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SOME ASPECTS OF RECENT TRADE DEVELOPMENTS IN SOUTH-EAST EUROPE

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I.   Introduction

There is growing international interest and involvement in economic and political developments in the south-east European (SEE) region, in particular its intraregional integration and ever closer ties with the European Union (EU).[1] An important strand of recent economic analytical literature on this region proposes various scenarios for fostering regional economic (re-)integration among the SEE countries, particularly those in the western Balkans, as a first step towards their integration into the EU. Some other literature, in contrast, argues for a more rapid integration into the EU on a bilateral basis via a customs union, as has been done by Turkey, for instance. It is argued that this would promote normalization of relations and assure political stability and economic growth in this turbulent region.[2] The theoretical and empirical basis for most of these arguments lies in the literature on regional trading blocs and currency unions as well as on the recent experience of emerging market economies in eastern Europe. Although these studies stress the importance of openness to trade and the ability to work together within cooperative trade arrangements, most of them fail to provide deeper insights into the changing potential of trade developments in these SEE countries, including Turkey. This study attempts to fill this gap, in part by providing a comprehensive analysis of changes in SEE trade flows over the past 10 years (1995-2004) and by investigating the region's factor endowments. It also draws attention to policy measures aimed at addressing challenges in the increasingly competitive global economy. On most of these issues the study draws a comparison with the pre-accession experience of the new EU member countries of eastern Europe (EU-8).[3]

A comprehensive data set for this study was compiled from several sources, including the UNComtrade database (for trade flows at disaggregated commodity levels and by partner), UNCTAD TRAINS database (for tariff schedules), Eurostat Comext (for mirror statistics on SEE exports to EU by commodity), and national sources (filling the gaps in the above-mentioned international databases).[4] In the text, charts and tables, the south-east European country group is referred to as SEE-8 whenever it includes all eight countries under consideration (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Romania, Serbia and Montenegro, The former Yugoslav Republic of Macedonia and Turkey), while the reference to SEE-7 refers to all these countries excluding Turkey. This is done for two reasons: Turkey's economic size, which strongly influences aggregate indicators, and its very

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[1]   All SEE countries are aspiring to become members of the EU. Two of them, Bulgaria and Romania, are already at the final stage of the accession process; for Croatia and Turkey the accession negotiations started on 3 October 2005; for The former Yugoslav Republic of Macedonia candidate status was granted in November 2005, while for the remaining countries, Albania, Bosnia and Herzegovina, and Serbia and Montenegro, their potential EU candidacy was reaffirmed in the conclusions of the 2002 Copenhagen Council and at the Thessaloniki Summit in June 2003.

[2]   See for instance: V. Gligorov, "European partnership with the Balkans", *European Balkan Observer*, Vol. 2, No. 1, May 2004 and *South-east Europe: Regional Co-operation with Multiple Equilibria,* IBEU Working Paper No. 4.1, 2004; E. Christie, *Trade Flows in South-east Europe,* IBEU Working Paper No. 4.2, 2004; P. Messerlin and S. Miroudot, *Trade Liberalization in South-east Europe: Review of Conformity of 23 FTAs with MoU,* Sciences Po Working Paper (Paris), January 2004 and *Harmonization of FTA's in South-east Europe: The Options Ahead,* SAP WGT Discussion Paper, No. 29, September 2004; European Commission, DG for Economic and Financial Affairs, *The Western Balkans in Transition,* Occasional Papers, No. 5, January 2004; A. Adam, T. Kosma and J. McHugh, *Trade-Liberalization Strategies: What Could South-eastern Europe Learn from the CEFTA and BFTA?,* IMF Working Paper, WP/03/239 (Washington, D.C.), December 2003; The World Bank, *Trade Policies and Institutions in the Countries in the EU Stabilization and Association Process,* Volume I: Regional Report (Washington D.C.), 2003.

[3]   The Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.

[4]   Trade data reported by SEE countries to UNComtrade were analysed at the lowest heading level (3,121 items), the 3-digit level (227 and 239 groups) and higher levels of aggregation of SITC Revisions 2 and 3; the mirror data (reported by EU countries to Eurostat) were analysed at the 2-digit level of aggregation of the Harmonised System (1996).

different initial conditions, which in some cases render comparisons with the SEE-7 and EU-8 inappropriate. Regarding the EU as the major partner group, a distinction is made between the EU-15 and the EU-25 (which includes the 10 countries that acceded to the EU in May 2004) when trends in specialization of SEE-8 exports are discussed.

II. Trade expansion and preferential access to the main markets

During the 1990s, many SEE-7 countries, plagued with armed conflicts in the western Balkans and affected by international sanctions, suffered a setback in their economic development. Moreover, they did little to advance their regional trade integration and liberalize their markets on a multilateral basis; rather, they resisted the strengthening of cooperation within the region. Bulgaria and Romania opted for membership in the Central European Free Trade Area (CEFTA) in the mid-1990s, followed by Croatia in 2003,[5] whereas Turkey conducted its trade relations with countries in the region on a strictly bilateral basis.[6] As for membership in the World Trade Organization (WTO), some have joined and others not yet.[7]

Since the early 1990s, the main focus of the majority of these countries has been on their prospects for integration with the EU. The initial stage – *liberalization* of mutual trade (albeit asymmetrical in most cases) – for three of them came to fruition in 1995, when the Europe Agreements with Bulgaria and Romania entered into force and when the customs union between Turkey and the EU was established. In 1999, the EU extended autonomous trade preferences to five western Balkan countries, albeit with some conditionality geared to the stabilization and association process.[8] Lastly, in 2001 Croatia and The former Yugoslav Republic of Macedonia signed Stabilization and Association Agreements (SAAs) with the EU, which, like the Europe Agreements, are set to provide the western Balkan countries with the formal mechanisms and agreed benchmarks for the association process with the EU. However, the initial focus of the SAAs is on the core elements of the EU single market: establishment of a free trade area and related legislation, including competition, State aid rules and intellectual property rights.

By the end of the 1990s, after the conflicts in the western Balkans had subsided, attempts were also made to revive regional trade integration within SEE, although Turkey did not participate actively in this process. These efforts, under the aegis of the Stability Pact for South-eastern Europe,[9] led to a

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[5] The former Yugoslav Republic of Macedonia was expected to become a member of CEFTA in 2005.

[6] Turkey has bilateral free trade agreements (FTAs) with most countries in the region: with Bosnia and Herzegovina and Croatia (since 2003), The former Yugoslav Republic of Macedonia (since 2000), Bulgaria (since 1999) and Romania (since 1998).

[7] Romania's and Turkey's membership in WTO succeeded their membership in its predecessor, the General Agreement on Tariffs and Trade (GATT), whereas Bosnia and Herzegovina as well as Serbia and Montenegro remain outside the WTO. Bulgaria joined the WTO in 1996, Albania and Croatia in 2000, and The former Yugoslav Republic of Macedonia in 2003.

[8] The countries for which the EU developed a framework for the stabilization and association process (SAP) were: Albania, Bosnia and Herzegovina, Croatia, The former Yugoslav Republic of Macedonia, and Serbia and Montenegro. Regional cooperation amongst these countries constitutes an essential element of this process. Considering SAP as a progressive partnership, the EU offers a mixture of trade concessions: Autonomous Trade Measures (ATMs), economic and financial assistance in the form of the CARDS programme (Community Assistance for Reconstruction, Development and Stabilization) and a contractual relationship through Stability and Association Agreements. The ATMs provide for duty-free access for goods from the western Balkans and preferential quotas for some sensitive goods such as fishery products and wine. Most agreements on textile products, however, have been negotiated separately on a bilateral basis. This asymmetric trade liberalization covers about 95 per cent of western Balkan exports. Turkey has had a customs union agreement with the EU since 1995, and, having extending this agreement to the 10 new EU member countries, enjoys free market access throughout the enlarged EU.

[9] On 10 June 1999, initiated by the EU and supported by more than 40 countries and international organizations, the Stability Pact for South-eastern Europe was adopted in Cologne. It aimed to coordinate regional and worldwide initiatives for this region on three groups of issues: democratization and human rights; economic reconstruction, development and regional cooperation; and security. The regional FTA initiatives are coordinated under the auspices of the Stability Pact Trade Working Group, which brings together senior trade policy officials from south-eastern Europe, the Republic of Moldova, international organizations (EC-DG Trade, WTO, the World Bank, UNECE) and bilateral donors (Germany, Hungary, Norway, Slovenia, Switzerland, the United Kingdom and the United States).

TABLE 1

Trade performance indicators of south-east European countries, 2004
(Values in dollars, growth in per cent)

	Merchandise exports			Merchandise imports			Trade openness
	Per capita (dollars)	*Per cent of GDP*	*Average annual growth, 1995-2004*	*Per capita (dollars)*	*Per cent of GDP*	*Average annual growth, 1995-2004*	*Exports + imports as per cent of GDP*
Albania	191	7.9	12.9	724	30.1	15.0	38.0
Bosnia and Herzegovina	412	22.7	61.5	1 360	74.9	31.0	97.6
Bulgaria	1 276	41.1	7.1	1 855	59.8	11.0	100.9
Croatia	1 806	23.4	6.3	3 734	48.3	9.2	71.7
Romania	1 084	32.1	12.9	1 507	44.6	13.7	76.7
Serbia and Montenegro	469	17.0	10.3	1 318	47.8	17.2	64.8
The former Yugoslav Republic of Macedonia	841	31.9	3.7	1 458	55.3	6.0	87.2
Turkey	872	20.9	12.6	1 346	32.2	11.8	53.1
SEE-7	956	28.2	10.0	1 658	48.9	12.8	77.1
SEE-8	907	23.6	11.4	1 476	38.4	12.3	61.9
Memorandum item:							
New EU-8	3 570	44.1	14.1	4 004	49.5	13.2	93.5

Source: National statistics.

network of bilateral free trade agreements (FTAs): 29 such FTAs were operational by 2005.[10] In June 2005, at the ministerial meeting in Sofia organized by Stability Pact Trade Working Group, the SEE countries finally committed to developing a single FTA in 2006 based on the existing CEFTA text.[11]

By end 2004, over 80 per cent of SEE-7 exports and around two thirds of Turkey's exports were going to the markets within this network of FTAs or preferential arrangements, while approximately two thirds of imports entered SEE-7 markets duty free.[12] Although transitional periods in trade liberalization with the EU played a role in this asymmetry, it also reflects the protective barriers, in some cases quite substantial, which were applied to imports from third countries, particularly by the countries that were not yet WTO members.

Table 1 provides data on SEE trade in 2004, along with trends over the past decade (see also chart 1). It is apparent that the preferential access to the EU market and the increasing number of FTAs within central and south-eastern Europe, combined with relative stability in the region since 2000, created the basis for a period of rapid trade growth. In aggregate, SEE-7 exports more than doubled in dollar value between 2000 and 2004, with an even higher growth of exports to the EU-15 partners. The market share of the SEE-7 in the EU-15 market rose from 1.5 per cent to 2.1 per cent (table 2).[13] Trade with the central European and Baltic countries also increased rapidly: exports nearly tripled in dollar value, while imports more than doubled. As a result, two thirds of total SEE-7 exports went to the enlarged EU (EU-25) in 2004 (chart 2). During the same period, intraregional trade within the SEE-7 also nearly doubled in dollar value, although its market share in total SEE-7 trade fell slightly (from 8.5 per cent to 7.3 per cent),[14] and trade with the rest of the world rose rapidly.

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[10] The Republic of Moldova and the United Nations Mission in Kosovo (under United Nations Security Council Resolution 1244) are also part of this FTA network.

[11] Stability Pact for South-eastern Europe, *Ministerial Statement on Trade Liberalization in South-eastern Europe* (Sofia), 10 June 2005.

[12] By way of comparison, in 2000, only a third of exports from The former Yugoslav Republic of Macedonia benefited from preferential treatment in the partner markets and a quarter of imports reached its market duty free. Similar situations prevailed in other western Balkan countries, while in Bulgaria and Romania, a much larger proportion of trade was already covered by preferential agreements.

[13] In relation to total extra-EU-15 imports.

[14] According to the most recent data, in January-September 2005 intraregional trade among the SEE-8 was the most rapidly growing sector of these economies (with a year-on-year rise of 48 per cent in dollar value).

Yet the trade performance of the SEE-7 countries and Turkey lagged somewhat behind that recorded for the central European and Baltic countries during the period 1994-1999, when they were undertaking active trade liberalization under CEFTA and Baltic Free Trade Agreement (BFTA) and increasing their preferential market access to the EU-15 under the Europe Agreements. The openness to trade of the SEE-8 in 2004 was markedly below the average for the EU-8 in 2000. In particular, the export propensity of the SEE-8, measured as the ratio of exports to GDP, lagged: in 2004 it was just two thirds of that recorded by the EU-8 in 2000.

The changes in the geographical structure of SEE-8 trade have also been less radical than they were in the EU-8 during the initial trade liberalization period. Nevertheless, the relative importance of the EU in the trade of almost every SEE-8 country has increased visibly over the past decade (table 2 for EU-15 and chart 2 for EU-25). But did this change reflect trade diversion in the European context, as some campaigners for regional SEE-7 reintegration had feared?

CHART 1

Trade openness in south-east European countries, 1995-2004
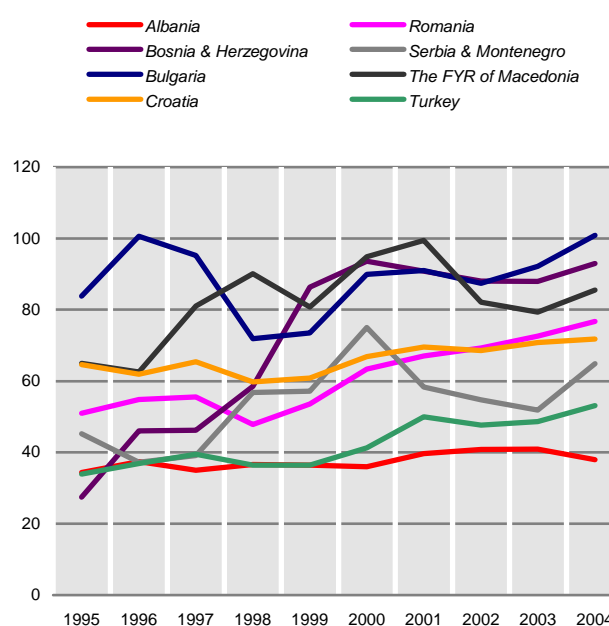
Source: UNECE Common database.

Note: Ratio of exports plus imports to GDP (expressed in current dollars).

TABLE 2

Importance of trade between south-east European countries and the EU-15, 1996, 2000, 2004
(Per cent)

	Country's/region's share in extra-EU imports [a]			EU-15 share in country's/region's exports [b]		
	1996	2000	2004	1996	2000	2004
Albania	0.03	0.03	0.04	86.0	92.7	89.4
Bosnia and Herzegovina	0.12	0.05	0.07	28.2	41.9	37.7
Bulgaria	0.29	0.30	0.39	39.1	51.3	54.3
Croatia	0.30	0.21	0.29	51.0	54.5	51.4
Romania	0.62	0.74	1.16	56.6	63.8	65.5
Serbia and Montenegro	0.08	0.08	0.13	56.4	41.6	42.5
The former Yugoslav Republic of Macedonia	0.07	0.07	0.05	42.8	42.6	52.4
Turkey	1.76	1.70	2.66	49.8	51.2	51.6
SEE-7	1.53	1.48	2.14	50.7	56.4	58.1
SEE-8	3.29	3.18	4.80	50.2	53.6	54.4
Memorandum item:						
New EU-8	7.22	8.46	11.25	60.1	68.7	65.5

Source: Eurostat and UNECE common database.

[a] Share of EU-15 imports from respective country in total extra-EU-15 imports (Eurostat data).

[b] Share of exports to EU-15 partners, as reported by each country.

In assessing possible trade diversion, it is important to take into account not only the concentration of a country's (or region's) trade flows to markets that offer preferential access, but also other factors that are likely to have been influential, particularly in the context of the transition reforms undertaken by the SEE economies since the early or mid-1990s. The strong recovery of output growth in the SEE-8 in the past four to five years, for instance, has also played a role, as well as trends in overall world trade. Indicators of trade *intensity* and *propensity*, since they normalize changes in trade

South-east European countries' trade with the EU-25, 1996 and 2004
(Percentage share in total exports/imports)

| Exports | ■ 2004 | Imports |
| | □ 1996 | |
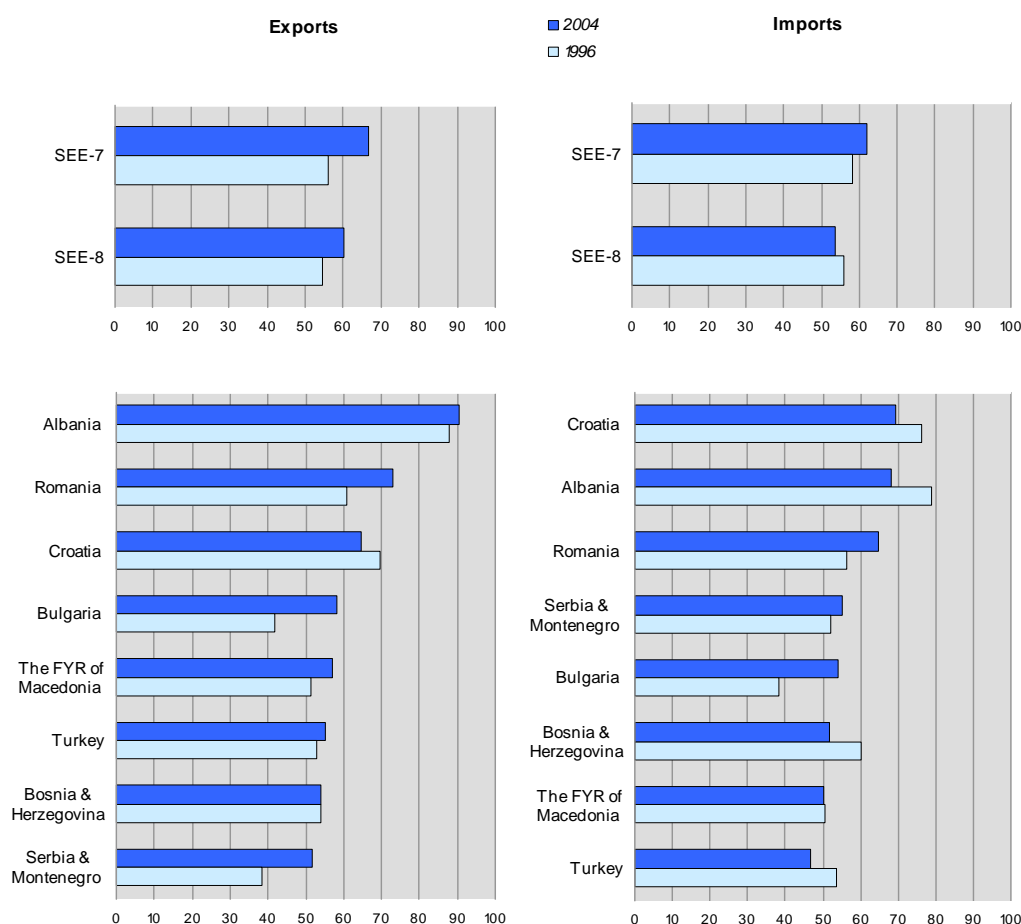
Source: UNComtrade and national statistics.

flows by the importance of the various trade partners in world trade and by exporters' GDP, help take into account both trade and non-trade factors in assessing trade diversion.[15]

The intensity measure,

$$I_{ij} = (x_{ij}/x_i)/(m_j/m_{w\text{-}i}),\qquad\qquad(1)$$

where x_{ij} is country i's exports to the region j, x_i is total country i's exports, m_j is total imports of region j and $m_{w\text{-}i}$ is world imports net of country i's imports, is based on the assumption that bilateral trade takes place in geographical patterns that are proportionate to the distribution of world trade. Thus the index I_{ij} is equal to unity when the share of country i's exports going to region j equals the latter's importance in world trade.

The index of propensity to export to certain partners, normalized by the latters' share in world trade,

$$P_{ij} = (x_{ij}/GDP_i)/(m_j/m_{w\text{-}i}),\qquad\qquad(2)$$

takes into account country i's openness to trade, and in fact could be defined as a product of country i's export-to-GDP ratio and the intensity index I_{ij}.

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[15] On the use of these indicators see J. Frenkel, *Regional Trading Blocs in the World Economic System*, Institute for International Economics (Washington, D.C.), 1997; UNECE, *Economic Bulletin for Europe*, Vol. 48 (1996), and earlier issues, Vols. 36 and 37; also K. Andersen and H. Norheim, "History, geography and regional economic integration", in K. Anderson and R. Blackhurst (eds.), *Regional Economic Integration and the Global Trading System* (Hemel Hempstead, Harvester-Wheatsheaf, 1993).

TABLE 3

**Coefficients of the intensity of and propensity to trade of south-east European countries, with the EU-25, SEE-7 and SEE-8,
1996, 2000, 2004**

	EU-25			SEE-7			SEE-8		
	1996	2000	2004	1996	2000	2004	1996	2000	2004
Intensity [a] of trade with the region									
Albania	2.19	2.44	2.23	9.19	7.74	2.51	6.16	3.59	2.31
Bosnia and Herzegovina	1.15	1.25	1.33	59.98	55.86	48.49	25.16	22.95	23.21
Bulgaria	1.04	1.42	1.44	20.95	27.50	13.88	14.24	18.01	12.38
Croatia	1.74	1.82	1.59	30.53	34.73	31.32	11.36	12.90	13.85
Romania	1.52	1.83	1.80	8.21	12.84	8.39	6.80	9.11	8.05
Serbia and Montenegro	0.96	1.26	1.31	75.83	61.52	45.87	30.62	23.95	21.86
The former Yugoslav Republic of Macedonia	1.28	1.23	1.41	57.51	64.05	39.76	25.16	25.78	20.80
Turkey	1.32	1.45	1.36	4.86	5.82	5.43	..	..	..
Propensity [b] to trade with the region									
Albania	0.15	0.17	0.18	0.64	0.55	0.20	0.43	0.25	0.18
Bosnia and Herzegovina	0.02	0.30	0.26	1.27	13.39	9.43	0.53	5.50	4.51
Bulgaria	0.52	0.54	0.59	10.35	10.53	5.71	7.03	6.90	5.09
Croatia	0.39	0.44	0.37	6.93	8.35	7.32	2.58	3.10	3.24
Romania	0.34	0.51	0.58	1.87	3.59	2.69	1.55	2.55	2.58
Serbia and Montenegro	0.11	0.30	0.21	8.72	14.63	7.42	3.52	5.70	3.53
The former Yugoslav Republic of Macedonia	0.33	0.45	0.44	14.87	23.55	12.42	6.50	9.48	6.50
Turkey	0.17	0.20	0.29	0.62	0.81	1.14	..	..	..

Source: UNComtrade database; national statistics and UNECE secretariat calculations.

[a] The "intensity of trade with a given region" is determined as follows: $I_{ij} = (x_{ij}/x_i)/(m_j/m_{w-i})$, where x_{ij} is country i's exports going to the region j, x_i is country i's total exports, m_j is total imports of the region j and m_{w-i} is world imports (net of country i's imports). An index larger than unity means that country i trades with region j more than j's weight in world trade.

[b] The "propensity to export to a given region" is determined as follows: $P_{ij} = (x_{ij}/GDP)/(m_j/m_w)$.

Table 3 presents these two indicators for three benchmark years (1996, 2000, 2004), and for the preferential trading areas: EU-25 and SEE-7 (as well as for SEE-8), with which each SEE country is involved. The intensity index *(I)* in both cases is larger than unity (except for Serbia and Montenegro in 1996),[16] indicating that these countries tend to trade with the specified regions more than those regions' weight in world trade would suggest. This might be ascribed, to some extent, to the geographical proximity of these markets. Yet the intensity indices for trade within the region are very high, most often in two digits, indicating in some instances an overreliance on intraregional trade and the need for greater market diversification for SEE-7 exports. On the other hand, changes in the intensity index may be more indicative for addressing the trade diversion issue. In fact, table 3 data show that there is a sharp difference in trends: Turkey seems increasingly to favour trade with both regions, whereas, apart from Croatia, in all other countries under consideration there is a continuous decline in the intensity indices associated with the SEE region, in contrast to the steady increase in those related to the EU. Croatia exhibits the opposite trend, with a decline in the intensity index for exports to the EU-25 but a rise in exports to the SEE-7 and Turkey.

However, the trend of declining trade intensity within the region may not give the full picture. The economies of some countries may have opened up so much (as measured by the share of exports in GDP) that there was still a rise in their propensity to trade with these partners – and not only with the EU – even when the intensity of intraregional trade was declining. Therefore, highlighting changes in the SEE-8's propensity to trade along with actual changes in intensity is helpful. For Turkey and Croatia, the trend in the propensity to export to the two above-mentioned preferential areas (as shown by the propensity index values *(P)* in the lower panel of table 3) seems to follow that of intensity. However, the picture is rather mixed in the case of the other six countries. In Bosnia and Herzegovina and in Romania, the propensity to export to both the EU-25 and SEE-7 regions (and to the SEE-8) increased during the period 1996-2004. In Albania, Bulgaria, Serbia and Montenegro, and The former Yugoslav Republic of Macedonia, the propensity indices tended to rise in trade with the EU-25, but to

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[16] Perhaps as a result of the strained relationship with the EU and international sanctions at the time.

decline in trade with the SEE-7, similar to the behaviour of the intensity indices. Nevertheless, the basis for concern regarding trade diversion in the European context seems to be moderate in the cases of Serbia and Montenegro and The former Yugoslav Republic of Macedonia if one considers the magnitude of change since 1996 and the fact that their propensity indices for trade with the SEE-8 increased in 2004. In fact, so far, only in the cases of Albania and Bulgaria does there seem to have been discernible trade diversion away from regional markets to the EU.

III. Relative factor endowments and export specialization

A.   Changes in commodity composition

Before turning to a more detailed analysis, it is useful first to summarize some of the principal changes in the export structures of the SEE countries, and second, to indicate, in necessarily broad terms, where these countries stand in relation to each other and to the new EU members (as well as the EU-15) with respect to relative factor endowments, and the extent to which the economic distance between these countries and the above mentioned EU country groups has narrowed in recent years.

Chart 3 illustrates the magnitude of change in the export commodity structure of the SEE countries, by examining how the commodity composition for each country's exports at the 3-digit level of the Standard International Trade Classification (SITC) (239 commodities) changed each year during the 1996-2004 period. In addition, the changes in the relative importance of major commodity groups of SEE exports during the decade from the mid-1990s are shown in appendix table A. Appendix table B provides data comparing the similarity of export structures of the SEE-8 in their trade with the EU-15.

With a few exceptions, the data reveal a classic path of economic development: a relative decline in the importance of food and raw material exports, accompanied initially by relatively rapid growth in the share of consumer manufactures (in particular, clothing and footwear), followed thereafter in some of these countries by diversification into machinery and transport equipment (Croatia, Romania, Turkey). During the period 1996-2004, exports of manufactures grew on average faster than other exports in all countries of the region (except Bosnia and Herzegovina), although the difference in pace was rather small in Croatia and Bulgaria. By 2004, manufactures accounted for nearly 85 per cent of Turkish exports[17] and for about three quarters of the exports of other SEE countries. In spite of this rapid expansion, south-eastern Europe remains a marginal source of manufactured exports. Its share was only some 1.2 per cent of

CHART 3

Structural changes in the commodity composition of SEE countries' exports, 1996-2004[a]
(Commodity structure of 1996=100)

Legend:
- Albania
- Bulgaria
- Croatia
- Romania
- Serbia & Montenegro
- The FYR of Macedonia
- Turkey
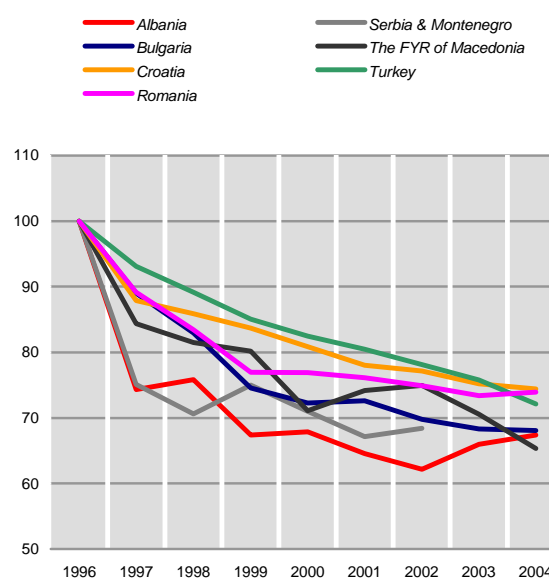
Source: UNComtrade.

[a] Finger-Kreinin similarity index of commodity structure (3-digit level of disaggregation, SITC Rev. 2) in each year compared with structure in 1996. Increasing dissimilarity from the 1996 structure is indicated by a declining value of the index.

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[17] Exports of manufactures from Turkey have been increasing exceptionally rapidly over the past three decades: at the end of the 1970s they accounted for just a quarter of total export sales, rising to three quarters by the mid-1990s and adding another 10 percentage points thereafter. For more on Turkey's early experience in developing manufactured exports and the comparative advantages of the former Yugoslavia's manufacturing, see UNECE, "Changing comparative advantages in manufactured exports from southern Europe, 1965-1978", *Economic Bulletin for Europe,* Vol. 33, No. 4, December 1981, chap. 4.

TABLE 4

Export variety, concentration and diversification in south-east European countries and the new EU-8, 1996, 2003 and 2004

	Item variety [a]		"New" export items [b]	Commodity diversification [c]		Commodity concentration [d]	
	1996	2004	2004	1996	2003	1996	2003
Albania	772	954	475	0.773	0.797	0.200	0.269
Bosnia and Herzegovina	..	2 087	..	..	0.614	..	0.182
Bulgaria	2 591	2 533	181	0.505	0.522	0.087	0.101
Croatia	2 495	2 468	249	0.541	0.508	0.115	0.116
Romania	2 185	2 484	507	0.607	0.576	0.120	0.117
Serbia and Montenegro [e]	2 285	2 408	384	0.535	0.558	0.090	0.091
The former Yugoslav Republic of							
Macedonia	1 474	1 744	538	0.670	0.698	0.129	0.165
Turkey	2 806	2 784	125	0.628	0.545	0.108	0.092
SEE-7							
Mean	1 967	2 097	389	0.605	0.611	0.123	0.149
Coefficient of variation	35.9	27.6	37.5	16.8	17.0	33.2	42.0
SEE-8							
Mean	2 087	2 183	351	0.608	0.602	0.121	0.142
Coefficient of variation	34.4	26.9	47.4	15.3	16.4	31.3	43.2
Memorandum item:							
New EU-8							
Mean	2 326	2 486	337	0.470	0.474	0.085	0.132
Coefficient of variation	13.2	9.3	57.2	15.2	18.7	33.7	28.2

Source: UNCTAD, *Handbook of Statistics* (CD-ROM), 2004; UNECE secretariat calculations based on UNComtrade data.

Note: The first two indicators, item variety and "new" exports, are derived from SITC Rev. 3 basic headings – the highest degree of disaggregation which provides for 3,121 items. The commodity "concentration" and "diversification" indices are calculated on the basis of 3-digit SITC Rev. 2 classification.

[a] Item variety is a simple product count at the level of basic headings of SITC Rev. 3, which allows for a maximum of 3,121 items.

[b] "New" export items refer to the items (SITC Rev. 3 basic headings) appearing for the first time on the export list in 2004 as compared with 1996 for those items with values exceeding $10,000.

[c] The diversification index ranges from 0 to 1, and reveals the difference between the structure of trade of the country and the world average. The index value closer to 1 indicates a bigger difference from the world average. The absolute deviation of the country share from the world structure is obtained as follows:

$$S_j = \frac{\sum_{i=1}^{n} |h_{ij} - h_i|}{2}$$

where h_{ij} = share of commodity i in total exports (or imports) of country j
h_i = share of commodity i in total world exports (or imports)

This index is a modified Finger-Kreinin measure of similarity in trade. For more information, see J. Finger and M. Kreinin, "A measure of 'export similarity' and its possible uses", *Economic Journal*, Vol. 89, 1979, pp. 905-912.

[d] The Herfindahl-Hirschman index is a measure of the degree of market concentration. It has been normalized to obtain values ranking from 0 to 1 (maximum concentration), according to the following formula:

$$H_j = \frac{\sqrt{\sum_{i=1}^{239} (x_i / X)^2} - \sqrt{1 / 239}}{1 - \sqrt{1/239}}$$

where H_j = country index
x_i = value of exports of product i
239 = number of products at the three-digit SITC, Rev. 2 level

$$X = \sum_{i=1}^{239} X_i$$

[e] 2002 instead of 2004.

total world exports of manufactures in 2003, with Turkey alone supplying more than half of this; the SEE-8 supplied some 2.1 per cent of the manufactured imports of the EU-15.[18]

As mentioned above, there were considerable structural changes in the commodity composition of SEE countries' exports between 1996 and 2004. During this period quite a large number of new commodities appeared on their list of exported goods. However, due to ongoing industrial restructuring and increasing competition on the international markets, exports of certain goods ceased and the general variety of exported items had narrowed slightly in Bulgaria, Croatia and Turkey by 2004 (table 4).

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[18] Based on WTO data for 2003 and Eurostat data for 2004.

GDP per capita and relative factor endowments in south-eastern Europe and the EU, 2004

	GDP per capita		Total capital stock per capita	Educational attainment [d]	Skill ratio [e]
	Current exchange rate [a]	PPP 2000 [b]	Dollars [c]		
Albania	2 406	5 536	..	0.89	..
Bosnia and Herzegovina	1 906	3 035	..	0.84	..
Bulgaria	3 102	7 642	10 418	0.91	24.0
Croatia	7 725	10 773	21 252	0.90	23.0
Romania	3 376	9 187	15 156	0.88	16.5
Serbia and Montenegro [f]	2 757	4 996	5 700	0.90	24.9
The former Yugoslav Republic of Macedonia	2 690	5 441	9 093	0.87	21.7
Turkey	4 176	7 315	12 423	0.80	11.6
SEE-7					
Mean	3 423	6 659	11 720	0.88	22.0
Coefficient of variation	52.9	37.2	43.6	2.5	13.3
SEE-8					
Mean	3 517	6 741	11 820	0.87	20.3
Coefficient of variation	48.7	34.5	40.1	4.0	23.3
EU-25					
Mean	25 466	22 341	41 670	0.96	27.0
Coefficient of variation	61.7	42.3	39.0	3.3	20.7
EU-15					
Mean	35 420	28 416	51 177	0.97	27.4
Coefficient of variation	34.6	27.7	24.0	2.40	20.7
Czech Republic	10 489	16 826	43 341	0.92	30.4
Estonia	8 300	12 853	26 737	0.98	26.0
Hungary	9 928	13 998	27 497	0.95	27.1
Latvia	5 890	10 971	19 707	0.95	23.5
Lithuania	6 479	11 550	18 177	0.96	24.3
Poland	6 345	11 634	20 574	0.96	25.0
Slovakia	7 639	12 502	29 863	0.91	28.7
Slovenia	16 115	18 773	38 437	0.96	29.2
New EU-8					
Mean	8 898	13 638	28 042	0.95	26.8
Coefficient of variation	35.3	19.1	30.1	2.30	9.3

Source: UNECE Statistical Division database; UNDP, Human Development Report database; ILO, LABORSTA database; national statistics.

[a] In dollars at current prices and average 2004 exchange rates.

[b] In dollars at purchasing power parity for 2000.

[c] Sum of total gross fixed capital formation over 10 years, 1995-2004, at constant prices and PPP (United States) of 2000, per head of population in 2004.

[d] UNDP Education Index combining adult literacy rate and joint gross enrolment ratio for primary, secondary and tertiary education.

[e] 2003 instead of 2004. Skill ratio refers to share of professionals, associate professionals and technicians (ISCO 1988 groups 2 and 3) in total employment.

[f] UNECE secretariat estimates for capital stock, education attainment and skill ratio refer to the Republic of Serbia only (excluding Kosovo and Metohia). Total capital stock estimates for 1995-2004 are based on Serbia's average annual gross fixed capital formation data for 1998-2003 (online data and in *System of National Accounts of the Republic of Serbia 2000-2003*, Belgrade 2005). Education attainment and skill ratio estimates are based on 2002 data from StatOffice of Republic of Serbia, and UNDP, *Women and Men in Serbia* (Belgrade), 2005.

Nevertheless, compared with the EU-8, the variety of export items remained markedly lower only in Albania, Bosnia and Herzegovina, and The former Yugoslav Republic of Macedonia, but not in the other SEE countries.

In general, these changes in the variety of exported goods were accompanied by increases in commodity concentration, as measured by the Herfindahl-Hirschmann index at the 3-digit SITC commodity level, and the variation in degrees of concentration among the SEE-8 countries increased (table 4). In fact, commodity concentration eased in 2004 only in Romania and Turkey as compared to 1996. In comparison to the EU-8, the degree of commodity concentration was distinctly higher in the SEE-8 countries, resulting partly from the narrower export base of some, on the one hand, and from their limited success in penetrating major markets and integrating into international production networks, on the other.

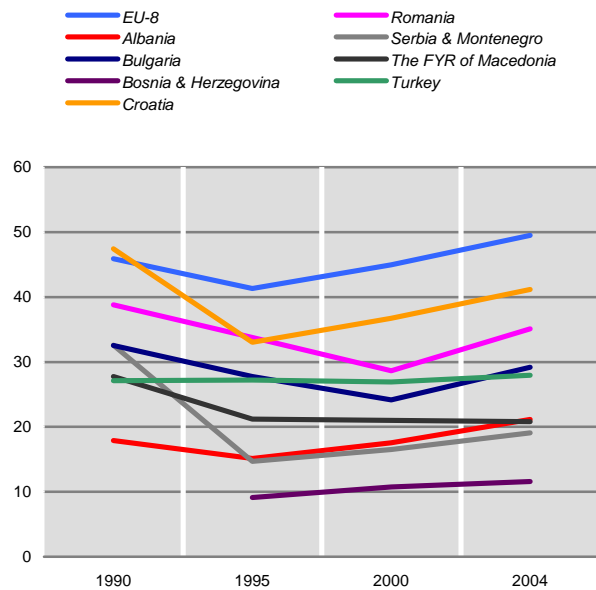## B. Relative factor endowments and levels of development

Since factor endowments are generally considered an important determinant of the commodity composition of trade flows, the factor content of SEE-8 trade, along with national endowments, are examined below. However, attempts to measure the factor endowments of individual countries are fraught with difficulties, both conceptual and statistical. This has not deterred efforts by various institutions (e.g. the World Bank, OECD, World-PENN Tables) and researchers to estimate physical and human capital stocks, using a mixture of direct and indirect variables.[19] However, most of the available data sets of such indicators do not include comprehensive and reliable data for the SEE countries, with the occasional exception of Turkey and, in some cases, Bulgaria, Croatia and Romania. Hence our table 5 presents only some indicative measures of the physical and human capital for the SEE countries and their counterparts in the economic transition process in central Europe and the Baltics, with the EU-25 and EU-15 averages (unweighted) shown as a benchmark. These estimates of stocks are unavoidably crude, and should be regarded as indicating only broad orders of magnitude.

The data in table 5 show significant differences in factor endowments and levels of economic development between SEE countries and both the old EU-15 and the present EU-25. Chart 4 illustrates the pace at which the SEE countries have (or have not) been catching up with the average level of GDP per capita in the EU-15 after the initial transitional shock and military conflicts that had marred economic development in the region until the late 1990s. The gap between the EU-15 and the majority of SEE countries seems to have narrowed only slightly, so that by end 2004 it was still quite substantial. Progress in The former Yugoslav Republic of Macedonia, in particular, seems to be lagging behind since the mid-1990s, while Turkey's position (at below 30 per cent of the EU-15 level) remains virtually unchanged since the early 1990s.

Although less striking, the differences between the SEE-8 and the new EU-8 countries are of considerable magnitude as well. For instance, GDP per capita in the new EU member countries is on average more than double that of the SEE-8 countries. The difference in per capita levels of estimated capital stock is even larger. This, incidentally, also reflects much lower levels of foreign direct investment (FDI) in the SEE-8 (chart 5). The human capital base, as measured by skill ratios, is also distinctly higher in the new EU-8 group than in the SEE-8, although the potential for human capital upgrading, which can be tentatively assessed on the basis of the UNDP Education Index, seems to be somewhat similar for both groups. Besides, it is worth noting that there are noticeably fewer differences between individual new EU member countries on any of these indicators (as reflected in coefficients of variation) than those between SEE countries. Croatia stands out on

CHART 4

GDP per capita in European countries and the EU-8, relative to the EU-15, 1990-2004
(Average for EU-15 = 100)

Legend: EU-8, Albania, Bulgaria, Bosnia & Herzegovina, Croatia, Romania, Serbia & Montenegro, The FYR of Macedonia, Turkey

Source: UNECE Common database.

Note: Based on GDP per capita in dollars, at prices and PPP (United States) of 2000.

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[19] World Bank, *World Development Indicators* [web.worldbank.org]; A. Heston, R. Summers and B. Aten, *Penn World Table Version 6.1*, Center for International Comparisons at the University of Pennsylvania (CICUP), October 2002; R. Barro and Jong-Wha Lee, *International Data on Educational Attainment: Updates and Implications,* CID Working Paper, No. 42.

CHART 5

Capital stock and FDI in south-east European countries, 1995-2004
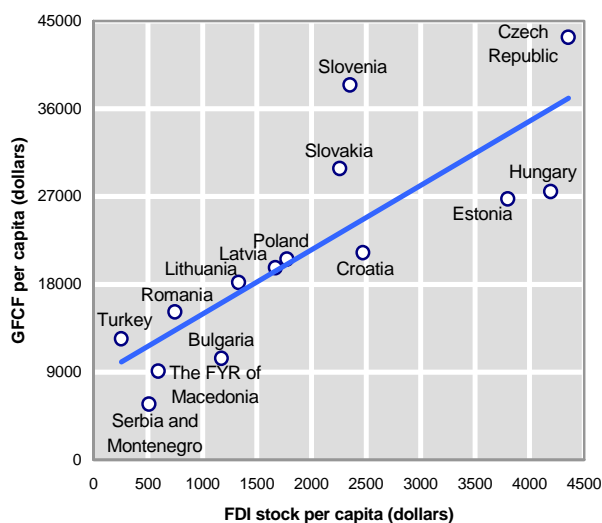
Source: UNECE Common database.

Note: Cumulative gross fixed capital formation, 1995-2004, at constant prices and cumulative FDI at the end of 2004 are in current dollars, per head of population in 2004.

several measures and seems to be closer to some new EU member countries than to the countries of the SEE region.

C. The factor intensity of exports from south-eastern Europe

To what extent are the differences in factor endowments and factor productivity discernible in the evolution of the export structures of the SEE countries? To answer this question, a classification of products according to the mix of human and physical capital intensity would be useful. However, establishing such a classification requires original inter-industry data (including, for instance, wage and non-wage components of value added per capita, in order to distinguish human and physical capital contributions), which are not currently available for most of these countries.[20] Therefore in this study we employ a general classification proposed by UNCTAD,[21] which assigns the 3-digit SITC Rev. 2 commodities to five categories according to the mix of different skill, technology, capital and scale requirements at the final-product stage. The five categories are: (i) primary commodities (including processed food), (ii) labour- and resource-intensive manufactures (e.g. textiles, clothing, footwear, wood products), (iii) manufactures with low to medium skill and technology intensity (e.g. iron and steel, fabricated metal products, certain transport equipment), (iv) manufactures with medium to high skill and technology intensity (e.g. rubber and plastic products, non-electrical machinery, road motor vehicles), and (v) manufactures with high skill and technology intensity (e.g. pharmaceutical products, computers and office equipment, communication equipment and semiconductors, aircraft and associated equipment, scientific instruments).[22] Fuels (SITC 3) and non-classified goods are excluded. To a certain extent this grouping also allows for product differentiation according to the industry's productivity potential.[23] The initial results of this commodity regrouping for exports from the SEE countries to the world and within the region are presented in charts 6 and 7. The same commodity regrouping is also used in analysing changes in their revealed comparative advantages (tables 6 and 7).

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[20] One of the earlier attempts to classify industries according to human and physical capital intensities was done by H. Lary in 1968. His approach assumes that wages per capita are positively correlated with the level of skills used in each industry and that "non-wages" per capita are positively correlated with physical capital stock. H. Lary, *Imports of Manufactures from Less Developed Countries,* NBER, 1968. More recently, an adapted version of his classification was employed for an analysis of export structures in eastern Europe in UNECE, *Economic Survey of Europe*, *1998 No. 3*.

[21] For more details on this classification and its use for trade analysis, see UNCTAD, *Trade and Development Report*, *1996,* p. 116 and 2002, p. 87.

[22] For convenience, in the text, tables and charts reference is made to "low" instead of "low to medium" and to "medium" instead of "medium to high" intensities.

[23] However, it has to be borne in mind that, as with any such classifications, there is a degree of uncertainty and compromise. For instance, the experience of the motor vehicles industry may put in doubt the relationship between skill requirements and capital intensity; production fragmentation of multinational companies allow the latter to distinguish low skill-, labour- and resource-intensive stages of production in otherwise capital-intensive and technologically-advanced goods.

CHART 6

Commodity composition of exports from south-east European countries, 1996 and 2004
(Shares in per cent)

□ *Primary commodities*
■ *Medium skill and technology intensive*
■ *Labour-intensive & resource-based manufactures*
■ *High skill and technology intensive*
□ *Low skill and technology intensive*

Exports, 1996   **Exports, 2004**
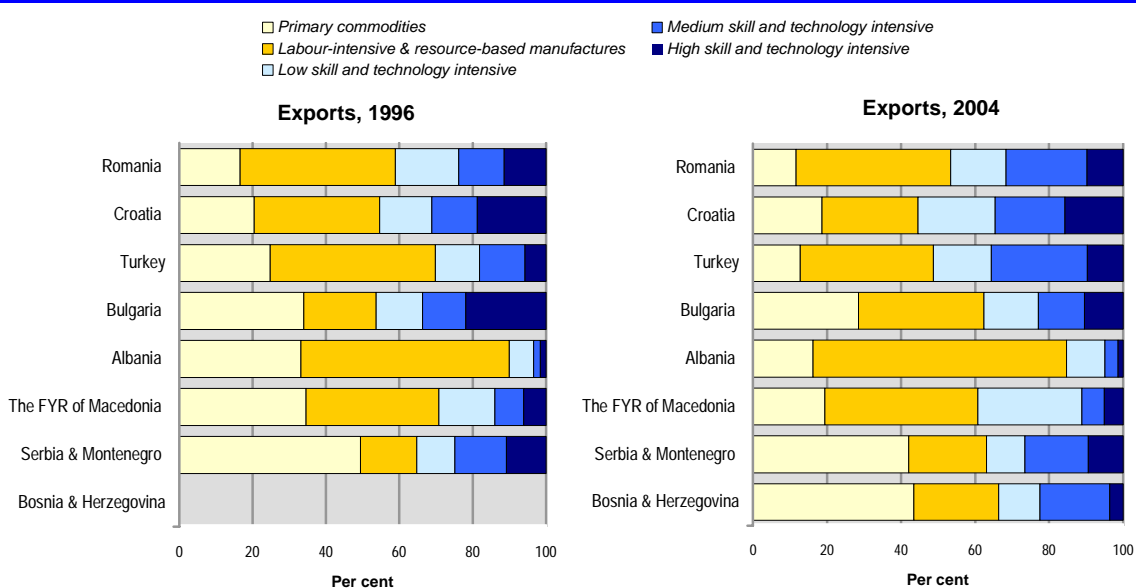
Source: UNComtrade, national statistics.

Note: Commodity grouping is based on 3-digit SITC Rev. 2 data. Commodities are reclassified into categories according to the mix of different skill, technology and capital intensities. Fuels and unclassified commodities are excluded.

As chart 6 indicates, in 2004 primary commodities (including processed food) made up the largest single group in exports from Bosnia and Herzegovina, and Serbia and Montenegro, whereas in the exports of all the other countries, labour-intensive and resource-based manufactures dominated, although to varying degrees. The predominance of the latter category was particularly marked in Albania (two thirds of total exports); it also accounted for nearly 40 per cent of exports from Romania and The former Yugoslav Republic of Macedonia. Somewhat surprisingly, the two above-mentioned categories jointly accounted for more than 55 per cent of Bulgarian exports, placing this country at par with Bosnia and Herzegovina, The former Yugoslav Republic of Macedonia, and Serbia and Montenegro. Still, in Bulgaria's case it was probably driven by the above-mentioned greater degree of trade diversion from the intraregional to the EU market over the past decade. (Specialization is to a large extent driven by demand from the relevant market and by the possibility to penetrate it with the least resistance.)

A disaggregation of the labour-intensive and resource-based category into the major groups of textiles (SITC 651-659), clothing (SITC 842-848) and leather goods and footwear (SITC 612, 851) show striking variations in their relative importance in each of the countries. In 2004, these "classic" labour-intensive goods accounted for more than 90 per cent of exports in this category from Albania and The former Yugoslav Republic of Macedonia, for 75-84 per cent from Bulgaria, Romania and Turkey, and for 40-60 per cent from Bosnia and Herzegovina, Croatia, and Serbia and Montenegro. In the latter three countries, the remainder of the exports in this category were spread among such goods as furniture, construction materials, paper products and wood manufactures.

The share of low skill- and technology-intensive products in total exports generally ranged from 10 to 18 per cent (except for The former Yugoslav Republic of Macedonia, where they accounted for more than 25 per cent). This category, in fact, dominated intraregional trade, the share of intraregional purchases of medium and high skill- and technology-intensive goods being quite low (chart 7).[24] For overall exports,

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[24] For intraregional trade composition we use import data, which tend to be more reliable. Chart 7 indicates that in six out of eight SEE countries more than 90 per cent of medium and high skill- and technology-intensive goods were purchased from outside the region.

CHART 7

Share of intra-SEE trade in total SEE imports, by commodity, 2004 [a]

(Per cent)
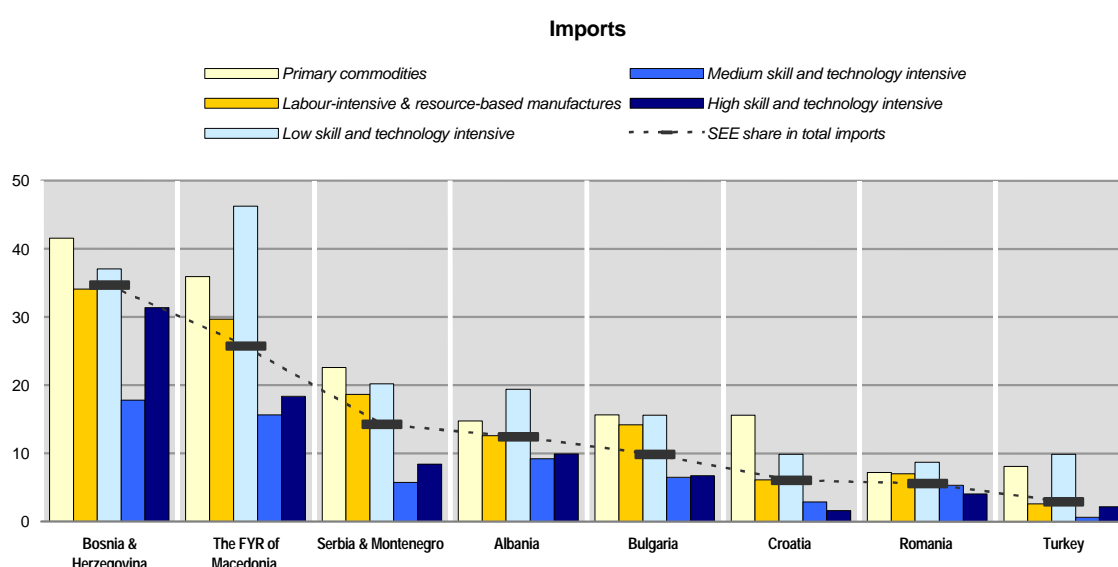
Imports

Legend:
- Primary commodities
- Labour-intensive & resource-based manufactures
- Low skill and technology intensive
- Medium skill and technology intensive
- High skill and technology intensive
- - - - SEE share in total imports

Source: UNComtrade and national statistics.

Note: Commodity grouping is based on 3-digit SITC Rev. 2 data. See note for chart 6.

[a] Countries are ranked by the importance of intra-SEE trade in their total imports.

however, the variation among the SEE-8 countries in the shares of the latter two commodity categories seems to be in line with observations on their capital stock and skill ratios in table 5.[25]

D. Changes in factor intensity of exports, 1996-2004

The apparent difference in export structures between 1996 and 2004, as illustrated by chart 6 and appendix table A, point to the presence of some time trends, although these may have been disrupted by certain one-off trade transactions (many SEE-7 countries being rather small) or cyclical market fluctuations. In order to abstract from these elements and to compare structural changes between the countries (although for such a short period and for annual data the separation of trends from cyclical movements is problematic), we first verified the fitted linear time trends. For those countries that showed statistically significant linear trends, we then estimated the semi-elasticities of the factor-intensity group shares with respect to time (rate of growth) based on the semi-log or so-called growth model (since linear regression coefficients on time are not directly comparable between the countries).[26]

The results, which are presented in table 7, point once again to the heterogeneity of SEE. The most common element is a widespread decline in the relative importance of primary commodities (including processed food), with Albania and Turkey exhibiting the strongest rates of decline. The changes in the relative importance of the low skill- and technology-intensive export category vary in sign, but are not statistically significant (at the 5 per cent level of significance) except for Romania. Turkey exhibits the most consistently upward change in its export structure, switching towards

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[25] The poor "fit" of Turkey – a country with the lowest skill ratio among the SEE, and with products of medium and high skill and technology requirements accounting for a third of exports – seems to illustrate the earlier mentioned flaw in the relationship between skill and capital intensity due to the intra-firm production fragmentation and specificity of some industries (motor vehicles). Motor vehicles and their parts (SITC 781-784) accounted for some 13 per cent of total Turkish exports in 2004.

[26] For regression equations and explanations, see note to table 7.

TABLE 6

Revealed comparative advantage by skill level and technology intensity,[a] of south-east European countries and the new EU-8, 2004
(Measured as the deviation between the actual and neutral trade balance)

	Primary commodities		Labour-intensive and resource-based manufactures		Low skill and technology intensity		Medium skill and technology intensity		High skill and technology intensity	
	Average 1996-1998	Average 2002-2004	Average 1996-1998	Average 2002-2004	Average 1996-1998	Average 2002-2004	Average 1996-1998	Average 2002-2004	Average 1996-1998	Average 2002-2004
Albania	-1.3	-31.6	87.1	138.4	-4.1	-4.3	-52.1	-61.9	-29.6	-40.6
Bosnia and Herzegovina	..	57.1	..	21.8		-0.2		-25.2		-53.5
Bulgaria	41.9	58.5	-3.0	58.6	36.4	23.7	-52.4	-88.4	-22.8	-52.4
Croatia	18.2	26.2	63.0	41.7	16.5	24.8	-75.4	-64.0	-22.3	-28.7
Romania	0.5	-1.3	88.2	89.9	50.9	18.0	-70.5	-44.3	-69.1	-62.2
Serbia and Montenegro[b]	56.6	93.3	-7.2	20.2	26.3	9.9	-19.3	-43.9	-56.3	-79.4
The former Yugoslav Republic of Macedonia	7.6	-11.1	78.2	132.5	48.9	51.7	-68.1	-83.2	-66.7	-89.9
Turkey	21.0	-12.6	161.1	135.4	6.0	22.3	-127.5	-44.8	-60.6	-100.3
SEE-7[c]	19.5	19.2	54.4	74.9	36.1	19.1	-63.4	-57.2	-46.6	-56.0
SEE-8[c]	20.5	1.4	115.6	106.1	19.0	20.6	-101.0	-49.1	-54.1	-79.0
Memorandum item:										
New EU-8	9.4	-0.4	41.5	24.2	17.8	4.0	-21.2	11.6	-47.5	-39.4

Source: UNComtrade database and UNECE secretariat calculations.

Note: RCA is measured by the CTB indicator. $CTB = [(x_{ik}-m_{ik})/(x_i+m)-((x_i-m_i)/(x_i+m))*((x_{ik}+m_{ik})/(x_i+m))]*10,000$, where i denotes country, k denotes commodity, x stands for exports and m for imports. CTB compares country i's actual trade balance for a given commodity to the "expected" (or "neutral") balance, assuming that each commodity contributes to total trade in proportion to its weight. A positive contribution is interpreted as a "revealed comparative advantage" for trade in that commodity, and a negative, as a "revealed comparative disadvantage". By definition, the sum of CTBs for all commodities is zero. For more details on the CTB indicator, see UNECE, *Economic Survey of Europe, 2002 No. 1*, p. 142.

[a] Commodity grouping is based on 3-digit SITC Rev. 2 data. Commodities are reclassified into categories according to the mix of different skill, technology and capital intensities. Fuels and unclassified commodities are excluded.

[b] Data for Serbia and Montenegro refer to 2002 instead of the average for 2002-2004.

[c] Aggregates for 1996-1998 exclude Bosnia and Herzegovina.

medium and high skill- and technology-intensive goods at the expense of such export categories as primary commodities and labour-intensive and resource-based exports. Some similarity to this pattern of change can also be observed in Croatia and Romania.[27] Interestingly, Bulgaria seems to be lagging behind these EU candidate countries in upgrading its exports.

E. Comparison with the EU-8

During the period 1996-2004, the underlying trend in the export structure of the EU-8 group as a whole was clearly towards the strengthening of the relative importance of the medium and high skill- and technology-intensive exports at the expense of the three other export categories.[28] The trends in the SEE-8 countries, discussed earlier, seem to have been diverging from the EU-8 pattern. In fact, for the SEE-8 group as a whole, the average export structure in the last three-year period (2002-2004) was closer to that of the EU-8 countries in the initial period of our observations (1996-1998) than to the current one. Moreover, the observed trends seem to be more in line with those that the EU-8 exhibited in their period of active trade liberalization in 1994-1998.

In 2002-2004, the average share of the medium and high skill- and technology-intensive products in the exports of the SEE-8 was about half that in EU-8 exports, whereas the share of primary commodities (including processed foods) was more than one third higher, and that of labour-intensive and resource-based goods at least twice as high. In particular, the current export structures of Albania, Bosnia and Herzegovina, Serbia and Montenegro, and The former Yugoslav Republic of Macedonia

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[27] Similar conclusions on Romania's export upgrading are drawn also in B. Kaminski and F. Ng, *Romania's Integration into European Markets: Implications for Sustainability of the Current Export Boom,* World Bank Policy Research Paper, No. 345 (Washington, D.C.), November 2004.

[28] The estimated semi-elasticities are as follows: +4.46 for the medium skill- and technology-intensive category and +3.45 for the high skill- and technology-intensive category.

TABLE 7

Trends and semi-elasticities in export structures of south-east European countries according to factor intensity, 1996-2004

Export category by factor intensity	Sign of regression coefficient		Statistically not significant [a]
	Positive (+)	Negative (-)	
I. Primary commodities (including processed food)		Albania .... (-11.93) Bulgaria .... (-2.74) Romania .... (-5.20) The former Yugoslav Republic of Macedonia .... (-5.78) Turkey .... (-9.16)	Croatia Serbia and Montenegro
II. Labour-intensive and resource-based manufactures	Albania .... (3.68) Bulgaria .... (7.67) The former Yugoslav Republic of Macedonia ..... (2.44)	Croatia .... (-3.12) Turkey .... (-2.37)	Romania Serbia and Montenegro
III. Low skill- and technology-intensive manufactures		Romania .... (-4.20)	Albania Bulgaria Croatia Serbia and Montenegro The former Yugoslav Republic of Macedonia Turkey
IV. Medium skill- and technology-intensive manufactures	Croatia .... (4.26) Romania .... (6.80) Serbia and Montenegro ... (4.63) Turkey .... (10.61)	The former Yugoslav Republic of Macedonia .... (-2.58)	Albania Bulgaria
V. High skill- and technology-intensive manufactures	Turkey .... (5.58)	Bulgaria .... (-8.81) Croatia .... (-1.73)	Albania Romania Serbia and Montenegro The former Yugoslav Republic of Macedonia

Source: UNECE secretariat calculations, based on UNComtrade data.

Note: Upward or downward trend in factor-intensity group shares of country i (H_{it}) is based on the sign of slope coefficient (b) in the linear trend model (H_{it}= a+bt). The slope coefficient (b) of semi-log model (ln H_{it}= a+bt) when multiplied by 100 is referred to as semi-elasticity, and here indicates the annual rate of growth of the regressand, in our case, growth of factor-intensity group share of country i.

[a] Coefficient is not significant at the 5 per cent level.

are much more biased towards primary commodities (including processed foods) and labour-intensive and resource-based goods than those of the EU-8. For Croatia and Romania, where trends were of the same sign in at least three out of five categories, the data show that during the period 1996-1998 structures of exports in respect to factor intensity were closer to those of the EU-8 than they have been recently, pointing probably to the lagging pace of structural change. Among SEE countries, only Turkey seems to be slowly converging to the EU-8 export pattern, although the distance between the Turkish and EU-8 export structures with regard to skill and technology intensities remains considerable. This tentative assessment of convergence (or divergence) trends between the EU-8 and the SEE-8 countries' export patterns is supported by changes in the degree of similarity of their export composition observed at a more disaggregated level in trade with the EU-15 (appendix table B).

F. Revealed comparative advantage (RCA)

Have the observed changes in export structures between 1996 and 2004 translated into new comparative advantages in the SEE countries? To examine changes in the RCA, we employed the contribution to the trade balance (CTB) indicator, which compares countries' actual trade balance for a given commodity to the "neutral" balance, (i.e. the balance that is normalized in proportion to the given commodity's weight in trade (see note to table 6 for the formula).[29] The CTB indicator

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[29] There are several RCA indicators used by trade economists, based on the shares of exports, imports or net trade of individual commodities/industrial branches for a given country vis-à-vis world/partner trade. In this study we use the CTB indicator proposed by Freudenberg and Lemoine, who argued (rightly so in our opinion) that as imports become an

presented in table 6 confirms the current tendency of SEE-8 countries towards a strong RCA in labour-intensive and resource-based exports, followed by the low skill- and technology-intensive group (except for Albania and Bosnia and Herzegovina).[30]

As the data indicate, over the past 10 years, at the aggregate level (SEE-8) there has been no shift from clear advantage to disadvantage (indicated by negative CTB) in any of five export categories considered, even though the primary commodity category (including processed foods) saw a significant drop in its positive contribution to the trade balance (CTB). At the same time, the negative contribution of exports of the medium skill- and technology-intensive category fell by one half. However, these important swings in the aggregate figures mainly reflected changes in Turkey's RCA levels; the SEE-7 country group exhibited much less variation in RCA over the 10-year period.

In four countries out of eight, the CTB of primary commodities (including processed foods) was positive and has been increasing since mid-1990s. In The former Yugoslav Republic of Macedonia and Turkey, it turned negative, while in Romania, the CTB of primary commodities (including processed foods) was more or less stable in both the initial and recent periods. A uniformly high and positive contribution to the trade balance (increasing in six out of eight countries) is observed in the category of labour-intensive and resource-based goods. Not surprisingly, within this category RCA is mainly in the sub-categories of textiles and clothing. The RCA has also been quite strong across the region in the category of low skill- and technology-intensive exports, although it seems to be levelling out in Bulgaria and Romania.

Though uniformly negative, the RCA in the medium skill- and technology-intensive category of goods exhibited rather diverse behaviour over the period under consideration. It seems to be turning towards a positive trend in Turkey, which in the last few years in some important sub-categories, such as motor vehicles, has already acquired a comparative advantage. In the rest of the region, only Croatia and Romania exhibit similar trends. Again, these three countries seem more similar to the EU-8, which have acquired a clear comparative advantage in medium skill- and technology-intensive exports over the past 10 years. The first step for them was also a positive CTB for motor vehicle exports.[31]

IV. Possibilities for further trade expansion: concluding remarks

As discussed above, over the past 10 years the SEE countries have experienced considerable changes in their foreign trade relations and trade composition. A rapid rise in exports and imports was accompanied by geographical reorientation, marked in particular by gains in the relative importance of EU partners. There were also changes in the commodity composition that reflected emerging specialization patterns, suggesting some progress in industrial restructuring. However, their growing dependence on the EU, particularly their increasingly heavy reliance on outsourcing orders from EU firms (mainly in the labour-intensive sectors of textiles and clothing, leather and footwear) in the past four years, seems to have resulted in a narrowing of the commodity mix of SEE exports, especially those from the western Balkan countries. The notable similarity of their export commodity structures has also led to stronger competition among the countries in the region for new orders and FDI. However, with a few exceptions, indicators such as openness to trade, variety of commodities traded and new commodities in the exports of these countries, along with the growth pace of export revenues during the period 1996-2004, were lower than similar indicators for the central European and Baltic

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important factor in explaining export performance in *transition economies* "comparative advantage is properly a net trade concept", and hence the measure based on the commodity trade balance is more revealing. M. Freudenberg and F. Lemoine, *Central and Eastern European Countries in the International Division of Labour in Europe,* CEPII Working Paper, No. 1999-05 (Paris), April 1999.

[30] We use three-year moving averages in order to smooth one-off effects that are quite common in the foreign trade of small economies. For more details on the CTB indicator, see the note to table 6 and UNECE, *Economic Survey of Europe, 2002 No. 1*, chap. 3.5(iii).

[31] For more details on the RCA of EU-8 countries, see UNECE, *Economic Survey of Europe, 2002 No. 1*, chap. 3.5(iii), pp. 137-149.

countries in 1998-1999, which marked the end of the period of this latter group's active trade liberalization under the CEFTA and BFTA and improved market access under the European Agreements.

Among the many reasons for this somewhat inferior performance has been the failure among the SEE to establish a multilateral approach to intraregional trade liberalization over the past decade. In fact, several studies that have scrutinized trade developments of the emerging European market economies using gravity models have pointed to the importance of the CEFTA and BFTA agreements for the overall successful trade performance of the central European and Baltic countries, including Bulgaria and Romania. One study even concluded that the CEFTA and BFTA were necessary for the welfare gains from the European Agreements.[32] Hence the recent commitment by the SEE-7 to boost intraregional trade and to develop a single south-east European Free Trade Agreement might help address this shortcoming.

However, our analysis provides a mixed picture regarding the possibilities for further expansion of SEE intraregional trade. Apart from the encouraging output recovery, the basis for such expansion, in particular in the four less developed countries, is somewhat uncertain. As the analysis above shows, there are no significant differences in the relative factor endowments, except for a few countries; differences in technology are rather negligible too, since these countries are net importers of machinery and equipment and most likely would import the same modern technologies at the same time. Scale economies and differentiated products could, however, be a source of increased regional trade, but these are dependent on specific industry and country factors, including shared cultural values and common borders, and, not least, a willingness of governments and firms to engage in economic cooperation. Sustained growth in regional trade may also require higher levels of GDP than currently prevail in the region.

In trade with the EU and other developed markets, the main specializations – textile, clothing and footwear – of many SEE countries may not be sustainable in the medium term, since these sectors are greatly exposed to the rapidly increasing competition from the lower-cost, labour-abundant Asian countries. Thus it is essential that the SEE countries upgrade their production and export base and foster human resource development in order to gain new comparative advantages in higher skill and advanced technology sectors.

According to the "quality ladders" concept in economic growth,[33] the less developed economies can compete with the more advanced industrialized economies by imitating innovations. In doing so, they can benefit substantially from lower manufacturing costs (if factor endowment conditions permit). Moreover, after several rounds of such imitation, a progressive increase in the quality of their products might occur. The experience of the EU-8 and of some of the south-east European EU-acceding countries demonstrates that FDI can be instrumental in this regard. High levels of FDI provide a channel for importing product designs and technologies, while an abundance of human capital and its relatively low cost make the imitation feasible and beneficial. [34]

In conclusion, the results presented here clearly support policies that favour international openness, including attracting FDI inflows, strengthening intraregional cooperation and stability, and increasing the quality of and access to skill-enhancing education.

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[32] A. Adam, T. Kosma and J. McHugh, *Trade Liberalization Strategies: What could South-eastern Europe Learn from the CEFTA and BFTA?,* IMF Working Paper, WP/03/239 (Washington, D.C.), December 2003.

[33] G. Grossman and E. Helpman, "Quality ladders and product cycles"*, Quarterly Journal of Economics*, Vol. 106, No. 2, 1991.

[34] Among the recent empirical investigations in this area, see, for instance, Y. Kandogan, "How much restructuring did the transition countries experience? Evidence from quality of their exports"*, Comparative Economic Studies*, Vol. 47, No. 3, September 2005; UNECE, 'The benefits from product differentiation in modern economies', *Economic Survey of Europe, 2004 No 1.*, chap. 6, pp. 145-162.

Changes in commodity composition of foreign trade in south-east European countries, 1996-2004
(Shares and growth rates in per cent)

	Exports							
						Manufactures		
								of which:
					Chemical	Machinery and transport	Other manufactured	clothing and
		All food items	Raw materials	Fuels	products	equipment	goods	footwear
SITC Codes	Total	0+1+4+22	2-22+68	3	5	7	6+8-68	(84+85)
Albania								
Structure 1996	100.0	11.1	20.6	3.0	1.4	1.7	62.2	47.9
Structure 2004	100.0	5.8	10.0	2.6	0.4	3.9	77.3	60.6
Growth rates in 1996-2000	5.5	-7.3	-12.7	-6.4	-12.3	9.1	12.1	13.4
Growth rates in 2000-2004	22.9	18.8	24.0	34.1	6.7	46.2	22.1	21.2
Bosnia and Herzegovina								
Structure 1996	100.0	2.5	30.3	1.5	2.4	17.3	45.8	5.4
Structure 2004	100.0	5.2	33.8	9.3	2.4	17.1	31.9	7.6
Growth rates in 1996-2000	84.8	112.7	81.2	86.8	100.3	60.8	93.6	132.6
Growth rates in 2000-2004	24.4	29.2	12.1	38.2	14.7	42.6	8.5	7.9
Bulgaria								
Structure 1996	100.0	18.1	12.7	6.5	18.3	12.4	29.4	8.0
Structure 2004	100.0	10.4	14.5	10.3	6.6	12.4	43.4	20.0
Growth rates in 1996-2000	-0.4	-14.5	4.6	15.4	-14.2	-6.6	5.6	20.1
Growth rates in 2000-2004	19.8	21.6	12.0	15.9	7.6	27.6	24.6	24.8
Croatia								
Structure 1996	100.0	11.4	6.9	9.2	14.3	21.4	36.8	19.2
Structure 2004	100.0	9.0	7.0	11.3	9.4	32.3	31.0	10.0
Growth rates in 1996-2000	-0.4	-6.4	1.9	4.0	-3.7	5.5	-3.1	-7.8
Growth rates in 2000-2004	16.0	16.4	13.9	17.0	8.0	21.3	14.1	6.3
Romania								
Structure 1996	100.0	8.6	6.6	7.4	9.8	13.6	53.7	25.5
Structure 2004	100.0	3.0	7.7	6.8	5.5	23.7	52.8	26.5
Growth rates in 1996-2000	6.4	-17.2	24.2	5.7	-6.6	15.3	5.6	10.9
Growth rates in 2000-2004	22.7	21.7	9.1	20.9	20.9	30.0	23.1	18.9
Serbia and Montenegro								
Structure 1996	100.0	28.2	7.0	2.1	9.0	12.1	39.7	15.8
Structure 2004	100.0	18.2	3.6	2.1	10.6	13.7	50.7	5.6
Growth rates in 1996-2000	3.6	-13.5	5.6	-42.2	-3.3	-1.0	5.2	0.8
Growth rates in 2000-2004	6.1	25.7	-2.6	110.0	30.4	26.2	22.5	-7.1
The former Yugoslav Republic of Macedonia								
Structure 1996	100.0	21.2	13.0	0.9	6.1	7.7	51.0	26.5
Structure 2004	100.0	15.3	3.2	4.7	4.8	5.9	66.0	32.2
Growth rates in 1996-2000	-1.8	-5.0	-1.8	58.3	-3.7	-1.6	7.3	4.0
Growth rates in 2000-2004	23.5	6.6	-21.2	5.6	7.4	4.4	9.2	10.9
Turkey								
Structure 1996	100.0	19.7	4.8	1.2	4.3	12.7	57.4	27.0
Structure 2004	100.0	9.3	3.3	2.3	4.1	29.0	51.8	18.1
Growth rates in 1996-2000	4.5	-6.2	0.8	2.5	5.4	18.3	4.2	1.7
Growth rates in 2000-2004	23.1	13.7	16.4	48.5	20.2	33.8	20.3	14.4
SEE-7								
Structure 1996	100.0	13.9	8.7	6.7	12.4	14.5	43.0	19.4
Structure 2004	100.0	7.2	9.4	7.8	6.6	21.0	47.3	20.8
Growth rates in 1996-2000	3.9	-12.0	11.8	8.3	-7.6	7.3	5.2	8.0
Growth rates in 2000-2004	21.8	19.9	13.1	19.2	14.6	27.0	20.9	17.0
SEE-8								
Structure 1996	100.0	17.0	6.6	3.8	8.2	13.5	50.5	23.4
Structure 2004	100.0	8.4	6.0	4.7	5.2	25.4	49.8	19.3
Growth rates in 1996-2000	3.3	-8.3	8.0	7.4	-3.5	13.1	4.6	4.3
Growth rates in 2000-2004	20.2	15.9	14.1	24.4	16.9	31.1	20.6	15.6

(For sources and notes see end of table.)

Changes in commodity composition of foreign trade in south-east European countries, 1996-2004
(Shares and growth rates in per cent)

SITC Codes	Total	All food items 0+1+4+22	Raw materials 2-22+68	Fuels 3	Chemical products 5	Machinery and transport equipment 7	Other manufactured goods 6+8-68	of which: clothing and footwear (84+85)
	Imports							
					Manufactures			
Albania								
Structure 1996	100.0	34.3	2.0	2.6	5.9	22.8	32.5	10.0
Structure 2004	100.0	19.3	2.8	7.7	7.9	23.7	38.7	9.3
Growth rates in 1996-2000	3.8	-7.3	10.1	42.3	8.1	2.4	8.0	2.4
Growth rates in 2000-2004	20.1	16.4	23.2	15.4	24.0	22.9	20.7	19.5
Bosnia and Herzegovina								
Structure 1996	100.0	28.8	3.7	6.6	7.0	28.7	25.0	5.5
Structure 2004	100.0	20.0	3.7	11.1	10.6	25.0	29.3	3.8
Growth rates in 1996-2000	18.2	6.7	-13.6	34.3	34.8	14.0	23.3	28.5
Growth rates in 2000-2004	21.1	22.4	26.5	21.8	17.9	21.3	20.9	1.3
Bulgaria								
Structure 1996	100.0	7.6	7.1	33.7	11.1	16.0	20.8	2.3
Structure 2004	100.0	5.4	7.6	16.7	10.4	29.5	28.8	4.1
Growth rates in 1996-2000	6.4	-3.2	6.2	-0.5	2.1	18.9	11.0	17.2
Growth rates in 2000-2004	22.1	23.2	23.3	9.5	25.3	27.4	26.9	27.7
Croatia								
Structure 1996	100.0	11.3	4.4	11.0	10.9	27.3	30.4	6.8
Structure 2004	100.0	8.4	3.5	12.0	11.2	34.9	30.0	3.3
Growth rates in 1996-2000	0.3	-7.1	-2.6	7.5	4.3	4.8	-1.7	-5.7
Growth rates in 2000-2004	20.4	20.8	17.6	14.8	16.5	22.6	22.5	7.4
Romania								
Structure 1996	100.0	7.3	5.9	20.9	10.0	25.6	29.1	2.7
Structure 2004	100.0	6.3	3.8	11.9	10.4	32.6	34.9	3.2
Growth rates in 1996-2000	3.4	2.2	0.5	-9.8	3.3	6.8	9.1	14.9
Growth rates in 2000-2004	25.8	22.7	16.1	25.2	27.1	29.3	24.7	17.6
Serbia and Montenegro								
Structure 1996	100.0	14.2	11.1	13.9	14.3	19.4	26.1	3.4
Structure 2004	100.0	6.8	2.0	14.3	12.8	31.5	32.1	3.0
Growth rates in 1996-2000	6.5	-12.2	-12.5	6.9	-1.3	0.7	-2.3	-9.4
Growth rates in 2000-2004	8.5	23.2	-3.7	22.5	28.2	45.8	40.2	39.4
The former Yugoslav Republic of Macedonia								
Structure 1996	100.0	15.9	8.8	9.1	10.5	22.3	32.3	6.7
Structure 2004	100.0	13.8	3.8	13.0	10.5	18.8	28.5	1.4
Growth rates in 1996-2000	-2.5	-0.6	-14.3	18.2	2.4	3.1	-10.0	-36.2
Growth rates in 2000-2004	33.4	12.3	9.0	6.8	12.7	7.4	24.4	22.9
Turkey								
Structure 1996	100.0	6.5	9.5	13.7	13.3	36.0	20.4	0.6
Structure 2004	100.0	3.2	9.0	14.8	14.6	34.6	20.1	1.0
Growth rates in 1996-2000	6.0	-6.5	0.3	12.7	6.4	7.1	4.8	10.8
Growth rates in 2000-2004	15.9	9.8	20.5	11.0	17.9	13.4	16.7	26.1
SEE-7								
Structure 1996	100.0	11.2	6.3	18.0	10.7	23.6	27.9	4.2
Structure 2004	100.0	8.0	4.1	12.9	10.8	31.2	32.1	3.5
Growth rates in 1996-2000	4.9	-3.1	-2.4	0.1	3.8	7.3	5.1	3.7
Growth rates in 2000-2004	19.2	21.2	17.5	17.6	23.3	27.7	25.9	17.3
SEE-8								
Structure 1996	100.0	8.5	8.2	15.6	12.2	30.7	23.6	2.1
Structure 2004	100.0	5.4	6.7	13.9	12.8	33.0	25.7	2.1
Growth rates in 1996-2000	3.3	-4.5	-0.5	7.0	5.5	7.2	5.0	4.9
Growth rates in 2000-2004	23.6	17.0	19.6	13.6	19.9	18.7	21.6	19.1

Source: UNComtrade database; national statistics and direct communications from national statistical offices to UNECE secretariat.

Note: Foreign trade growth is measured in current dollar values. Commodity groups are based on SITC, Rev. 3. Shares may not add to 100 due to the omission of non-classified goods (SITC 9) in the table.

Similarity of exports in trade between south-east European countries and the EU-15, 1996, 2000, 2004
(Finger-Kreinin index) [a]

	Albania	Bosnia and Herzegovina	Bulgaria	Croatia	Romania	Serbia and Montenegro	The former Yugoslav Republic of Macedonia	Turkey
1996								
Albania	1.00							
Bosnia and Herzegovina	0.30	1.00						
Bulgaria	0.49	0.53	1.00					
Croatia	0.45	0.45	0.42	1.00				
Romania	0.49	0.54	0.37	0.49	1.00			
Serbia and Montenegro	0.40	0.42	0.37	0.30	0.34	1.00		
The former Yugoslav Republic of Macedonia	0.58	0.54	0.42	0.54	0.51	0.51	1.00	
Turkey	0.60	0.70	0.51	0.53	0.51	0.53	0.56	1.00
SEE-8	0.33	0.39	0.29	0.29	0.34	0.23	0.37	0.44
New EU-8	0.61	0.56	0.44	0.35	0.56	0.42	0.52	0.54
2000								
Albania	1.00							
Bosnia and Herzegovina	0.51	1.00						
Bulgaria	0.48	0.58	1.00					
Croatia	0.50	0.47	0.41	1.00				
Romania	0.54	0.68	0.45	0.62	1.00			
Serbia and Montenegro	0.37	0.44	0.38	0.30	0.48	1.00		
The former Yugoslav Republic of Macedonia	0.57	0.47	0.42	0.46	0.63	0.47	1.00	
Turkey	0.54	0.66	0.47	0.46	0.60	0.45	0.53	1.00
SEE-8	0.38	0.42	0.27	0.30	0.47	0.24	0.32	0.40
New EU-8	0.66	0.57	0.54	0.35	0.72	0.43	0.53	0.49
2004								
Albania	1.00							
Bosnia and Herzegovina	0.51	1.00						
Bulgaria	0.42	0.51	1.00					
Croatia	0.60	0.49	0.44	1.00				
Romania	0.40	0.45	0.32	0.36	1.00			
Serbia and Montenegro	0.62	0.43	0.47	0.50	0.53	1.00		
The former Yugoslav Republic of Macedonia	0.55	0.69	0.47	0.69	0.53	0.70	1.00	
Turkey	0.62	0.60	0.44	0.48	0.42	0.59	0.63	1.00
SEE-8	0.37	0.38	0.23	0.36	0.22	0.37	0.50	0.40
New EU-8	0.70	0.53	0.52	0.40	0.40	0.58	0.73	0.44

Source: Eurostat.

Note: Calculations based on EU-15 import data at 2-digit HS level.

a

$$S_{jk} = \frac{\sum_{i=1}^{n} \left| h_{ij} - h_{ik} \right|}{2},$$

where j and k denote countries for which similarity is measured and h_i refers to the share of commodity i in the respective country's exports to the EU-15. The Finger-Kreinin export similarity index S_{jk} ranges from 0 to 1. An index closer to 1 indicates a bigger difference between the structure of the countries' exports in their trade with the EU-15.