialise in furniture, especially Poland, Romania, Slovenia and Estonia. One feature of Malta is that it is the only country with a comparative advantage for professional, scientific and controlling instruments and apparatus (SITC 87).

Slovakia and Bulgaria: metal products

Estonia and Latvia are specialised in cork and wood manufactures, excluding furniture (SITC 63). Slovakia and Bulgaria are strong in the case of metal products, and the two countries have a fairly significant comparative advantage for iron and steel manufactured goods. Bulgaria is also specialised in non-ferrous metal goods. These specialisations are the result of being equipped with infrastructure for heavy industry that existed long before the changeover to a market economy.

Baltic countries: raw materials

With regard to raw materials, the Baltic countries stand out from the other candidate countries on account of their specialisation in timber, metalliferous ores (apart from Latvia) and oil. Because of their location and port facilities, the three Baltic republics are transit countries for raw materials coming from Russia, Belarus and Ukraine. They also provide added value, particularly by refining crude petroleum. At the other extreme, Malta is heavily dependent in terms of its energy requirements and has a significant comparative disadvantage in the case of oil.

Trend in specialisations since 1995

The "contribution to trade balance" index was calculated for 1995, and the figures were then compared with those for 1999. Table 2 shows the countries where the comparative disadvantage for certain goods became a comparative advantage in 1999, and vice versa. As before, instances in which the index figures exceed 10 per thousand in GDP terms for at least one of the two years were selected. It can be assumed that these goods will be the strengths (or weaknesses) of the countries in question in the future. The products concerned are all manufactured articles belonging to the section of machinery and transport equipment (SITC 7). They are thus all capital-intensive goods.

Five countries (Czech Republic, Slovakia, Slovenia, Estonia and Hungary) moved from a situation of comparative disadvantage to one of significant advantage for a group of products. Among these countries, between 1995 and 1999, the Czech Republic, Slovakia and Slovenia were specialised in road vehicles. It can be seen that trade in this group of goods accounted for a significant share of these countries' exports to the EU in 1999, with figures of 18% for the Czech Republic, 29% for Slovakia and 18% for Slovenia.

Between 1995 and 1999 Estonia switched from a position of comparative disadvantage to one of advantage for telecommunications equipment. During the same period Hungary became specialised in office machines. On the other hand, Estonia - which enjoyed a comparative advantage in 1995 for iron and steel manufactured articles and office machines - saw this change to a comparative disadvantage in 1999.

Table 2 - Trend in specialisations between 1995 and 1999*

Country	SITC-Rev. 3 Division		CTB 1995	CTB 1999
Change from comparative disadvantage to advantage				
Hungary	Office machines	75	-3	17
Estonia	Telecommunication	76	-13	37
Czech Rep.	Road vehicles	78	-5	26
Slovakia	Road vehicles	78	-7	40
Slovenia	Road vehicles	78	-3	11
Chyprus	Road vehicles	78	-10	9
Change from comparative advantage to disadvantage				
Estonia	Iron and Steel	67	12	-8
Estonia	Office machines	75	10	-5

* This table shows the contribution to trade balance (CTB) index figures falling between -10 et +10 per 1000 of GDP for at least one of the two years considered in a country.

Sources: Eurostat (Comext) and Eurostat calculations.

➢ ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

Groups of countries: EU: EU-15. NIS: countries of the former USSR.

There are thirteen applicant countries: Bulgaria (BG), Cyprus (CY), Czech Republic (CZ), Estonia (EE), Hungary (HU), Latvia (LV), Lithuania (LT), Malta (MT), Poland (PL), Romania (RO), Slovakia (SK), Slovenia (SI) and Turkey (TR).

Data source: Custom data reported by the EU Member states.

"Contribution to trade balance" indicator: in order to measure the comparative advantages of the CC-13 in relation to the EU, a "contribution to trade balance" indicator was calculated (See CEPII, "La mesure des avantages comparatifs révélés", Lafay 1997, Economie Prospective Internationale). The indicator compares, in thousandths of GDP, the trade balance recorded for a product in relation to a theoretical trade balance that would exist if there were no comparative advantage or disadvantage. The theoretical balance (the case if there is no specialisation) is calculated according to a specific product's share of total trade. Without specialisation, the trade balance for a product should correspond to the product's share of total trade. The theoretical balance is obtained by multiplying the product's percentage share of total trade by the total trade balance. The difference between the recorded and theoretical balances, expressed in thousandths of GDP, is calculated as follows: **((Xp-Mp) - [(X-M)* ((Xp+Mp)/(X+M))])*1000/GDP**, where Xp and Mp are exports and imports of product "p". The figures are calculated at level 4 of the of the SITC classification and then aggregated at levels 1 and 2.

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For information on methodology

Timothy Allen, Eurostat/C4, L-2920 Luxembourg, Tel. (352) 4301 35098, Fax (352) 4301 34339, E-mail: timothy.allen@cec.eu.int

Eurostat thanks A. Petermann, S. Quefelec and C. Pochet for their collaboration on this report.
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