EFFECTS OF THE EASTERN EU-ENLARGEMENT ON CROATIA – A TRADE ANALYSIS

Dražen Derado [*]

Starting from the theory of customs union and recent contributions to it, the paper tries to apply the theoretical inferences about welfare effects of trade integration within the EU on Croatia and its business sector. The analysis focuses on static and dynamic effects which follow from increasing export possibilities and advantages from economies of scale. Taking into account the pace of trade liberalization, the paper estimates the effects of Croatian non-participation in the EU and the potential adjustment costs arising from increased competition from the new EU-member countries and the changing pattern of specialization. In doing so, the export similarity index and the methodology of intra-industry trade (IIT) have been applied. Implications on the business sector and management practice have also been included.

1. INTRODUCTION

Regional economic integrations play an important role today as they offer easier access to the international market for domestic companies. This importance is further reinforced by the increasing competition on the world market and product differentiation caused by imperfect market structures, consumers' demand for differentiated products and dynamic technological advance. This, together with the increasing globalization of business activities make it easier for companies from less developed (transition) countries to successfully participate in global production and distribution networks. However, in order to achieve this, national competitiveness should be improved, including the company level restructuring and development of new business strategies. The second half of the 20th century was marked by an increase in the

---

[*] Dražen Derado, Ph.D., Faculty of Economics, University of Split, Matice hrvatske 31, 21000 Split, Phone: ++ 385 (0)21 430 681, Fax: ++ 385 (0)21 430 701 (attn:), E-mail:dderado@efst.hr

37

number of preferential trade agreements (PTAs), with the EU being the best example. Although PTAs are generally considered not to be harmful to non-member countries' exports, many empirical studies found out that they do not always occur without a negative effect, either on the third parties or the general welfare (Krueger, 1997, Ohyama, 2007). Therefore, the aim of the paper is to find out the effects of economic integration in Europe, primarily of the EU-eastern enlargement on Croatian trade and exports in particular. The purpose is to access international competitiveness of Croatian exporters and estimate the expected structural adjustments both at the national and company level. The paper is structured as follows. The first part gives an overview of classical and recent theoretical contributions to the preferential trade area analysis – from Viner's static effects to long-term dynamic effects. Recent developments in Croatian trade and that of the new member countries of the EU are presented in the second part, followed by an analysis of export similarity and IIT in the third part of the paper. The final part concludes.

2. EFFECTS OF TRADE INTEGRATION

The classical theory views trade integration as a step towards free trade with, consequently, positive welfare effects for the participating countries as well as for the world as a whole. However, modes and dynamics of trade integration, together with country-specific characteristics make it difficult to unanimously conclude on the welfare implications of trade integration.

2.1. Short-term effects of trade integration

Viner (1950) differentiates between two main (static) effects of trade integration – trade creation and trade diversion. In a customs union (CU), trade creation occurs when one product, which had previously been produced in each of the countries, is now produced in one of the CU members which achieves the highest efficiency. Trade creation influences, thus, allocation efficiency in each of the member countries and encourages specialization according to comparative advantage. According to the factor proportion theory, the advantages of such specialization are mutual – both for the low-cost producer and the importing country[1]. Trade diversion results from tariff discrimination of the countries which do not participate in CU. This effect results from the redirection of imports from the third, non-member country (which has lower production costs, but also faces import tariffs of CU) to the member countries

---

[1] Countries which remain out of the custom union can also enjoy advantages from such specialization through the efficient exchange of commodities.

whose 'competitiveness' results only from the 0% tariff rather than from better allocation efficiency. Due to the allocation of resources which does not fully comply with the principle of comparative advantage, trade diversion is negative for both the importing and producing country[2]. Therefore, the net-effect of CU on the general welfare cannot be unanimously or *à priori* conferred as it largely depends upon the degree of trade creation and trade diversion.

The emerging theory of free trade area (FTA) found out that FTA is not more welfare increasing than CU, while it is more welfare reducing, thus creating negative net-effects on welfare (Melatos/Woodland, 2007). The main reasons for that are the possibility of overlapping between more FTAs and the introduction of the rules of origin (an administratively demanding and costly procedure) in order to prevent trade deflection resulting from a non-existing common external tariff (Krueger, 1997). Nevertheless, many authors claim that any form of PTA is better than individual and uncoordinated trade liberalization and can, therefore, be regarded as a 'stepping stone' rather than a 'stumbling stone' towards free trade (Ghosh, 2002). In the same vain, a more detailed analysis of welfare implications of PTA on individual countries reveals that both CUs and FTAs have positive net-effects which, however, differ for members and non-members (Kose/Riezman, 2000). FTAs are considered to have positive effects for both types of countries, while CUs, apart from the positive effects for member countries, have negative consequences on non-members. Generally, members of CU are considered to have stronger welfare gains than those of FTA, while the greatest welfare gains in both cases are generated through the positive volume-of-trade effect. Terms-of-trade effects are strongly present in CU and benefit members positively, while having a negative impact on countries which remain outside the union.

2.2. Long-term effects of trade integration

Despite the possible negative net-effects, the interest of small economies for trade integration grows steadily[3]. Furthermore, in the case of transition economies, trade integration is viewed as a strategic objective in improving

---

[2] "*Trade creation involves a shift in domestic consumption from a high-cost domestic source to a lower cost partner source, as a result of the abolition of tariffs on intra-union trade. Trade diversion involves a shift in domestic consumption from a low-cost world source to a higher-cost partner source, as a result of the elimination of tariffs on imports from the partner.*" (Hine, 1994, p. 236).
[3] Free trade is optimal policy for small economies because of perfectly elastic (foreign) demand for their products. By introducing tariffs or any other kind of trade barriers, small economies can suffer from decreasing trade volume and unchanged terms of trade making the net-effect of such a trade policy negative

local companies' international competitiveness. The main reason for that are the long-term effects resulting from the preferential access to a larger market and increasing export possibilities. Market enlargement and stronger competition force companies to reduce production costs and make it possible for them to take advantage of economies of scale. By improving the competitiveness of producers within the integration, this effect contributes to further reduction in trade with the countries which remain outside the integration[4]. Except for the economies of scale, trade integration can contribute to significant changes in the structure of trade flows through increased competition and changes in the specialization pattern. Increasing specialization constitutes the basis for the analysis of trade in which different types of the same product dominate. The resulting IIT, which is nowadays the largest between the high-income countries ('North-North trade'), is understood as an indicator of convergence of their economic structures, growth rates and level of development[5].

Considering the inferences above, it is possible to differentiate between inter-industry and intra-industry trade creation (Hine, 1989). Inter-industry trade creation emerges as a result of specialization between different industries of two or more countries and leads to the situation in which the concerned industry in one country stagnates, while in another it expands. Intra-industry trade creation implies much narrower specialization in certain segments of the same production and makes it possible for the same industry to expand in both countries. Differences between the two types of trade creation are important and mainly concern structural adjustment costs. Structural adjustment realized through the allocation of resources within the same industry (intra-industry trade creation) requires lower costs and, therefore, has a much better effect on the long-term economic growth ('smooth adjustment hypothesis'). For transition economies, this would mean specialization and allocation of resources along the principle of comparative advantage, while at the same time taking advantage of the economies of scale.

---

[4] The main advantage of trade integration for small economies is increasing scale of production. However, Viner points out that it is not easy to achieve, mostly due to limitation in the supply of the production factors and suggests integration of the production factors markets in order to avoid increasing prices of the factors of production (Viner, 1950). Similarly, Corden considers that dynamic effects will occur neither easily, nor quickly and claims: "*...industries do not just 'take over' the whole market in another country or 'close down' as neatly as comparative-static model might suggest."* (Corden, 1972, pp. 474).

[5] Too large development gap between the integrating countries can lead to income divergence. However, a rather small income gap is even desirable as it induces faster income convergence through a more rapid income growth of the less developed member countries (Venables, 2003).

2.3. Stylized facts about advantages of trade integration

The welfare effects of PTA ultimately depend upon the number of country-specific factors. They can be divided into static and dynamic ones (Park, 2007). To static factors belong those whose impact can be observed shortly after trade integration takes place – size of the market and degree of trade integration, tariff structure prior to and after integration, level of economic development, similarities in industrial structure, etc. The possibilities of trade creation beyond trade diversion are greater with a larger CU which comprises more countries and offers greater opportunities for increasing production and efficiency as well as economies of scale. High intra-regional trade integration prior to PTA formation, together with similar economic structures[6] contribute further to trade creation and positive welfare effects for individual countries. Additionally, geographically proximate countries at the similar level of development can more easily realize increasing amounts of trade than countries with large development (and income) gaps or those which face significant differences in consumer preferences[7]. Finally, tariff structure can significantly influence gains from trade integration (primarily of CU due to common external tariff) and the sign of its impact depends largely upon the aims of the tariff protection. Assuming that tariffs were used to protect domestic producers with weak comparative advantages and, therefore, imposed on similar imports, the higher the tariffs prior to CU, the greater are the gains of their elimination.

The most important dynamic factor which occurs with trade integration, and is further reinforced by it, is increasing competition. It can result in a more detailed division of labour, increasing production efficiency and deeper specialization along the principles of comparative advantages (Lohrman, 2001). Such a specialization pattern, together with increasing economies of scale and learning-by-doing can add to local companies' competitiveness, making trade more efficient and reducing the scope for trade diversion (Wonnacott, 1996). In this way, intra-regional transaction costs can be reduced and, not the least important, the negotiating position of small economies *vis-à-vis* developed ones improved. Based on what was said above, it is impossible to give, with strong certainty, a general conclusion on the net-effect of economic integration. Estimations of the final effects differ from case to case and require a good

---

[6] "…CUs should be formed among countries whose economies are currently competitive but potentially complementary." (Hine, 1994, pp. 244).
[7] The concept of 'natural trading partners' implicitly aims at gravity approach and is based on considerations of low transport and transaction costs which reduce the possibilities for trade diversion (Krueger, 1997). For empirical confirmation, see: Lee/Shin, 2006; Papazoglou *et al.*, 2006; Tang, 2005.

knowledge of the conditions of economic integration (Kreinin/Plummer, 2008; Neyapti *et al.*, 2007; Nakos *et al.*, 2001).

3. TRADE LIBERALIZATION IN CROATIA

Croatia embarked on the process of trade liberalization with the EU as early as 2002, following the signing of the Stabilization and Association Agreement (SAA). Today, it has free trade agreements with 38 countries (EU, EFTA, CEFTA and Turkey) and in 2006 realized 77% of the total trade volume on the principle of free trade. However, recent trends in Croatian foreign trade are not favourable as the negative trade balance continued to increase throughout the observed period (1997-2007). Fairly balanced average annual growth rates of exports (12%) and imports (11%) during 1997-2007 were not enough to reduce the large trade deficit cumulated during the '90s. Consequently, the export-import ratio fell below 50% (47.9%) in 2007 when the negative trade balance reached almost USD 13.5 bn; the greatest part of which is realized in trade with the EU (USD 9.3 bn). Although the EU still represents the most important Croatian export and import market (63.4% of total trade volume), its share is diminishing as it amounted to almost 70% as recently as in 2000. Moreover, Croatian trade with the EU is facing another negative development – faster growing imports (9.5% on average), compared to exports which grew annually by 6%. This resulted in the increasing negative trade balance from USD 7.8 bn in 2006 to USD 9.3 bn in the following year. Individually, EU-member countries occupy the leading positions as the most important Croatian trade partners. Croatian exports are more regionally concentrated than imports, but both resemble a relatively strong gravitational pattern according to which among the 10 most important trade partners, 30.3% of exports (11.6% of imports) is realized with the neighbouring countries and 55.6% of exports (33% of imports) with the neighbouring and geographically proximate countries.

Intermediate goods and capital goods (30% each) dominate in the commodity structure of trade exports. Both of these increased by almost 20%, as compared to 2006. Croatian manufacturing contributes to 93.6% of the total exports and 85.2% of imports. In 2007, there were many industries whose exports grew more strongly than total exports or manufacturing exports. These industries are: office machinery and computers, motor vehicles, metal processing industry, machinery and equipment including electrical machinery and apparatus, paper industry and wood processing industry. According to SITC, manufacturing (5-8 SITC) makes 73.6% of the Croatian trade volume (Figure 1).

Figure 1. Structure of Croatian trade volume, (SITC), 2007
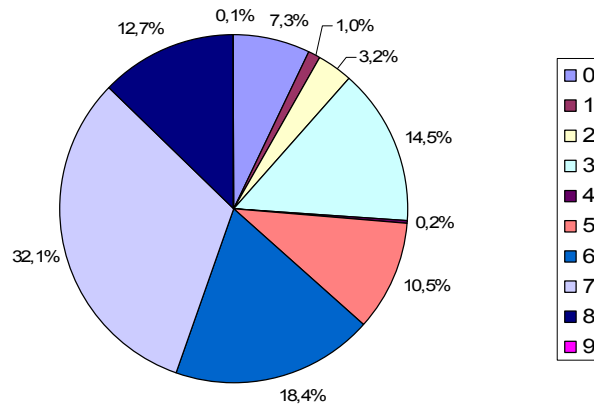
Source: DZS – "Priopćenje", No. 4.2.1/12, 2008

4. TRADE EFFECTS OF THE EASTERN EU-ENLARGEMENT

4.1. Export similarity between Croatia and the new EU-member countries

Many analyses have dealt with the effects of economic integration on the countries which take part in it (Aitken, 1973; Yannopoulos, 1987; Plummer, 1991). However, there are a few studies which focused on the expected effects of economic integration for the countries remaining out of the integration process. This analysis tries to find out the effects of the eastern EU-enlargement on Croatian trade. For that purpose, the export shares of individual industries in overall exports will be compared across countries in order to find out the extent to which their export structures overlap. The more similar the export structures of the analyzed countries, the more exposed their industries are to mutual competitive pressure on the markets of the third countries (EU). For the purpose of the analysis, the Finger-Kreinin export similarity index (FKESI) will be used (Finger/Kreinin, 1979):

$$S(a,b;c) = \left\{ \sum_i \min \left[X_i(a;c), X_i(b;c) \right] \right\} \cdot 100 \qquad \text{i = 1, …, n} \qquad (1)$$

in which *a* and *b* stand for exporting countries which compete for the market of the country (or group of countries) *c*, while X_i denotes the share of the commodity *i* in total exports of the respective country to the country (or group of countries) *c*. It can take value within the range $0 \leq S \leq 100$ with 0 indicating no commodity overlap between the two competing countries in their exports and 100 denoting full similarity in export flows. The importance of FKESI for the countries which remain out of PTA follows from the fact that a greater similarity of their export structures indicates the expected negative net-effects (trade diversion) resulting from trade integration. A lower index value points to less export similarity between the analyzed countries and, therefore, a weaker mutual competitive pressure on the target export markets. Many analyses (Kreinin/Plummer, 2007; Pomfret) have confirmed the relevance of the depicted methodology in estimating the effects of PTAs on the third countries. The index shows strong stability over time while its changes reflect only the changes in comparative advantage[8]; therefore, it can tentatively be used as an indicator of comparative advantage. Although FKESI is sensitive to the chosen level of data aggregation (its value systematically increases with the higher level of aggregation and *vice versa*), it has been found out that this methodology enables optimal use on the three-digit level of the SITC (Kellman/Schroder, 1979) which makes it compatible with IIT analysis (Grubel/Lloyd, 1975; Greenaway/Milner, 1983).

The forthcoming analysis is based on the data series on the total exports of Croatia and the new member countries of the EU from CEE for the years 1995, 2002 and 2006 (UNSD – Commodity Trade Statistics Database). The data are classified according to the SITC (Rev. 3), and the analysis has been carried out at the third-digit level of aggregation for all industries (0-9 SITC) and for manufacturing (5-8 SITC) which experienced the strongest trade liberalization during the '90s. Countries of CEE are analyzed since Croatia realizes 15% of its trade volume with them and they might present potential competitive pressure for Croatian exporters on the EU-market. Table 1 shows that, concerning the export pattern, strong divergence has occurred between Croatia and the majority of the analyzed countries. During the second half of the '90s, the degree of Croatian export similarity had fallen, mostly in relation to Hungary (by app. 15 percentage points), while significant reduction of FKESI can be observed with Slovenia, Poland and the Czech Republic. Quite a different pattern is, however, observed in relation with Bulgaria and Romania whose export similarity with

---

[8] *"Export composition tend to reflect basic forces of comparative advantage – resource availabilities, underlying technologies, levels of education and on-the-job experience, and taste patterns – which tend to change but slowly over time."* (Kellman/Schroder, 1983, pp. 193).

Croatia increased, showing that in 2006 about half of these countries' exports were similar to Croatian exports.

Table 1. Export similarity between Croatia and the new EU-member countries
(0-9 SITC, Rev. 3), (%)

COUNTRY	1995	2002	2006
CZE	46.6	44.2	43.3
HUN	56.2	43.0	37.7
POL	54.3	52.3	48.2
SVK	52.8	52.1	44.9
SLO	49.1	45.4	42.7
BUL	-	43.3	47.8
ROM	47	49.9	55.3

Source: UNSD – Commodity Trade Statistics Database, http://comtrade.un.org,
[accessed: 10. 03. 2008]

Dynamics of the change of the index value presented in the table above shows that the strongest divergence in Croatian export similarity to that of the advanced transition countries (the Czech Republic, Hungary, Slovenia) occurred before 2002, while Poland and Slovakia experienced the same trend a little bit later (not until 2006). In any case, an obvious divergence between these countries, on one hand, and Bulgaria and Romania, on the other, is probably to be explained by the last two countries' later accession with the EU (2007) and their less successful structural adjustments to the EU-economy. Nevertheless, although the elimination of trade barriers between all the present EU-member countries from CEE and the EU has been gradually realized during the '90s and, as far as the manufactures are concerned, by 2004 almost fully completed, joining the single market opens up new business opportunities for companies from CEE and makes possible the realization of dynamic effects of economic integration[9]. For Croatia, which has FTA with the EU but still takes no part in CU, this might result in further trade diversion.

When only trade in manufacturing (5-8 SITC) is concerned, the degree of similarity between Croatian and other countries' export flows is even smaller and ranges between 30% (Hungary) and 40% (Poland, Romania); however, with markedly smaller fluctuations across the countries.

---

[9] Kaminski and Ng (2005) confirmed successful integration of the CEE-companies into the EU-production and distribution networks through their business reorientation from simple assembly operations to processing and production of specialized inputs.

Table 2. Export similarity between Croatia and the new EU-member countries
(5-8 SITC, Rev. 3), (%)

	1995	2002	2006
CZE			
5 – chemicals and related products	6.1	3.9	2.9
6 – manuf. goods classif. by material	13.4	10.6	10.4
7 – machin. and transp. equipment	9.5	14.8	16.1
8 – miscell. manuf. articles	8.9	8.7	7.2
HUN			
5 – chemicals and related products	9.4	4.7	2.9
6 – manuf. goods classif. by material	10.9	8.4	7.4
7 – machin. and transp. equipment	9.7	13.8	14.9
8 – miscell. manuf. articles	14.1	9.6	6.1
POL			
5 – chemicals and related products	5.1	3.9	3.1
6 – manuf. goods classif. by material	11.4	10.8	11.1
7 – machin. and transp. equipment	11.8	18.9	17.1
8 – miscell. manuf. articles	16.8	11.3	8.3
SVK			
5 – chemicals and related products	9.1	5.0	2.3
6 – manuf. goods classif. by material	13.3	12.2	10.8
7 – machin. and transp. equipment	8.7	12.5	13.7
8 – miscell. manuf. articles	9.2	11.8	7.6
SLO			
5 – chemicals and related products	5.7	6.3	2.2
6 – manuf. goods classif. by material	13.3	11.6	12.3
7 – machin. and transp. equipment	8.3	12.2	13.5
8 – miscell. manuf. articles	16.3	10.4	8.7
BUL			
5 – chemicals and related products	-	3.5	2.6
6 – manuf. goods classif. by material	-	7.2	7.8
7 – machin. and transp. equipment	-	9.5	10.8
8 – miscell. manuf. articles	-	9.5	10.2
ROM			
5 – chemicals and related products	3	2.6	2.8
6 – manuf. goods classif. by material	9.7	9.2	9.1
7 – machin. and transp. equipment	10.1	13.2	15.8
8 – miscell. manuf. articles	11.1	11.1	11.7

Source: UNSD – Commodity Trade Statistics Database, http://comtrade.un.org,
[accessed: 10. 03. 2008]

Therefore, an average of 35% of FKESI can be taken as a good representation of the entire sample of countries, pointing to an even stronger competitive pressure which Croatian manufacturing exports will face in the coming years, implying the hard process of company restructuring and their

search for new market niches (Mascarenhas, 1999). When analyzed by commodity classes, Croatian exports of chemical products experienced a sharp drop in the index value, followed by classes 8 and 6 (Table 2). The only commodity class which realized an increasing similarity with the other countries' exports is 7. However, these negative trends are less pronounced among Croatia, Bulgaria and Romania.

However, in order to find out the more specific sector effects of the current economic integration in Europe on Croatia, it is necessary to know to which extent Croatian exports resemble those of the new EU-member countries at the level of each single industry (three-digit SITC). For that purpose, the following formula will help to calculate the bilateral relative export similarity between Croatia and other countries at the industry level:

$$D = \left\{ \frac{\min.\left[X_i(a;c), X_i(b;c)\right]}{\max.\left[X_i(a;c), X_i(b;c)\right]} \right\} \cdot 100 . \qquad i = 1, \dots, n \qquad (2)$$

Analysis of export similarity by manufacturing reveals that Croatia realizes the lowest export similarity in chemical products (25.6%), followed by manufactured goods classified by material (38.4%), while exports of machinery and transport equipment and miscellaneous manufactured articles resemble those of the analyzed countries from CEE up to 44% and 42.4% on average, respectively[10]. Regarding Croatian non-participation in the eastern EU-enlargement (2004 and 2007) and the high level of trade liberalization, the Croatian industry is expected to come under strong competitive pressure from the new EU-members[11]. In the chemical industry, this refers to both low-technology industry (production of plastic products and plastics in primary forms) and technologically more advanced industry which is demanding in terms of labour skills (production of pigments and paints, cosmetics and plant protection chemicals). Strong competitive pressure is further expected in the textile sector (textiles and clothing), metal industry (base and non-base metal, including simple products thereof) and the machine industry. In machinery and transport equipment, competitive pressure is expected to be very strong in a wide range of commodities which include: power generating machinery, machines for special purposes (agriculture, civil engineering, textile industry, metal-working machinery), mechanical parts for machinery, electric equipment and transport vehicles. Countries of CEE pose a strong competition for Croatian

---

[10] More detailed results (3-digit 5-8 SITC) can be obtained at the request from the author.

[11] Thanks to trade liberalization and technology upgrading, companies from CEE have considerably increased their international competitiveness (Navaretti *et al.*, 2004).

producers also in fine electronics like optical and measuring instruments and similar.

4.2. IIT as an indicator of trade integration with the EU

Although Croatia presently remains outside of the EU, it is still very interested in improving its share on the EU-market. Therefore, it is necessary to find out what kind of structural adjustments integration with the EU will bring to Croatia and what the chances are for Croatia to increase its exports of goods. Table 3 shows the level of Croatian IIT realized both with the EU 15 and the advanced transition countries prior to the first eastern enlargement (2004).

The analysis has been carried out on the basis of time series on Croatian exports and imports in 2001; the data are available up to the seven-digit level of SITC and differentiated by countries (DZS – Foreign trade statistics, 2001). When calculating IIT, the problem of biased measurement of the overlapping trade flows (especially categorical aggregation) has been taken into account (Greenaway/Milner, 1983) and, therefore, the adjusted Grubel-Lloyd index of intra-industry trade has been used (for methodology see: Grubel/Lloyd, 1975).

Croatia realized a relatively low level of IIT – both with all the countries and individual countries or country groups. 'Trade overlap' with the EU 15 and the Central and East European countries (CEEC 5) is very similar and accounts for 35-40% of total trade and is lower than the share realized in overall trade (44.09%). In trade with the CEEC 5, there is a strong domination of inter-industry trade realized according to the factor proportions theory; the only exception in that respect is Slovenia which, with app. 40% of IIT, absorbs the greatest part of Croatian IIT with the CEEC 5.

An exception, indeed to a lesser extent, is also Hungary. The share of IIT increases when only manufacturing (5-8 SITC) is taken into consideration – in this case, Croatia realizes almost 47% of its total trade flows by exchanging commodities within industries. Concerning 'trade overlap' with the products of manufacturing, an exception is again Hungary with a noticeably higher share of IIT than in the case of all the commodities (0-9 SITC).

Table 3.: The share of Croatian IIT with different countries and country groups (%) (SITC), 2001

|	**ALL COUNTRIES**	**IIT**		**CZE**	**IIT**
	Total (0-9 SITC)	**44.09**		**Total (0-9 SITC)**	**9.16**
	Total (5-8 SITC)	**46.56**		**Total (5-8 SITC)**	**9.07**
5	chemicals and related products	47.4	**5**	chemicals and related products	7.85
6	manuf. goods classif. by material	48.82	**6**	manuf. goods classif. by material	13.04
7	machin. and transport equipment	37.29	**7**	machin. and transport equipment	3.84
8	miscell. manufactured articles	63.39	**8**	miscell. manufactured articles	21.35
	EU 15	**IIT**		**SVK**	**IIT**
	Total (0-9 SITC)	**39.57**		**Total (0-9 SITC)**	**9.73**
	Total (5-8 SITC)	**39.97**		**Total (5-8 SITC)**	**7.68**
5	chemicals and related products	28.45	**5**	chemicals and related products	8.71
6	manuf. goods classif. by material	43.56	**6**	manuf. goods classif. by material	8.78
7	machin. and transport equipment	33.83	**7**	machin. and transport equipment	4.05
8	miscell. manufactured articles	54.62	**8**	miscell. manufactured articles	4.28
	CEEC 5* (average)	**IIT**		**SLO**	**IIT**
	Total (0-9 SITC)	**35.57**		**Total (0-9 SITC)**	**40.08**
	Total (5-8 SITC)	**34.2**		**Total (5-8 SITC)**	**39.91**
5	chemicals and related products	40.01	**5**	chemicals and related products	35.2
6	manuf. goods classif. by material	35.56	**6**	manuf. goods classif. by material	44.49
7	machin. and transport equipment	24.11	**7**	machin. and transport equipment	32.54
8	miscell. manufactured articles	41.26	**8**	miscell. manufactured articles	45.29
	POL	**IIT**		**HUN**	**IIT**
	Total (0-9 SITC)	**4.27**		**Total (0-9 SITC)**	**19.96**
	Total (5-8 SITC)	**3.69**		**Total (5-8 SITC)**	**26.94**
5	chemicals and related products	2.79	**5**	chemicals and related products	16.81
6	manuf. goods classif. by material	6.91	**6**	manuf. goods classif. by material	35.92
7	machin. and transport equipment	1.68	**7**	machin. and transport equipment	18.02
8	miscell. manufactured articles	7.31	**8**	miscell. manufactured articles	20.94

* CEEC 5: Czech Republic, Hungary, Poland, Slovakia, Slovenia.
Source: DZS – Foreign trade statistics, 2001

Regarding the IIT-share with the EU, Croatia lags behind the majority of transition countries which, before their accession with the EU, realized IIT in the range from 45% (Estonia, Poland) to 75% (Czech Republic). The only worse positioned countries were Bulgaria (40.1%), Romania (37.1%) and the remaining two Baltic countries (Lithuania: 35%, Latvia: 25%), (Havlik *et al.*, 2001). By 2006, the situation with Croatian IIT had further deteriorated. 'Trade overlap' with all the countries had fallen by almost 8 p.p. and amounted to 36.47% (0-9 SITC), while IIT in manufacturing (5-8 SITC) had stabilized at 36.51% – lower by app. 10 p.p. than in 2001. This negative trend can be observed in almost all commodity classes in 2006, except for classes 1 and 3

and, more importantly, class 7 – machinery and transport equipment – which generates a significant amount of Croatian exports (Figure 2). The absence of positive trends of increasing IIT indicates that structural adjustments in Croatia do not follow the 'smooth adjustment hypothesis' of making the Croatian economy more vulnerable in international competition.

Figure 2. The share of IIT with the EU 15 (0-9 SITC, Rev. 3), (%), 2001, 2006
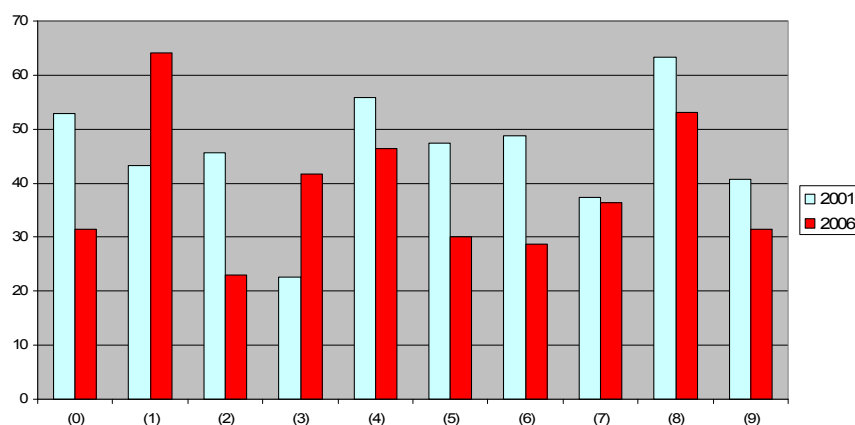
Source: DZS – Foreign trade statistics, 2001, 2006

A high share of inter-industry trade, as well as a high degree of similarity in exports structure between the new member countries of the EU and Croatia lead to the conclusion of possibly high structural adjustment costs for Croatia resulting from the EU-enlargement. In that case, the costs would occur as a consequence of further specialization according to the principle of comparative advantage and increasing allocation of resources between sectors. The resulting specialization pattern could not guarantee a sound competitive position on the EU-market and might, therefore, lead to the weakening of market positions for Croatian exporters.

5. CONCLUDING REMARKS

The CU-theory and further contributions to the analysis of the PTAs offer valuable insights, not only into the analysis of trade integration effects on the participating countries, but also on the countries which remain out of the integration process. As a non-member of the EU, Croatia fails to realize the positive effects of trade integration. An increasing trade deficit and a diminishing share of the EU in Croatian trade point to trade divergence which

occurred parallel with the other CEE-countries' successful accession with the EU. A diminishing export similarity with the advanced transition countries and an increasing resemblance with the export structure of the less developed new member countries of the EU point not only to the sources of the expected competitive pressure for Croatian companies, but also to the slow restructuring process which potentially reduces the dynamic effects of integration in the future. It is also important to note that the greatest divergence in the commodity composition of exports between Croatia and the advanced transition countries occurred during their association with the EU and particularly upon full integration, not to mention their improved trade integration with the EU. Similar tendencies can be observed with IIT, whose share in Croatian trade considerably decreased after eastern EU-enlargement. This indicates potentially high structural adjustment costs and short-to-medium term welfare losses from integration with the EU.

Implications for the Croatian business sector are straightforward since negative competition effects can be expected until and even after the accession to the EU. In order to achieve narrower specialization and improved strategies of doing business abroad, Croatian companies are expected to undergo a thorough restructuring process. Therefore, their efforts in the short-to-medium term should concentrate on increasing innovation capacity and further development of profitable core business activities. In that way, they should be able to find their market niche and grow from local companies to international specialists who take part in international production and marketing networks. Nevertheless, this calls for prompt and thorough economic policy measures which should include the development of soft business infrastructure and support for innovation culture, including the technology absorption capacity of domestic companies in particular.

6. BUSINESS AND MANAGERIAL IMPLICATIONS

Usually the 'big picture' or broad perspective blurs the more detailed aspects upon which the successful solution to the problem depends. In a similar vein, the expected restructuring of the Croatian economy, following the integration process in Europe, will certainly have its impact on company restructuring and some managerial functions in particular. A dynamic and complex international economic environment which is nowadays characterized with trade and capital flows liberalization, deregulation, profound institutional reforms in the emerging economies, globalization and increasing inequality in the world, creates challenging conditions for doing business internationally. Strong international competition which Croatian companies already face, both

on the domestic and international market, calls for developing appropriate actions in terms of corporate strategy. In order to develop strategies which will enable them to achieve a stable market position through improved competitiveness, companies will have to focus on:

- external environment in order to find out the challenges of economic integration and globalization of economic activities;
- internal characteristics which include current competitive position, main field of activity and specialization pattern, as well as the desired business performance in the future (growth, investment, export, etc.);
- long-term horizon in order to achieve a sustainable competitive position through contingency planning and effective and efficient management operations.

The interplay of a changing external environment and internal characteristics of a company stresses the importance of strategic planning as a way to overcome the difficulties of company restructuring and sectoral adjustments. As strategy can be defined as making the utmost of the firm's own resources with respect to real limitations from the external environment, it includes the following issues: adjustment to new conditions, allocation of resources, market positioning of a company and ways to cope with international competition.

Basically, there are two main sources of a company's competitive advantages – internal and external. Internal sources of competitive advantages are determined by the firm's own characteristics to which belong: resources (physical, financial, human and organizational), capabilities (managerial, transformational, input- and output-based) and knowledge (Čater, 2005). Besides these tangible and intangible assets, a company's competitive position also depends upon external conditions such as: industrial structure characteristics, market structure, existence of market entry and exit barriers, as well as product substitutes. Regarding the current position of Croatian companies, external sources of competitive advantages pose even stronger limitations to a company's competitiveness than the internal ones. The most important obstacle that Croatian companies will probably face in their aspirations for doing business internationally are entry barriers to foreign markets; not only in the form of sophisticated government regulation, but also in terms of capital requirements, economies of scale, product differentiation and even cost advantages (stemming from learning curve, proprietary technology, etc.). Substitute products or services as well as strong bargaining positions of suppliers, together with customer-driven sales markets further threaten the

position of the small countries' exporters on the world market (Porter, 1979). In order to avoid these obstacles, Croatian companies should search for market niches with less severe competition and technically less advanced products not exposed to the risk of being easily substituted. Medium-to-long term companies should balance out competitiveness forces (innovations, marketing, vertical integration) in order to exploit industry changes which can be noticed through product differentiation, stage of a product life cycle, etc.

The main forms of competitiveness resulting from the generic strategy model are cost and product differentiation advantages. In order to achieve efficient differentiation and along some rearrangements of Porter's generic strategies, the following objectives have to be realized – product customization to target consumers, adding services to products and focusing on specific customer needs. Besides that, the geographical aspect of the competitiveness strategy should concentrate a company's activities on growing and emerging markets, while through networking and collaboration with other companies, productivity growth should be realized through access to new knowledge and know-how, increased capacities and improved market access. In this case, strategic positioning, execution and internal learning capabilities would be the most important aspects of management restructuring (Loch *et al.*, 2007). Due to increased consumer preferences for differentiated products and development of consumer-driven markets, it is getting more difficult for companies to compete on pure product differentiation grounds. In volatile markets and with shorter product life-cycles, pure product differentiation strategies are becoming less efficient in achieving stable competitive positions. Product standardization, increased consumer experience and product imitations force companies to compete not only with products but also with solutions which incorporate product and service support and know-how which nowadays significantly add to competitiveness (Matthyssens/Vandenbempt, 2008). For Croatian companies, this should imply more reliance on service-centred and solution-based strategies which can be realized through the value chain.

Regarding the significant weaknesses of Croatian companies and in light of the expected EU-accession, a reasonable solution to improving their international competitiveness would be business cooperation through networks and vertical integration. The networking strategy, as a novel approach, incorporates the main characteristics of other types of strategies – outward- or inward-oriented, either planned and structured or accidental ones (Baraldi *et al.*, 2007). In this case, an outward-looking strategy allows more interactions among the interested parties, is more adaptive and, therefore, more efficient in achieving competitive advantages for the participating companies. Besides the

usual aspects of product and market positioning, this strategy calls for network positioning and puts a new dimension on strategy formulation. In an integrated, outward-looking system such as the business network, strategy occurs through interactions and daily activities of all the interested parties which can contribute to their own and the entire networks' advantage.

REFERENCES:

1. Aitken, N. D., (1973), *The Effects of the EEC and EFTA on European Trade: A Temporal Cross-Section Analysis*, American Economic Review, Vol. 63, No. 5, pp. 881-892

2. Azhar, A. K. M., Elliott, R. J. R., (2003), *On the Measurement of Trade-Induced Adjustment*, Review of World Economics, Vol. 139, No. 3, pp. 419-439

3. Baraldi, E., Brennan, R., Harrison, D., Tunisini, A., Zolkiewski, J., (2007), *Strategic thinking and the IMP approach: A comparative analysis*, Industrial Marketing Management, Vol. 36, pp. 879-894

4. Beladi, H., Samanta, S. K., (1990), *Foreign Technology and Customs Union: Trade Creation and Trade Diversion*, Journal of Economic Studies, Vol. 17, No. 6, pp. 27-35

5. Brülhart, M., Elliott, R. J. R., (1998), *Adjustment to the European single market: inferences from intra-industry trade patterns*, Journal of Economic Studies, Vol. 25, No. 3, pp. 225-247

6. Choe, S., Roehl, T. W., (2007), *What to Shed and What to Keep: Corporate Transformation in Korean Business Groups*, Long Range Planning, Vol. 40, pp. 465-487

7. Corden, W. M., (1972), *Economies of Scale and Customs Union Theory*, Journal of Political Economy, Vol. 80, No. 3 (Part 1), pp. 465-475

8. Čater, T., (2005), *A critical review of existing theories on the sources and forms of a firms competitive advantage*, Sixth international conference Enterprise in Transition Proceedings, Faculty of Economics, Split, pp. 149-152

9. DZS (Državni zavod za statistiku) – *Priopćenje*, No. 4.2.1/12, 2008

10. DZS (Državni zavod za statistiku) – Foreign trade statistics: Exports and imports by commodities and partner countries, 2001, 2006

11. Éltetö, A., Inotai, A., Meisel, S., (2000), *Hungarian Trade and Trade Policy Toward Integration into the European Union*, Russian and East European Finance and Trade, Vol. 36, No. 2, pp. 42-62

12. Fidrmuc, J., (2000), *Restructuring European Union Trade with Central and Eastern European Countries*, Atlantic Economic Journal, Vol. 28, No. 1, pp. 83-92

13. Finger, J. M., Kreinin, M., (1979), *A measure of 'export similarity' and its possible uses*, Economic Journal, Vol. 89 (December 1979), pp. 905-912

14. Frensch, R., (2000), *Internal Liberalization as a Barrier To Export-led Recovery in Central European Countries Preparing For EU Accession*, Vol. 42, No. 3, pp. 31-47

15. Gabrisch, H., Werner, K., (1998), *Advantages and drawbacks of EU membership – the structural dimension*, Comparative Economic Studies, Vol. 40, No. 3, pp. 79-103

16. Ghosh, M., (2002), *The revival of regional trade agreements: a GE evaluation of the impact on small countries*, Journal of Policy Modeling, Vol. 24, pp. 83-101

17. Gorynia, M., Jankowska, B., Owczarzak, R., (2005), *The cooperative strategies of Polish firms as the response to the expansion of foreign investors in the Polish market*, Sixth international conference Enterprise in Transition Proceedings, Faculty of Economics, Split, pp. 161-165

18. Greenaway, D., Milner, C., (1983),*On the Measurement of Intra-Industry Trade*, in: The Economic Journal, Vol. 93 (December 1983), pp. 900-908

19. Grubel, H. G., Lloyd, P. J., (1975), *Intra-Industry Trade - The Theory and Measurement of International Trade in Differentiated Products*, Macmillan Press Ltd., London

20. Havlik, P., Landesmann, M., Stehrer, R., (2001), *Competitiveness of CEE Industries: Evidence from Foreign Trade Specialization and Quality Indicators*, Vienna Institute for International Economic Studies, Research Reports No. 278

21. Helpman, E., Krugman, P. R., (1986), *Market Structure and Foreign Trade: Increasing Returns, Imperfect Competition and the International Economy*, MIT Press, Cambridge

22. Hine, R. C., (1989), *Customs Union Enlargement and Adjustment: Spain's Accession to the European Community*, Journal of Common Market Studies, Vol. 28, No. 1, pp. 1-27

23. Hine, R. C., (1994), *International Economic Integration*, in: Greenaway, D., Winters, L. A., (eds.), (1994), *Surveys in International Trade*, Blackwell, Oxford, Cambridge

24. IMF (International Monetary Fund) – International Financial Statistics, January 2008

25. Kaminski, B., Ng, F., (2005), *Production disintegration and integration of Central Europe into global markets*, International Review of Economics and Finance, Vol. 14, pp. 377-390

26. Kellman, M., Schroder, T., (1983), *The export similarity index: some structural tests*, Economic Journal, Vol. 93 (March 1983), pp. 193-198

27. Kose, M. A., Riezman, R., (2000), *Understanding the Welfare Implications of Preferential Trade Agreements*, Review of International Economics, Vol. 8, No. 4, pp. 619-633
28. Kreinin, M. E., (1972), *Effects of the EEC on imports of manufactures*, Economic Journal, Vol. 82, pp. 897-920
29. Kreinin, M. E., Plummer, M. G., (2008), *Regional groupings, discrimination, and erosion of preferences: Effects of EU enlargement on the Mediterranean Basin*, Journal of International Trade & Economic Development, Vol. 16, No. 2, pp. 213-230
30. Krueger, A. O., (1997), *Free trade agreements versus customs unions*, Journal of Development Economics, Vol. 54, pp. 169-187
31. Lee, J.-W., Shin, K., (2006), *Does regionalism lead to more global trade integration in East Asia?*, North American Journal of Economics and Finance, Vol. 17, pp. 283-301
32. Lloyd, P. J., (1982), *3×3 theory of customs unions*, Journal of International Economics, Vol. 12, pp. 41-63
33. Loch, C. H., Chick, S., Huchzermeier, A., (2007), *Can European Manufacturing Companies Compete? Industrial Competitiveness, Employment and Growth in Europe*, European Management Journal, Vol. 25, No. 4, pp. 251-265
34. Lohrmann, A.-M., (2001), *Development Effects of the Customs Union Between Turkey and the European Union: Catchning-Up Or the Hechscher-Ohlin Trap?*, Russian and East European Finance and Trade, Vol. 36, No. 4, pp. 26-44
35. Lohrmann, A.-M., (2002), *A Dynamic Analysis of Turkey's Trade with the European Union in the 1990s*, Russian and East European Finance and Trade, Vol. 38, No. 2, pp. 44-58
36. Matthyssens, P., Vandenbempt, K., (2008), *Moving from basic offerings to value-added solutions: Strategies, barriers and alignment*, Industrial Marketing Management, Vol. 37, pp. 316-328
37. Melatos, M., Woodland, A., (2007), *Endogenous trade bloc formation in an asymmetric world*, European Economic Review, Vol. 51, pp. 901-924
38. Nakos, G. E., Brouthers, K., Moussetis, R., (2001), *The experience of Portugal's Accession to the European Union: what countries wanting to join a customs union should expect*, Competitiveness Review, Vol. 11, No. 1, pp. 12-24
39. Navaretti, G. B., Galeotti, M., Mattozzi, A., (2004), *Moving skills from hands to heads: does importing technology affect export performance in textiles*, Research Policy, Vol. 33, pp. 879-895

40. Neyapti, B., Taşkin, F., Üngör, M., (2007), *Has European Customs Union Agreement really affected Turkey's trade?*, Applied Economics, Vol. 36, pp. 2121-2132

41. Ohyama, M., (2007), *Partial Free Trade Agreements and Economic Welfare: Reconsidering GATT Article 24*, Review of Development Economics, vol. 11, No. 4, pp. 621-628

42. Park, D., (2007), *The Prospects of the ASEAN-China Free Trade Area (ACFTA): A Qualitative Overview*, Journal of the Asia Pacific Economy, Vol. 12, No. 4, 485-503

43. Papazoglou, C., Pentecost, E. J., Marques, H., (2006), *A Gravity Model Forecast of the Potential Trade Effects of EU Enlargement: Lessons from 2004 and Path-dependency in Integration*, World Economy, Vol. 29, pp. 1077-1089

44. Plummer, M. G., (1991), *Efficiency Effects of the Accession of Spain and Portugal to the EC*, Journal of Common Market Studies, Vol. 29, No. 3, pp. 317-325

45. Pomfret, R., (1981), *The impact of EEC enlargement on non-member Mediterranean countries' exports to the EEC*, The Economic Journal, Vol. 91 (September 1981), pp. 726-729

46. Pomfret, R., (1986), *The Theory of Preferential Trading Agreements*, Review of World Economics, Vol. 122, No. 3, pp. 439-465

47. Porter, M. E., (1979), *How competitive forces shape strategy*, Harvard Business Review, March-April, pp. 137-145

48. Porter, M. E., (1990), *The competitive advantage of nations*, Free Press, New York

49. Robson, P., (1998), *The Economics of International Integration*, Routledge, London, New York

50. Singer, M., Donoso, P., (2008), *Upstream or downstream in the value chain?*, Journal of Business Research, Vol. 61, pp. 669-677

51. Tang, D., (2008), *Effects of Regional Trading Agreements on Trade: Evidence from the NAFTA, ANZCER and ASEAN Countries, 1989-2000*, Journal of International Trade & Economic Development, Vol. 14, No. 2, pp. 241-265

52. Togan, S., (2000), *Effects of a Turkey-European Union Customs Union and Prospects for the Future*, Russian and East European Finance and Trade, Vol. 36, No. 4, pp. 5-25

53. UNSD (United Nations Statistics Department) – Commodity Trade Statistics Database, http://comtrade.un.org, [accessed: 10. 03. 2008]

54. Venables, A. J., (2003), *Winners and losers from regional integration agreements,* Economic Journal, Vol. 113, pp. 747-761

55. Viner, J. (1950), *The customs union issue*, Carnegie Endowment for International Peace, New York, London

56. Westkämpfer, E., Hüser, M., Briel von, R., (2000), *Transition process: a survey of German industry*, Journal of Material Processing Technology, Vol. 106, pp. 141-151

57. Wonnacott, R. J., (1996), *Free-Trade Agreements: For Better of Worse?*, American Economic Review, Vol. 86, No. 2, pp. 62-66

58. Woodward, R., Yoruk, D. E., (2005), *Actors and factors behind changes in enterprise competitiveness: the experience of five cohesion countries (a literature review)*, Sixth international conference Enterprise in Transition Proceedings, Faculty of Economics, Split, pp. 211-214

59. Yannopoulos, G. N., (1987), *Trade effects from the extension of customs union on third countries: a case study of the Spanish accession to the EEC*, Applied Economics, Vol. 19, pp. 39-50

EFEKTI ISTOČNOG PROŠIRENJA EU NA HRVATSKU – TRGOVINSKA ANALIZA

Sažetak

Početši od teorije carinske unije i nedavnih doprinosa ovoj teoriji, ovaj rad pokušava primijeniti teoretske zaključke o pozitivnim efektima trgovinske integracije unutar EU na Hrvatsku i njezin poslovni sektor. Analiza se fokusira na statičke i dinamičke efekte, koji proizlaze iz povećanih izvoznih mogućnosti i prednosti ekonomije razmjera. Uzimajući u obzir kretanje liberalizacije trgovine, rad procjenjuje efekte hrvatskog nesudjelovanja u EU, kao i potencijalnu prilagodbu troškova, koji proizlaze iz povećane konkurencije iz novih članica EU i promjena u specijalizaciji. Kako bi se postigli ovi ciljevi, razmatraju se indeks izvozne sličnosti i metodologija inter-industrijske trgovine (IIT). Također se analiziraju i implikacije na poslovni sektor i menadžersku praksu.