



**TURKEY'S COMPETITIVENESS IN THE EUROPEAN
UNION: A COMPARISON WITH FIVE CANDIDATE
COUNTRIES - BULGARIA, THE CZECH REPUBLIC,
HUNGARY, POLAND, ROMANIA - AND THE EU15**

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The Eastward Enlargement of the Eurozone

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Abstract

The main purpose of this paper is to examine the international competitiveness of the Turkish economy and the structure of specialisation in foreign trade in comparison with the five EU candidate countries Bulgaria, the Czech Republic, Hungary, Rumania, Poland and the EU/15. This research work attempts to find out Turkey's ability to overcome difficulties and challenges that might arise from the hard competition with the enlarged EU, mainly in the field of foreign trade.

JEL-Classification: F14, F15

Keywords : International Competitiveness of Turkish Economy, EU 15, EU Candidate Countries

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**Turkey's competitiveness in the European Union:
a comparison with five candidate countries - Bulgaria, The Czech
Republic, Hungary, Poland, Romania and the EU 15¹**

In October 1999 the European Commission recommended that Turkey should now be considered as a candidate country, but without opening negotiations at this stage. Then the European Council followed the recommendations taken in Brussels and political leaders of the 15 member countries decided at summit meeting in Helsinki to name Turkey, which has been knocking on the EU's door longer than any other outsiders, officially "candidate for full membership" on 10 and 11 December 1999. By opening the way for Turkey's possible full membership in the EU Ankara was now closer to realising one of its more cherished dreams.

The basic requirement of full membership for the EU is the fulfilling of so-called the "Copenhagen criteria" set by 1993. If Ankara wanted to be considered as potential candidate for a full membership and to be included in the "European Family" it has to meet those criteria, which were set forth by the 1993 Copenhagen Summit. One of the basic pre-conditions is the establishing of a well-functioning free market economy, protection of free competition and the ability to realise the conditions of the Monetary Union.

This well-known opinion of the EU was underlined again by the summit meeting in Copenhagen on 12-13 December 2002. "Presidency conclusion" states that"... The Union encourages Turkey to pursue energetically its reform process. If the European Council in December 2004, on the basis of report and a recommendation from the commission, decides that Turkey fulfils the Copenhagen political criteria, the European Union will open accession negotiations with Turkey without delay." Meanwhile, ten candidate countries –Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic and Slovenia- will be full member of the EU from 1 May 2004.

Turkey signed a customs union agreement with the EU in 1995 and put it in force on January 1,1996. For the time being the customs union covers only free trade of manufactured

goods between Turkey and the EU. This means that the country has to completely open its economy to international competition. In addition to this, it must adopt the Common Customs Tariff (CET) against the third country imports and adopt all of the preferential agreements the EU has concluded with third countries by the year 2001. In other words, Turkey has already lost its national sovereignty concerning foreign trade policy without any form of active participation to the decision making process in Brussels.

The main purpose of this paper is to examine the international competitiveness of Turkish economy and structure of specialisation in foreign trade in comparison with the five-candidate country -Bulgaria, the Czech Republic, Hungary, Rumania, Poland and the EU/15.² In other words this research work attempts to find out Turkey's ability to overcome difficulties and challenges that might arise from the hard competition with the enlarged EU, mainly in the field of foreign trade.³

The paper is divided into four main sections. In the first section we will focus on the importance of the EU countries for the Turkish economy. In this context, it will be given an overview of the economic relations between Turkey and the EU. The second part describes the methodology for assessing Turkey's competitiveness with the Five and the EU/15 as a whole. Then we will try to interpret the empirical results. This empirical analysis sheds light on the structural differences in trade sectors among the six countries and the extent to which such differences have increased or decreased between Turkey and the Five candidate countries. The concluding section draws some basic conclusions from the empirical results and considers the future position of Turkey within the enlarged EU. The Table 1 gives a comparison of these six countries and of the EU as a whole on a number of basic economic indicators.

Indicator	Bulgaria	Romania	Poland	Turkey	Hungary	Czech Rep.	EU/15
Population (2001, in millions)	7,9	22,4	38,6	68,6	10,2	10,2	375,0
Budget deficit (%) – 2000	-0,7	-4,0	-3,6	-11,0	-3,1	-4,3	-
Inflation rate (%) - 1997-2001	9,8	46,3	9,9	69,9	12,4	5,6	3,3
Current Account/GDP (%) – 1997-2001	-1,5	-5,3	-5,4	-0,8	-3,4	-4,3	-
Annual GDP Growth rates (%) – 1997-01	2,0	-1,0	4,2	1,2	4,5	1,1	3,7
GDP (billion Euro) – 2001	51,5	132,2	355,5	356,8	121,3	136	8348,3
Distribution of GDP (%)							
Agriculture	13,8	14,6	3,4	12,1	5,8	4,2	4,4
Industry*							30,6
Services*							65
Per capita income (Euro) – 2001	6500	5900	9200	5200	11900	13300	23380
FDIs (net inflow in % of GDP) – (Average 1997-01)	5,6	3,5	4,2	0,8	4,3	7,8	-
Trade with the EU							
Export (%) – 2001	54,8	67,8	69,2	51,6	74,3	68,9	-
Import (%) – 2001	49,4	57,3	61,4	44,6	57,8	61,8	-

Table 1: Some Indicators of Economic Structures of Bulgaria, the Czech Republic, Hungary, Poland, Romania Turkey and the EU/15.

Source: The European Union (Economics and Politics), Ali M. El-Agraa; Financial Times, Prentice Hall, 2001, Toward the Enlarged Union; Strategy Paper and Report of the European Commission, 9 October 2002.

I. The Economic Relations of Turkey with the European Union

Since 1950s the EU and the OECD countries have been playing a dominating role in Turkey's external economic relations. Both are Turkey's traditional markets, and this has not changed over almost 50 years. For the time being and for the foreseeable future, it seems that Turkey has no serious and promising alternative markets, which can replace the European markets. The EU is the part of the world economy in which Turkey today is most strongly integrated in every respect even though not a full member of the European Union.

The share of EU countries in Turkish export revenues was almost 52 per cent in 2001. The regional distribution of imports reveals the similar picture and the share of EU countries in total imports of Turkey was almost 45 per cent in the same year. Not only has the volume of trade between Turkey and the EU increased very rapidly over the years, but also the export structure has changed radically. Whereas Turkey was mainly an exporter of raw materials and agricultural products in the 1960s and 1970s, today manufactured production covers almost 80 per cent of Turkish exports. Contrary, the share of Turkey in total export (imports) of the EU towards to all candidate countries is 19% (16%), respectively and she takes the second place after Poland (export 24% and import 16%). Foreign Direct Investments (FDI) to Turkey mainly originates from the EU countries. The EU share is about 65% with respect to total foreign direct investments in year 2002. Most foreign firms operating in Turkey come from the EU states. At present, the main channel for the transfer of technology has been foreign direct investments. Turkish firms signed 707 patent licenses and know-how agreements between 1980 and 1992, 88 per cent of which were related to manufacturing. In this regard, Germany and Britain have been playing a very important role in the transfer of technology by foreign direct investments. Turkish workers established their own enterprises in the EU and have been intensifying trade and investment activities between Turkey and the EU. Almost 3 million Turkish workers are employed in the EU countries. Remittances have reached the level of 3 billion US-\$ annually. Additionally tourists to Turkey come mainly from European countries and make an essential contribution to the Turkish balance of payments.

II. Methodology and database

In order to estimate the competitiveness of the countries in question in different categories of trade, we use the following four indices:

1. "Revealed Comparative Advantages (RCA)" use different versions of Balassa's formula (1965).⁴
2. "Comparative Export Performance (CEP)" formula (Donges 1982)⁵
3. "Trade Overlap (TO) Formula (Finger and de Rosa (1979) for the calculation of the overall importance of intra-industry, in comparison with inter-industry.⁶
4. "Export Similarity (ES) " Formula of Finger and Kreinin (1979), in analog to the TO index.⁷

In calculating these indices, the trade sectors "Standard International Trade Classification (SITC)" values have been divided also in five different groups or sub-sectors for the period between 1996 and 1999. The Table in appendix provides more detail on the grouping.⁸

- Raw material- intensive goods [SITC 0, 2-26, 3-35, 4, 56]
- Labour-intensive goods [SITC 26, (6-62, 67, 68), (8-87, 88)]
- Capital- intensive goods [SITC 1, 35, 53, 55, 62, 67, 68, 78]
- Easily imitable- research oriented goods [SITC 51, 52, 54, 58, 59, 75, 76]
- Difficultly imitable research-oriented goods [SITC 57, 7-(75, 76, 78), 87, 88]⁹

III. Empirical Results

1. Revealed Comparative Advantages (RCA indices)

As a first step we attempt to measure the international competitiveness of Turkey and the other five countries and the EU/ 15 by using RCA indices. By considering exports and imports together, RCA's describe comparative advantages and disadvantages in international trade.

RCA indices have been calculated using the following formula

$$RCA = \ln \left[X_i / M_i \left(\frac{\sum_{i=1}^n X_i}{\sum_{i=1}^n M_i} \right) \right] \times 100. \quad (1)$$

where X and M denotes exports and imports, respectively, and the subscript *i* refer to a group at the one-or two digit SITC level. The higher (lower) the RCA index, the more (less) and successful is the trade performance of the country in question in a particular area of industry.

The empirical results of the RCA-index calculations for the candidate five countries and Turkey and the EU/15 are broad indicators of comparative advantages of the six candidate countries and the EU/15 and their positions in international trade.

Product Category/Year	Turkey	Bulgaria	Hungary	Romania	Poland	Czech Rep.	EU 15
Raw Material- Intensive Goods / 1996	-48,30	-77,16	-8,95	-56,46	-32,18	-38,82	-39,74
1997	-36,77	-76,47	1,07	-56,77	-19,94	-46,85	-36,57
1998	-29,91	...	5,75	-53,35	-22,60	-42,73	-13,47
1999	-40,00	...	-3,34	-21,07	-27,94	-31,09	-35,05
Labor-Intensive Goods/1996	31,01	10,68	-8,84	10,56	-0,80	11,40	8,16
1997	30,26	10,94	-14,55	10,09	-4,16	10,63	8,68
1998	35,60	...	-19,37	4,68	-6,52	16,99	1,39
1999	48,07	...	-20,53	6,71	-5,65	17,70	2,93
Capital-Intensive Goods/ 1996	-23,40	87,42	-27,15	6,53	-16,79	0,90	15,63
1997	-35,61	99,13	-25,32	31,48	-23,00	8,83	15,67
1998	-39,42	...	-35,52	5,99	-30,56	21,89	11,45
1999	-24,81	...	-24,68	6,52	-29,07	24,78	10,26
Easily Imitable Research-Oriented Goods/1996	-133,55	-18,15	-44,32	-84,30	-93,78	-73,47	-0,01
1997	-127,46	-6,60	-0,05	-89,61	-84,60	-75,53	1,64
1998	-116,49	...	7,56	-112,61	-85,55	-75,37	-1,35
1999	-143,16	...	14,60	-108,94	-92,41	-86,60	-0,26

Difficulty Imitable Research-Oriented Goods/1996	-102,40	0,08	-17,53	-59,99	-43,73	-31,39	30,80
1997	-99,98	-11,49	-13,97	-63,28	-60,91	-19,87	31,18
1998	-99,95	...	-11,45	-49,11	-44,63	-13,33	25,39
1999	-81,35	...	-17,68	-43,87	-40,69	-12,72	19,19

Table 2: Revealed Comparative Advantage Indices by Product Category, 1996- 1999

Source: United Nations, Yearbook of International Trade Statistics, and various years.

The main conclusion to be drawn from the RCA indices of all six-candidate countries and the EU/ 15 between 1996-1999 is that

- Turkey, the Czech Republic, Romania and partly Bulgaria appear in broad terms to be in a strong competitive position with respect to the labour intensive sector, but they did so in different degrees. Turkey and the Czech Republic have been maintaining their strong position in compared to others. In the case of Romania and Poland, the results show that both countries have been losing their comparative advantage concerning labour intensive products. It is interesting to notice that, except for Hungary, the five others have disadvantages in the raw material-intensive sector. Hungary just joined them since 1999.
- As far as the capital- intensive goods are concerned, the Czech Republic, Bulgaria and partly Romania have a comparative advantage compared to Turkey, Hungary and Poland. Despite fluctuations observed in some years, it is obvious that Turkey's position in the capital-intensive goods is relatively much worsened than that of the Czech Republic and Bulgaria.
- The Five and Turkey appear to have comparative disadvantages, although to different degrees, in the "easy imitable research- oriented goods" and "difficultly imitable research-oriented goods" categories. But Hungary performed relatively better in the "easy imitable research oriented goods than other five candidate countries. Hungary and the Czech Republic have been decreasing the degree of their comparative disadvantages in the "difficult imitable research oriented goods" in comparison to others.

- As it is expected, the European Union with 15 members seems to have a strong comparative advantage mainly in capital-intensive and difficultly imitable research-oriented goods.

2. Comparative Export Performance (CEP)

Since the RCA indices are based on actual export and imports flows, trade policy interventions in the form of tariff and non-tariff barriers on imports can distort their calculation. The CEP- index based only export shares and allows for comparison of findings between the two measures. As a second step we estimated the structure of international competitiveness for Turkey, the five candidate countries and EU/15 between 1996 and 1999.

$$CEP = (x_{ij} / X_{iw}) / (\sum x_{ij} / \sum X_{iw}) \quad (2)$$

where the subscript j refers to the country in question and subscript w to the EU/15, respectively. CEP index values above (or below) unity mean that the particular sectors have a greater (lower) share in total exports of the individual country than they have in the EU as a whole. Thus, the country in question possesses a relative advantage (or disadvantage) in the export of these products.

CEP		Turkey	Bulgaria	Hungary	Romania	Poland	Czech Rep.
Raw Material Intensive Goods/1996		1.475433	1.601834	1.836943	1.496581	1.548977	1.0017873
	1997	1.497794	1.584964	1.368086	1.334352	1.648594	0.8740686
	1998	1.252748		1.000775	1.050357	1.305591	0.6561566
	1999	1.381585		0.957537	1.519608	1.424801	0.7842486
Labour Intensive Goods/1996		2.311125	1.069708	1.315015	2.025261	1.726113	1.5109892
	1997	2.351106	1.154423	0.994236	2.071454	1.766301	1.4387376
	1998	2.591834		1.036652	2.415301	1.854742	1.5034103
	1999	2.389582		0.956688	2.296542	1.802373	1.4594094
Capital Intensive Goods/1996	1996	0.941161	1.50239	0.673841	0.881974	0.883403	1.0918456
	1997	0.899094	1.501235	0.581321	1.004718	0.941626	1.2243841
	1998	0.806157		0.551779	0.91208	0.888053	1.2351938
	1999	0.859413		0.628992	0.672619	0.901412	1.2213693

Easily Imitable Research-Oriented Goods/1996		0.127678	0.64209	0.732327	0.2895	0.33675	0.4709882
	1997	0.149588	0.665073	1.315067	0.283293	0.383833	0.4286018
	1998	0.224392		1.350904	0.228174	0.371184	0.3919232
	1999	0.191358		1.372459	0.233609	0.328317	0.3353917
Difficult Imitable Research-Oriented Goods/1996		0.290045	0.476235	0.745813	0.456027	0.642131	0.8451537
	1997	0.311297	0.427498	0.942391	0.445747	0.519266	0.9100708
	1998	0.338947		1.082071	0.496003	0.702831	1.0336157
	1999	0.420683		1.080495	0.555288	0.740161	1.0423773

Table 3: Comparative Export Performance (CEP)

Source: United Nations, Yearbook of International Trade Statistics, and various years.

For this analysis, the whole trade sector has been broken down into five different groups.

The results for Comparative Export Performance (CEP) are summarised in Table 3 and the following conclusions can be drawn.

- To begin with, Turkey appears to have been keeping its initially strong position of comparative advantages in the export of raw material and labour intensive goods. Concerning the capital -intensive goods Turkey has increased its competitiveness remarkably but its CEP's values are still below the unity. As the results show, the Turkish economy has continuously disadvantages in easily and difficultly imitable research-oriented goods.
- Bulgaria and Turkey had generally the same export structures regarding raw material and labour intensive goods. Concerning easily and difficultly imitable research-oriented goods Bulgaria has shown quite a low export performance. The results for 1996 and 1997 indicate that Bulgaria is still highly competitive in trade of capital-intensive goods with the EU as a whole.
- Hungary possessed relative advantage in export of raw material and labour intensive goods 1996-1999. Generally spoken, Hungary seems to be losing its advantages in these sectors with the EU/15. Hungarian economy indicates a

noticeable performance improvement in the export of easily and difficultly imitable research-oriented goods.

- In the case of Romania, the results show that the country is highly competitive in terms of export performance in raw material and labour intensive goods. But it still has comparative disadvantages in exporting of capital intensive; easily and difficultly research- oriented goods.
- Poland seems to be still highly competitive in raw material and labour intensive goods. The export performance of the capital-intensive goods shows an increasing tendency throughout the time. It is obvious that Polish economy shows the low performance in exporting of easily and difficultly imitable research-oriented goods.
- In the case of Czech Republic, the result show that the country seems to be loosing its advantage in export performance in raw material intensive goods and keeping its relative competitiveness in labour and capital intensive goods. CEP's also show that the Czech Republic is the only country of the six (Turkey, Bulgaria, Hungary, Romania, Poland and the Czech Republic) that has been completing the first stages of export substitution and export diversification processes successfully and achieving a relative advantage together with Hungary compared to others in exports of difficultly imitable research-oriented goods between 1996 and 1999.
- The trade patterns for the six countries that has revealed with the RCA indices, based on export-import ratios, are generally and to large extent confirmed by the CEPs. Turkey, Bulgaria, Romania and Poland are more similar in their export structures relative to Hungary and the Czech Republic.

3. Trade Overlap (Intra-and Inter- Industry Trade)

As a further step, we consider the overall importance for Turkey and The Five, as well as EU/15, of intra-industry in comparison to inter-industry specialization in international trade. As it is known, under monopolistic competition there exists two-way trade within the manufacturing sector. This exchange of manufactures for manufactures is called intra-

industry trade and an exchange of manufactures for food, for example, is called inter-industry trade. The intra-industry trade suggests how and to what extent the economy in question is already integrated into the world market and the degree of liberalization that the economy has already realized throughout the economic development process

$$TO = 2 \sum_{i=1}^n \min(X_i, M_i) / \sum_{i=1}^n (X_i + M_i). \quad (3)$$

where X_i and M_i refer to exports and imports, respectively, of each of the SITC 0-9 production sectors i , and "min" defines the magnitude of the total trade that overlaps in dollar terms. The coefficient can vary between 0 and +1. The closer it comes to unity, the more intra-industry specialization exists. A lower coefficient implies that trade takes the form of inter-industry specialization.

The empirical results for Turkey, The Five and the EU/15 with the world are presented in Table 4.1 can be divided into two main parts:

1. Aggregate TO Coefficients

- It is expected that the TO coefficients for EU/15 would be higher than for any of the countries and come close to unity. This emphasises that the EU/15 has already realized full intra-industry specialization in trade with the world.
- Of the six countries the Czech Republic's, Hungary's and Poland's TO coefficients come closest to unity but are still below the TO coefficients for the EU/15. The Czech Republic seems to be in the best position as compared to others and seems capable of catching up with the EU/15 in the next decades.
- The TO coefficients for Turkey, Romania are much lower than for the others. For both countries, though, the TO coefficient suggests mainly inter-industry specialization. The TO results for Bulgaria (1996-97) occupy an intermediate position and the gap between the EU/15 and Bulgaria is getting closer.

	Turkey	Bulgaria	Hungary	Romania	Poland	Czech Rep.	EU /15
1996	0,48	0,62	0,71	0,54	0,67	0,78	0,89
1997	0,45	0,67	0,80	0,53	0,65	0,80	0,89
1998	0,46		0,81	0,52	0,80	0,85	0,89
1999	0,49		0,81	0,54	0,80	0,84	0,90

Table 4.1: Trade Overlap Coefficients, 1996-1999

Source: United Nations, Yearbook of International Trade Statistics, and various Years

Product Category/Year	Turkey	Bulgaria	Hungary	Romania	Poland	Czech Rep.	EU /15
Raw Material-Intensive Goods / 1996	0,34	0,52	0,51	0,58	0,76	0,68	0,81
1997	0,32	0,60	0,52	0,58	0,82	0,69	0,83
1998	0,34	...	0,56	0,54	0,86	0,76	0,80
1999	0,35	...	0,57	0,58	0,80	0,74	0,83
Labour-Intensive Goods/1996	0,65	0,75	0,78	0,52	0,74	0,89	0,95
1997	0,65	0,73	0,79	0,51	0,75	0,90	0,94
1998	0,63	...	0,81	0,53	0,79	0,91	0,95
1999	0,60	...	0,83	0,48	0,80	0,91	0,93
Capital-Intensive Goods/1996	0,70	0,39	0,68	0,56	0,67	0,87	0,91
1997	0,63	0,37	0,77	0,51	0,64	0,84	0,90
1998	0,63	...	0,74	0,48	0,81	0,78	0,92
1999	0,72	...	0,82	0,54	0,84	0,77	0,93
Easily Imitable Research-Oriented Goods/1996	0,15	0,66	0,70	0,38	0,32	0,49	0,92
1997	0,18	0,64	0,87	0,40	0,34	0,51	0,92
1998	0,24	...	0,83	0,31	0,87	0,67	0,91
1999	0,20	...	0,80	0,39	0,84	0,63	0,90
Difficultly Imitable Research-Oriented Goods/1996	0,40	0,99	0,89	0,58	0,67	0,80	0,85
1997	0,27	0,94	0,92	0,60	0,54	0,88	0,85
1998	0,31	...	0,94	0,66	0,73	0,94	0,87
1999	0,45	...	0,90	0,73	0,75	0,95	0,90

Table 4.2: Trade Overlap Coefficients by Product Category, 1996-1999

2. TO Coefficients by Sector:

- Table 4.2 shows estimations for the TO coefficients by sub-sector. As far as the sub-sectors are concerned Turkey approaches intra-industry specialization only in capital intensive and in the labour intensive goods. In other groups of goods, Turkey shows the characteristic of inter-industry trade with the world.
- Interestingly, Bulgarian economy indicates the characteristics of intra-industry trade mainly in difficultly imitable research-oriented and labour intensive goods between 1996 and 1997, whereas in other groups the Bulgarian economy shows the typical industrialization pattern of developing countries. Romanian economy generally shows features of inter-industry trade with the world market.
- It is interesting to notice that Hungary's trade in many industries or areas of production is on the best way to create more the intra-industry type of specialization in, with the exception of raw-material-intensive goods.
- The TO results for the, Czech and to large extend Hungarian economies reflect mainly intra-industry specialization but they did so in different degrees. In all groups of production, more than half of the value of its exports to the world is offset by similar imports. Especially, in labour intensive and capital-intensive products, the country has already caught up with the EU/15.¹⁰

4. Export Similarities (ES)

Finally, we calculate whether or not the exports of Turkey overlapped with each of the six-candidate countries in the period 1996-1999. Coefficients of "export similarity" (ES) using the formula of Finger and Kreinin (1979) which measures the proportion of a country's exports matched by its competitor's exports in the same product category. The ES coefficient can vary between 0 and 1. The closer it comes to unity; there is a greatest degree of similarity between two countries. On the other hand, 0 indicates no export similarity between the countries in question and no overlap at all.

$$ES(ab, c) = \sum_i \left[EX_i(ac) - \frac{EX_i(ac) + EX_i(bc)}{2} \right] \quad (4)$$

This formula measures the difference in the export patterns of countries *a* and *b* to market *c*. If the commodity distribution of the exports of (*a*) and (*b*) are identical, then the index will take on a value of 0. $EX_i(ac)$ is the share of commodity *i* in *a*'s exports to *c*.

The estimated ES coefficients show that the degree of export similarity (besides Hungary) between Turkey, Bulgaria, Romania, and Poland with the world market is very high. This means that by a possible accession of Turkey into the EU or within the customs union, Turkish export industries compete, first of all, with export goods originating from Poland and Romania, and then Bulgaria, followed by the Czech Republic and the EU/15, but at a lesser degree. The main question here is whether Turkish export goods bear complementary or substitutive features.

Year	Bulgaria	Hungary	Romania	Poland	Czech Rep.	EU /15
1996	0,73	0,73	0,93	0,86	0,76	0,65
1997	0,74	0,62	0,92	0,87	0,72	0,64
1998	...	0,60	0,94	0,85	0,70	0,64
1999	...	0,60	0,94	0,88	0,73	0,66

Table 5: Export Similarity Coefficients, 1996-1999

Source: United Nations, Yearbook of International Trade Statistics, various years

IV. Conclusion

The results and interpretations of the RCA, CEP, TO and ES results allow us to draw some essential conclusions from the past and to make some predictions for general tendencies regarding future trade relations of Turkey and the EU.

- All six-candidate countries have a strong comparative advantage in exporting of labour intensive goods. Besides the Czech Republic all five-candidate countries

also have a comparative advantage in exporting of raw material intensives goods. Bulgaria and the Czech Republic have established competitiveness in capital-intensive goods. Hungary is the only country, which has a comparative advantage in exporting of easily imitable research-oriented goods.

- To a certain extent the Czech Republic and Hungary are the only two countries in comparison to the other four countries, which have been trying to catch up and close the industrialization gap with the EU/15. The results indicate that these countries have been making some impressive progress to reshape their export structure since the collapse of the command economic system from labour-intensive goods to capital-intensive, easily and difficultly imitable research-oriented products.
- Turkey has a strong comparative advantage in raw and labour intensive goods and so far has comparative disadvantages in the difficultly imitable research oriented goods and in easily imitable research- oriented goods. Therefore it shares the same export structure with Romania, Poland and partly with Bulgaria.

The crucial question is now how Turkey can realize step-by-step export diversification from labour intensive to easily and difficultly imitable research oriented goods within the customs union and by a possible full membership in the EU? The current state of the Turkish economy of high inflation –almost 30 percent, the chronic and constantly rising budget deficit, over 11 percent of the GNP, while the authorised ceiling in the EU is 3 percent, an alarming level of internal and external debt, structural and hidden unemployment, a distribution at the expense of the working population and a reform deficit in public-life compared to the member states, is in a relatively poor position.

Turkey, therefore, should put its own house in order, firstly, by implementing a "Stabilisation Program", which put in force in April 2001 under pressure of the IMF and World Bank, and far reaching restructuring measures and by continuing an economic policy geared to the Community market. Secondly, Turkey should continue to enforce and to promote its restructuring and modernisation policies constantly. With the decisive implementation of the latest IMF-guided stabilization program the present government

has the chance to break through the deep-rooted vicious cycle. Thirdly, Turkey should intensify the transfer of technology connected with capital inflows and foreign direct investments for renewing investment equipment in Turkey. These require that new reform measures be instituted, particularly in the field of education.

The resolution of Turkey's economic stability will certainly contribute to an internal resolution of the country's political stability. Hence the crucial imperative seems to be the re-establishment of Turkey's economic stability. Improvement of economic conditions and establishment of economic stability in Turkey will provide the government with self-confidence for the necessary political reforms. In turn, this would create a policy stable environment for the completion of political liberalization in order to satisfy the 1993 "Copenhagen Criteria", which certainly would help Turkey's rapprochement with the EU leading to its final place in the "European House".

It is obvious that the establishment of the customs union have created and provided new dynamism and impulse for the Turkish economy. The Turkish economy has already accepted the serious pressure of international competition by abolishing tariffs and non-tariffs barriers with the EU. There is a great challenge for the Turkish economy to recover and to integrate itself with the most advanced economies in the world.

Appendix:

Table 1: SITC Classification

Raw material intensifies goods: (RMIG)

- SITC 0 Food and live animals
- SITC 2 Crude Materials excl. fuels
- SITC 3 Mineral Fuels etc
- SITC 4 Animal Vegetable Oil fat

Labour intensive goods (LIG)

- SITC 26 Textile fibres and Waste
- SITC 6 Basic Manufactures
- SITC 8 Misc Manufactured Goods

Capital-intensive goods (CIG)

- SITC 1 Beverages and Tobacco
- SITC 35 Electrical Energy
- SITC 53 Dyes, Tanning, Colour Production
- SITC 55 Perfume, Cleaning etc Production
- SITC 62 Rubber manufactures Nes
- SITC 67 Iron and Steel
- SITC 68 Non-Ferrous Metals
- SITC 78 Road Vehicles

Easy Imitable Research Oriented Goods (EIRG)

- SITC 51 Organic Chemicals
- SITC 52 Inorganic Chemicals
- SITC 54.1 Medical Pharm Products
- SITC 58 Plastic Materials etc
- SITC 59 Chemical Materials Nes
- SITC 75 Office Machines and Adapt Equipment

Difficultly imitable research-oriented goods

SITC 7 Machines, Transport Equipment

SITC 87 Precision Instrument

SITC 88 Photo Equipment, Optical Goods etc

NOTES AND REFERENCES

¹ We have only considered and compared the six comparable economies out of 13 candidate countries in our empirical work. For Bulgaria we had data for 1996 and 1997 available.

² The similar empirical works have been done for the time period between 1970-1987 and 1987 -1994. See Bahri Yilmaz, " (1986), "Turkish Exports to the EC", University of Durham/England, Occasional Paper Series Nr: 29, pp.3-35 and " International Competitiveness of Turkey with the EU: A Comparison with Greece, Portugal, Spain and the EU/12/15" published in *The Political Economy of Turkey in the Post-Soviet Era* (edited) by Libby Rittenberg, Prager Publishing Company, pp.79-95, 1996.

³ Comparative advantage is distinct from competitiveness because of two reasons. First, competitiveness is related to the relative strength or weakness of a country for producing a given product, while comparative advantage is to the relative strength or weakness of products for a given country. Second, competitiveness is often subject to macroeconomic fluctuations (exchange rate or wage rate), while comparative advantage is structural. See for details. [Gerhard Lafay (1992), "The measurement of Revealed Comparative Advantages," in M.G Dagenais and P. -A. Muet (Eds), *International Trade Modelling*, London: Chapman & Hall, 209-234].

⁴ The methodology was originally developed by Balassa (1965) and refined later. See Bela Balassa (1965) "Trade Liberalization and 'Revealed ' Comparative Advantage," *The Manchester School of Economics and social Studies* no.33, pp.99-123.

⁵ For methodology see Juergen Donges et al. (1982), *The Second Enlargement of the Community*", *Kieler Studien* 171, Kiel/Germany.

⁶ For details on the methodology and its analytical applications see Finger and de Rosa (1979), "Trade Overlap, Comparative Advantage and Protection". In: Herbert Giersch (Eds), *On the Economics of Intra-Industry Trade*, Symposium 1978, Tübingen, pp.213-240.

⁷ Finger, J.M. and M.E.Kreinin (1979), "A Measure of 'Export Similarity' and its possible Use," *Economic Journal*, 89, pp. 905-912

⁸ Gary C. Hufbauer, John C.Chilas, " Specialization by Industrial Countries: Extent and Consequence". In: Herbert Hirsch (Ed.), *The International Division of Labour, Problems and Perspectives*, International Symposium, Tübingen 1974, pp.3-38. - Henning Klodt, "Technologietransfer und internationale Wettbewerbsfähigkeit". *Aussenwirtschaft*, Vol. 45, H.1, St.Gallen 1990, pp.57-79.

⁹ Note that SITC "3-35" means all of SITC 3 except for SITC 35, and SITC "6-62,67,68" means all of SITC 6 except for SITC 62,67, and 68, and so on.

¹⁰ As is known, the relative importance of intra-industry and inter-industry trade depends on how similar the capital-labour ratios are. If they are different, there will be a relatively low level of intra-industry trade, and trade will be based more on comparative advantage. However, it must be pointed out that models of imperfect competition can explain intra-trade but cannot by themselves explain why some countries are net exporters of certain manufactures and net importers of other goods. Therefore, the TO results must be regarded and interpreted with the other results in order to explain the whole trade pattern.