

**ECONOMIC FEASIBILITY OF TURKEY'S ECONOMIC INTEGRATION WITH  
THE EU: Perspectives from Trade Creation and Trade Diversion**  
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## **1. INTRODUCTION**

When the Treaty of Rome was signed in 1957, the original EEC countries were only six (West Germany, France, Italy, Belgium, the Netherlands and Luxembourg), until 1973 when the United Kingdom, Ireland and Denmark became member and thus completed the first enlargement of the EEC. The second phase of enlargements involved the absorption of Greece (1981) and Spain and Portugal (1986). Turkey, Malta and Cyprus applied for full-membership in the late 1980s. The Early 1990s has seen a veritable explosion in the number of states seeking membership of the EU.<sup>1</sup> From the east, Poland, Romania, Czechoslovakia, Hungary and Bulgaria have all stated their wish to be a part of wider EU. Austria, Sweden and Finland finally became a full-member of the EU in 1995. Turkey, however, signed a Customs Union Agreement with the EU in March 1995 and this Agreement went into effect at the beginning of 1996. It is expected that this new enlargements will have a considerable effect for the new entrants, for the East European candidate countries, for Turkey and for the EU as a whole. Paying particular attention to Turkey, the purpose of this paper is to investigate the potential trade creation and trade diversion effects of economic integration for Turkey and for the EU. The analysis is based upon an approach found in the literature known as the revealed Comparative Advantage (RCA) index discussed below. The RCA index will also be used to examine whether Turkey's accession to European markets will jeopardise the trade for Southern European member countries, namely Greece, Portugal and Spain. In this section, we will also analyse possible competition circumstances that Turkey and these three EU countries might face should the Eastern European countries join the EU.

The first theoretical contribution to the understanding of customs union was made by Viner (1950). Viner's theoretical framework suggests that the benefits (of trade creation) to member states of joining a regional bloc like the EU may be small and possibly outweighed by the negative effects of trade diversion. Viner showed how welfare gains or losses may result from

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<sup>1</sup> The term EU will refer to both European Union and European Community for simplicity.

either trade creation or trade diversion. Trade diversion, as a result of forming a customs union, takes place when imports from a lower-cost source are altered to a higher-cost source. Whereas, the trade creation takes place as a result of shifting the imports from higher-cost to a lower-cost source. One of Viner's approach is static taking no account of economies of scale, increases in competition and increases in bargaining power etc.

Following Viner, an extensive literature was provided on customs union theory to capture static effects and dynamic effects.<sup>2</sup> Jovanovic (1992) states that a static model of the theory of customs union considers the impact of the formation a customs union on trade flows and consumption in the united countries. In order to analyse these static effects most of the researchers' traditional framework is trade creation and trade diversion.

This paper adopts Viner's traditional approach, by comparing the trade creation effects with the trade diversion effects resulting from the removal of trade restrictions for Turkey and the EU as a whole. This approach follows that of Huang and Tu ( 1994) who measured the economic implications of integration in East Asia. In the next section, we present the methodology to measure the trade creation and trade diversion effects . In section 3, trade creation and diversion effects will be presented in the case of Turkish entry into the European markets. In section 4, Turkey, Eastern European candidate countries and the southern European member countries will be compared. Finally section 5 will provide concluding remarks.

## **2. ON THE MEASUREMENT OF TRADE CREATION AND DIVERSION**

The revealed comparative advantage(RCA) index measures the comparative advantage of each industry within each country. The more dispersed the distribution of comparative advantages among the member countries, the greater will be the possibility of these countries complementing each other's industrial production. Therefore, *ceteris paribus*, if the variance of the RCAs of the member countries in one industry is large, the trade creation effects in that industry should also be large. Furthermore, a large difference in the RCAs of member and non-member countries would suggest larger trade diversion effects, since imports originating from non-member countries would be replaced by imports from the member countries. Thus,

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<sup>2</sup> Studies on static effects of customs union can be seen from Viner (1950), Lipsey (1957), Baysan (1985), Aktan (1985) etc. Studies on dynamic effects can be seen from Balassa (1961), Yu (1985), Baldwin (1992).

feasibility or potential of this grouping depends on the net difference between trade creation and trade diversion. As mentioned earlier, the dispersion of the RCA's among the member countries are used to measure the magnitude of trade creation and the difference in RCA's between the selected group and the rest of the world is used to determine the magnitude of trade diversion. In what follows, we will explain the relationship between the RCA index and trade creation or trade diversion in more detail.

## 2.1. The RCA Index and TC and TD

Trade creation denotes a shift in production from higher-cost domestic producers to cheaper producers in the partner country. Trade diversion, on the contrary, represents a shift from lower-cost producers in the non-member countries to higher-cost producers within the group due to discriminatory trade policies against non-member countries. Thus, trade creation is equivalent to an increase in intra-regional trade and trade diversion to a decrease in inter-regional trade.

### 2.1.1 The RCA Index

There are several RCA indices referred to in the literature. For convenience, Huang and Tu (1994) adopt the index used in Hou & Wang (1991). The same method will be followed in this article. Hou & Wang define the RCA as the ratio of the share of a commodity group in total exports for a country or group of countries to that commodity group's share of world exports. A country is said to have a revealed comparative advantage in good  $i$  if its export share of good  $i$  is higher than the world average, i.e. the RCA index of good  $i$  for that country exceeds one. Conversely, a country is said to have a revealed comparative disadvantage in good  $i$ , if the corresponding RCA index is less than one.

For convenience, the above RCA concept may be restated by using the following notation.

Let  $X_k^i$  denote the value of exports of good  $i$  from country or region  $k$ . Therefore,

$$X_k = \sum_i X_k^i$$

represents the total export value of country or region  $k$ . And,

$$S_k^i = X_k^i / X_k \tag{1}$$

is the share of commodity group  $i$  in the total exports for country or region  $k$ . Thus,

$$X^i = \sum_k X_k^i$$

would be the total exports of good  $i$  in the world, and

$$X = \sum_i X_i$$

represents total exports in the world. Then,

$$S^i = X^i / X \quad (2)$$

depicts the  $i$ th commodity group's share of the world exports, and the RCA index may be obtained by means of the following formula:

$$RCA_k^i = S_k^i / S^i \quad (3)$$

$RCA_k^i > 1$  means that country  $k$  or region  $k$  has a revealed comparative advantage in good  $i$ . On the contrary,  $RCA_k^i < 1$  states that the country has a revealed comparative disadvantage in good  $i$ . Furthermore, the larger the deviation of the RCA index from one, the greater comparative advantage or disadvantage.

To calculate the RCA index we need the shares of various commodity groups in the total exports of the world and the shares in terms of total exports of a country or groups of countries. The data used in this paper was mainly provided from UN International Trade Statistics Yearbook (1980, 1986, 1990, 1993). World commodity shares for 1980 and 1986 were obtained from Huang and Tu (1994) and commodity shares for 1990 and 1993 were obtained from Karakaya (1997).

Following Huang and Tu (1994), the data for each country's export share of given commodity group,  $S_k^i$ , can be provided by using the UN's country tables. With  $S_k^i$  and by making use of total export value of a country,  $X_k$ , from UN Country Table (Volume One) data, we are able to calculate the share of the same grouping in total world exports, since  $X_k^i = X_k \cdot S_k^i$ . It should be noted that only those countries having a total export value of more than US \$ 1000 000 are taken into account in the calculations.

### 3. ON THE DEGREE OF TRADE CREATION IN THE EU

As mentioned earlier, trade creation, equivalent to an increase in intra regional trade, is positively related to the diversity of export structure or variance of the RCA indices among the member countries. In that sense, we first attempt to find out the differences in the export structures among Central Eastern Europe candidate countries (CEECs) and the EU<sup>3</sup> as a

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<sup>3</sup> Even though Turkey has a Customs Union Agreement with the EU we consider her like a member of the EU, since we assume that the other things are equal, *ceteris paribus*, when we measure the trade creation and trade diversion effects.

whole. Table 1 provides the export share of each commodity group in Turkey and in the candidate EU countries. Due to data limitations, we only included Poland, Romania, Czech Republic and Slovenia in our analysis and it is unfortunate to note that even data set for these countries are incomplete. Table 1 also presents the share of each commodity group in the total exports of the world, and in the case of two different EU formations ( EU15 and EU16) .

From Table 1, it can be seen that highly different export structures exist among four CEECs countries, Turkey, and the EU15 as a whole. Taking 1993 as an example, the leading commodity groups in the EU15's exports are group 38 (metal manufacture), 31(food and beverages), 35(chemicals), and 37(basic metals). Leading commodity groups in the CEEC countries exports for 1993 are groups 2 (mining quarries), 32 (textile), 33 (wood), 36 (non-metals), and 37 (basic metals). The leading commodity group for Turkish exports for the same year are groups (agriculture), 31 (food and beverages), 32(textiles), and 37(basic metals). Generally speaking, the export structures among the EU, Turkey and CEECs countries are very heterogeneous. Due to this different export structures among the EU, the CEEC countries and Turkey, we would expect to find a significant trade creation effect after integration, provided that trade barriers within the union are effectively removed.

These findings are also supported by RCA indices for the concerned countries and groups of countries. As noted earlier, an  $RCA_k^i$  that is greater than one implies a revealed comparative advantage of good  $i$  for country or region  $k$ .

Table 2 shows that original EU15 has a revealed comparative advantage for commodity groups 31 (food & bev), 35 (chemicals), 36 (non-metal), 37 (basic met) and 34 (paper) since RCA indices for these goods are greater than one. In addition to this, RCA index for commodity group 38 (metal man) for the EU15 is just below the value one which are 0.997.

**TABLE 1: Commodity Trade Shares for Turkey, CEECs, EU and World, in % terms.**

	1	2	31	32	33	34	35	36	37	38	39	
1980	57.0	6.6	6.9	16.9	0.2	0.1	4.7	2.6	1.5	3.5	0.1	Turkey %
1986	24.9	3.3	7.8	30.1	0.7	0.7	10.1	2.5	11.4	8.3	0.3	
1990	18.1	2.7	6.3	37.1	0.3	0.5	9.9	3.0	13.3	8.6	0.2	
1993	15.1	1.6	8.6	39.2	0.3	0.5	7.4	3.0	12.9	11.0	0.3	
1980	3.93	4.96	7.63	7.44	1.16	3.30	18.56	2.11	8.26	39.83	2.78	EC16 %
1986	4.10	3.26	7.46	8.29	0.90	3.60	17.67	1.98	6.35	42.92	2.70	
1990	3.62	2.38	7.41	8.08	0.80	3.46	16.76	2.10	6.07	45.53	3.62	
1993	3.48	2.14	8.15	7.64	0.92	3.53	17.32	2.08	5.29	46.08	3.21	
1980	3.73	4.95	7.63	7.40	1.16	3.32	18.62	2.11	8.29	39.97	2.79	EC15 %
1986	3.91	3.26	7.46	8.10	0.90	3.67	17.73	1.98	6.30	43.28	2.76	
1990	3.49	2.38	7.42	7.81	0.82	3.48	16.82	2.09	6.00	45.83	3.69	
1993	3.36	2.14	8.15	7.31	0.93	3.56	17.43	2.07	5.21	46.46	3.25	
1986	4.9	15.2	5.00	6.5	0.9	0.4	6.9	1.00	7.4	45.4	6.4	Poland %
1990	5.9	10.6	6.60	6.1	1.3	0.8	10.6	1.5	13.6	32.3	10.5	
1993	4.2	9.5	8.2	15.3	3.4	1.4	9.3	2.8	13.9	29.6	2.4	
1990	1.0	0.4	0.5	12.0	2.7	0.7	25.3	2.4	14.1	38.2	2.8	Romania %
1993	2.4	0.5	4.6	19.3	3.3	0.6	19.1	3.4	18.0	27.4	1.6	
1993	3.1	5.7	6.2	9.0	3.0	2.4	13.0	6.2	11.8	34.7	5.0	Czech Rep. %
1993	1.0	3.9	4.3	18.2	4.5	5.0	13.1	2.7	5.3	40.0	2.0	Slovenia %
1980	7.29	8.10	7.20	7.02	1.35	3.02		1.50	7.65	38.40	3.60	World %
1986	5.42	4.68	6.28	7.72	1.18	3.19	14.88	1.44	5.48	45.78	4.67	
1990	4.92	7.48	5.89	8.11	1.04	2.94	14.15	1.45	5.44	43.96	4.62	
1993	4.05	5.03	5.63	8.13	1.18	2.70	14.11	1.42	4.56	46.55	4.45	

The code for commodity groups are 1. agricultural, 2. mining quarries, 31. food, bev, tobacco, 32. textiles, 33. wood products, 34. paper products, 35. chemicals, 36. non-metal, 37. basic metal, 38. metal manufactures, 39. other man.

**Table 2: RCA Indices for Turkey, EU15-16.**

	1	2	31	32	33	34	35	36	37	38	39	
1980	7.819	0.815	0.958	2.407	0.148	0.033	0.315	1.733	0.196	0.091	0.027	RCA Turkey
1986	4.594	0.705	1.242	3.899	0.593	0.219	0.713	1.736	2.080	0.181	0.064	
1990	3.678	0.360	1.069	4.574	0.288	0.170	0.701	2.068	2.444	0.165	0.043	
1993	3.802	0.318	1.527	4.821	0.254	0.185	0.443	2.112	2.828	0.236	0.067	
1980	0.540	0.612	1.060	1.060	0.861	1.095	1.247	1.408	1.080	1.037	0.772	RCA EU16
1986	0.756	0.698	1.189	1.074	0.778	1.432	1.248	1.378	1.159	0.938	0.587	
1990	0.736	0.318	1.258	0.994	0.816	1.179	1.188	1.451	1.116	1.036	0.794	
1993	0.861	0.425	1.449	0.940	0.783	1.309	1.038	1.467	1.165	0.989	0.757	
1980	0.511	0.611	1.060	1.055	0.864	1.099	1.251	1.407	1.083	1.041	0.775	RCA EU15
1986	0.723	0.698	1.188	1.049	0.779	1.151	1.253	1.375	1.151	0.945	0.591	
1990	0.709	0.318	1.269	0.964	0.825	1.188	1.193	1.445	1.103	1.044	0.803	
1993	0.830	0.426	1.448	0.898	0.789	1.321	1.045	1.460	1.148	0.997	0.764	

1-The code for commodity groups are 1. agricultural, 2. mining quarries, 31.food, bev, tobacco, 32. textiles, 33. wood products, 34. paper products, 35. chemicals, 36. non-metal, 37. basic metal, 38. metal manufactures, 39. other man.

2-The results from Table 2 are derived from Table 1.

As for Turkey, commodity groups 1 (agriculture), 31 (food & beverages), 32(textile), 36(non-metal) and 37(basic metal) have a revealed comparative advantage. In Turkey's commodity groups, the RCA indices for textile and agriculture are well above the value. The RCA indices for these commodity groups, however, are less than one for the EU15. The EU15 has a comparative advantage in paper products, chemicals and metal manufactures which Turkey has a comparative disadvantage. Having said that, it can be expected that a considerable intra-EU TC effect, as a result of next European enlargement, would emerge. In the next sections, we will analyse these trade creation and trade diversion results in the case of Turkey joining the European Union, which is called EU16.

### **3.1. Trade Creation Effects in the EU16 ( EU15 + Turkey )**

As noted before, a difference in export structures leads to trade creation. Table 2 shows that the RCA indices which are greater than value one are 1, 31, 32, 36 and 37 for Turkey. It is seen that the EU15 and Turkey have different export structures. The EU15 countries have a revealed comparative advantage on 34 (paper), 35 (chemicals), and 38 (metal manufacture products) which Turkey has a clear comparative disadvantage. Table 2 shows that two leading commodity groups for Turkey are 1 and 32 which the EU15 has a clear comparative disadvantage.

The next stage of the analysis is to consider the effects of integration between Turkey and the EU15 on these commodity groups, to ensue initially upon the intra-EU trade creation effects in these commodity groups when Turkey becomes the members of the EU. These results can also be seen in Table 1 and in Table 2 for the years 1980, 1986, 1990 and 1993. It could be expected to have a trade creation effects on these commodity groups when Turkey included the EU15. However, Table 2 shows that competitive export industries, namely 1 (agriculture) and 32 (textile), would not be able to change the EU countries to a better position. Turkey's only contribution at this point is to improve the competitiveness level higher than the previous level. However, it does not provide a revealed comparative advantage for these goods. These implications can also be applicable for goods 36 (non-metals) and 37 (basic metals). Turkey would strengthen the EU's position on these goods. It can be said that Turkey does not have a substantial effect on EU's competitiveness since Turkey's trade volume is relatively low vis a vis the EU countries exports.

However, the EU15 countries have a revealed comparative advantage on commodity groups 34 (paper), 35 (chemicals), and 38 (metal manufacture) and they will still have comparative advantage for these goods when Turkey included to the EU. Therefore, it can be expected that there would be intra-EU trade creation effects between Turkey and the EU in the case of paper products and chemicals exported to Turkey from the EU15. Finally, when Turkey is included the EU15, the commodity groups which the EU have a comparative advantage are goods 31 (food), 34 (paper), 35 (chemicals), 36 (non-metal), and 37 (basic metal). Additionally, the RCA indices for goods 32 and 38 for the EU16 are just below one, thus, it can be considered that the EU16 also have revealed comparative advantage on these goods.

#### **4. ON THE DEGREE OF TRADE DIVERSION IN THE EU**

Trade diversion arises when higher-cost products from member countries replace cheaper imports from outside the region. As noted earlier, we would expect trade diversion to occur, if it is revealed that comparative advantage exists for the rest of the world. In other words, a member country that has a low RCA index would probably suffer from trade diversion, if the union as a whole had a revealed comparative disadvantage. In that sense, we consider that if a union ( the EU in our case) has a revealed comparative disadvantage on a commodity group that would correspond a revealed comparative advantage for rest of the world on related



commodity group. In this section, it will be first considered in the case of the EU15 and Turkey. Then, the EU16 will be discussed in turn.

Using 1993 data, it can be seen from Table 2 that the EU15 and Turkey have a clear comparative disadvantage on goods 2 (mining and quarries), and 39 (other manufacturers). In these cases the RCA indices for these goods are less than 0.5 except for the EU15 on good 39. Both Turkey and the EU12 have a low RCA index for commodity group 33. Turkey by itself has a clear revealed comparative disadvantage in goods 34 (paper), 35 (chemicals), and 38 (metal manufacture) in which corresponding RCA indices are well below 0.5.

Note should also be taken of the fact that both parties have had low RCA indices for the related commodity groups over the period under considerations. These results imply that any discriminatory trade policies against the outside the world would lead to trade diversion in these commodities.

#### **4.1. Trade Diversion in the EU16 ( EU15 + Turkey )**

In this section, we will discuss trade diversion possibilities if an integration between the EU15 and Turkey occurs. When Turkey is included in the EU, it can be said that there will be no considerable change in the EU's position. The commodity groups which the EU15 have low RCA indices will remain same. As we mentioned earlier, Turkey's accession can only strengths the EU's position in goods 1 and 32, but not sufficiently to turn the EU sectors to a situation of comparative advantage. Although, Turkey has a clear comparative disadvantage in goods 34, 35 and 38 , the RCA indices for these goods for the EU15 would not go down below one. However, if Turkey stayed out the Union, there would be trade diversion in goods 34, 35 and 38 for her. As for the EU16, there would be a clear intra- EU trade diversion in good 2 (mining and quarry) for which the RCA index is less than 0.5. There might also be a trade diversion on goods 39, 33 and 1 which the RCA indices for these products are well-above 0.5 but less than one.

**Table 3: RCA Indices of Turkey, Greece, Portugal, Spain and CEECs Countries.**

	1	2	31	32	33	34	35	36	37	38	39	
1980	7.819	0.815	0.958	2.407	0.148	0.033	0.315	1.733	0.196	0.091	0.027	RCA Turkey
1986	4.594	0.705	1.242	3.899	0.593	0.219	0.713	1.736	2.080	0.181	0.064	
1990	3.678	0.360	1.069	4.574	0.288	0.170	0.701	2.068	2.444	0.165	0.043	
1993	3.802	0.318	1.527	4.821	0.254	0.185	0.443	2.112	2.828	0.236	0.067	
1980	2.126	0.592	1.680	2.933	0.296	0.364	1.606	3.666	1.320	0.151	0.083	RCA Greece
1986	3.376	1.047	2.324	4.222	0.254	0.250	0.636	2.986	1.605	0.128	0.107	
1990	3.170	0.374	2.733	3.625	0.384	0.340	0.850	2.890	1.764	0.141	0.608	
1993	3.777	0.695	2.468	1.635	1.016	0.592	1.396	3.802	1.688	0.259	0.606	
1980	0.301	0.407	1.555	4.287	6.962	2.052	0.833	2.000	0.313	0.486	0.277	RCA Portugal
1986	0.442	0.256	1.178	5.064	5.338	2.100	0.713	2.361	0.401	0.449	0.149	
1990	0.467	0.374	0.950	4.636	5.480	2.040	0.709	2.890	0.257	0.539	0.152	
1993	0.468	0.735	1.456	4.169	4.915	1.441	0.743	3.661	0.438	0.580	0.247	
1980	1.371	0.123	1.236	1.324	0.814	1.357	0.967	3.000	1.699	0.846	0.333	RCA Spain
1986	1.863	0.192	1.130	1.243	0.677	1.065	1.229	2.222	1.678	0.786	0.471	
1990	1.707	0.090	1.205	0.937	0.576	1.020	1.176	2.275	1.250	1.006	0.347	
1993	2.370	0.119	1.278	0.824	0.508	1.000	0.821	2.605	1.403	1.007	0.426	
1986	0.904	3.248	0.796	0.842	0.763	0.125	0.488	0.694	1.350	0.992	1.370	RCA Poland
1990	1.199	1.417	1.121	0.752	1.250	0.272	0.751	1.034	2.500	0.735	2.273	
1993	1.037	1.889	1.456	1.882	2.881	0.519	0.558	1.972	3.048	0.636	0.539	
1990	0.203	0.053	0.085	1.480	2.596	0.238	1.793	1.655	2.592	0.869	0.606	RCA Romania
1993	0.593	0.099	0.817	2.374	2.797	0.222	1.145	2.394	3.947	0.589	0.360	
1993	0,765	1,133	1,101	1,107	2,542	0,889	0,779	4,366	2,588	0,745	1,124	RCA Czech R.
1993	0,247	0,775	0,764	2,239	3,814	1,852	0,785	1,901	1,162	0,859	0,449	RCA Slovenia

1-The code for commodity groups are 1. agricultural, 2. mining quarries, 31.food, bev, tobacco, 32. textiles, 33. wood products, 34. paper products, 35. chemicals, 36. non-metal, 37. basic metal, 38. metal manufactures, 39. other man.

2-The results from Table 3 are derived from Table 1.

## **5. ANALYSIS ON CANDIDATE COUNTRIES' AND SOUTHERN EU COUNTRIES' EXPORT STRUCTURE**

The aim of this final section is to consider empirically the implications of Turkey's accession into the EU markets for the three Mediterranean EU countries, Greece, Portugal and Spain. We will also compare some Eastern European candidate countries export structures with the Southern EU countries export structures as well as with Turkey. The consequences of joining the EU with a customs union agreement or full-member are relatively straightforward: as barriers to trade between Turkey and the EU are removed , it can be expected that the

comparative advantage will be further exploited for Turkey and inter- industry trade will develop between these two parties. From previous sections, we observed that Turkish export structure displays a relatively large labour-intensive commodities i.e. agriculture, food and beverages, textile, non-metal. Therefore, Turkey should benefit from further specialisation in labour-intensive commodities. As Neven ( 1990, 1991 ) states that the southern European countries within the EU, namely Portugal, Spain and Greece, also have a relatively large endowment of labour. It can be argued that there might be a conflict between Turkey and southern European countries in terms of trade when Turkey to be included into the EU. The purpose of this section is to assess the overall position of these countries and discuss whether southern countries trade with the EU countries will be jeopardised after Turkey's accession into the EU market without discriminatory barriers. For the same purpose, we will also analyse some Eastern European candidate countries' export profiles. We will use again the RCA index for this purpose. As noted earlier, comparative advantage can be estimated from trade flows; trade flows will indeed 'reveal' the comparative advantage underlying actual trade. Neven ( 1991 ) states that 'revealed comparative advantage' will provide insight into the effect of such trade liberalisation only to the extent that the revealed comparative advantage is a fair guide to the actual comparative advantage.

According to our formula, a country has a revealed comparative advantage on a commodity group if the RCA index value for this commodity group is higher than one. RCA indices have been computed for 1980, 1986, 1990 and 1993 for 11 commodity groups. Table 3 shows the RCA indices for Turkey, Greece, Portugal and Spain for related commodity groups for these periods. Table 3 also shows RCA indices for Poland, Romania, Czech Republic and Slovenia, yet data for these countries are incomplete for backdated years. According to the RCA indices for 1993 in Table 3, four countries have a revealed comparative advantage on goods 31 (food and beverages), 36 (non-metal). Turkey, Greece and Spain have revealed comparative advantage on goods 1 (agriculture) and 37 (basic metal). Turkey, Greece and Portugal have a revealed comparative advantage on good 32 (textiles). Looking at the five product, it can be observed that both Turkey and Greece have a revealed comparative advantage. Spain and Turkey shows similar export structures on four commodity groups. Portugal, on the other hand, has three commodity goods which reveal similar export structure with Turkey. It seems that Turkey and southern European countries have similar export structures and should be expected a considerable conflict among these countries in terms of trade. Trade conflict should especially be expected between Greece and

Turkey. Table 3 also reveals that Turkey's export position on textile sector has been increased considerably over the period under consideration and can threaten Greece and Portugal's textile sector position in the EU market since the RCA indices for textile sectors for Portugal and Greece have experienced a decline over the period under consideration. Turkey also might jeopardise the Greece and Spain's export position in the case of good 37 (basic metals) because of the same reason. Having said that, it should also be noted that these southern Mediterranean countries except Portugal have made considerable headway in diversifying their export structures. Therefore, they might strengthen their position on these goods and be a serious danger for Turkish products in the EU markets.

Regarding some Eastern European candidate countries export performances, it can be seen that these countries can pose a real threat for both Turkey and those southern Mediterranean EU members. For Turkish exports, the biggest rivalry comes from Poland as both parties have shown revealed comparative advantage on five similar commodity groups, which are groups 1, 31, 32, 36 and 37. Romania, Czech Republic and Slovenia show three similar commodity groups that have revealed comparative advantage as Turkey has. For the southern EU member countries, it seems that Poland, Romania and Czech Republic pose serious competition once they are joined to the EU. The competition could particularly be more severe for Greece as those CEECS countries have experienced revealed comparative advantages over five commodity groups that is also experienced by Greece. At sectoral level, it can be seen that both Greece and Portugal face severe competition from these candidate countries especially in the case of textile and wood products.

## **6. CONCLUSION**

The aim of this paper was twofold. First, we discussed the degree of trade creation and trade diversion effects on the EU countries when Turkey is included into the EU market. We used the RCA index to examine trade creation and trade diversion effects. It was found that the export structures are substantially different among Turkey and the EU15. As far as trade creation and trade diversion effects are concerned, we observed that Turkey, probably, does not change the EU position significantly because of her lower trade volume vis a vis the EU countries. When Turkey joins the EU, the comparatively advantageous goods for the EU would be 31, 34, 35, 36 and 37. Additionally, commodity groups 32 and 38 can be added into this group since the RCA indices for these goods are 0.940 and 0.984 respectively. There will be a trade diversion in the case of goods 2, 39, 33 and 1. Before the accession into the EU,

for Turkey, the comparatively disadvantageous goods were 34, 35 and 38. Therefore, Turkey would suffer from a trade diversion if she stayed out of the EU. After the integration with the EU, however, trade diversion effects on these products disappear.

The RCA index was also used to assess the potential effect of Turkey and some Eastern European candidate countries (namely Poland, Romania, Czech Republic and Slovenia) accession into the EU market for southern European countries. The results indicate that Turkey and the southern European countries relatively have similar export structures. Accession of Turkey into the EU market without any trade barriers might hamper these southern EU countries export position. The results also suggest that the CEECs countries would pose serious threat for both Turkey and these three EU members should they join the EU because of similar export structures on many commodity groups.

The results in this study should be interpreted cautiously. First, the RCA index can identify only the occurrence rather than the magnitudes of trade creation and trade diversion for each commodity groups. It should also be noted that the RCA index cannot capture the dynamic effects of integration, e.g. scale economies, increases in bargaining power, increases in competition etc. Factors which are usually of much concern to member countries. It is acknowledged the results here reflect static changes and future analysis should focus on more dynamic effects of Turkey's accession.

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