

**ECONOMIC CHALLENGES AND CONSEQUENCES OF THE
EU ENLARGEMENT FOR TRADE AND DEVELOPMENT OF
CANDIDATE STATES**

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Abstract

In this paper we intended to analyse the effects that the incorporation of the candidate states to the EU will have over their economies. As far as the EU has evolved towards a single market, we studied their foreign trade with the EU member states (intra and inter industrial trade...). We also studied the role that foreign direct investment (FDI) has played in these countries. As a stone yard, we used the evolution of the countries that joined the UE in previous enlargements processes and that, at that moment, had also an unfavourable economic situation.

JEL classification: O1, O52, F1

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1. Introduction

The enlargement of EU will have important consequences over the economic growth of the national states that will join it in the near future. From the beginning of the European Common Market, there has been a strong increase in intra industrial trade, reason for which the adhesion of new states has had small costs of adjustment over their industrial structures. Besides, this process has favoured that the EU has increasingly behaved as an optimal monetary area.

It is generally accepted that due to a better accessibility from these new states (with low salaries) to the European core, industrial

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activities may move towards them. Nonetheless, it is also possible that production may concentrate around the areas closer to the markets, although their costs of production were higher.

As these countries joined the EU, they will undergo the removal of borders controls, technical barriers to trade and barriers to the movements of factors of production. Thus, the consequences of being an EU member state can best be approached with the help of trade theories.

Traditional theories of international trade, based in unrealistic hypothesis, state that the result of an economic integration will be the specialization of the regions in those activities in which they have comparative advantages. After a process of change in trade patterns, economies would reach higher standards of living through the equilibration of the prices of production factors and income. This model can also incorporate the mobility of the capital, in which case the differentials in productivity are also important.

New theories of international trade -Krugman (1979), Brander and Krugman (1983) and Helpman and Krugman (1985)- considered the possibility of firms operating in an imperfect competition context with increasing returns and differentiated goods. In terms of capital mobility, the foregoing theories may explain a reciprocal flow of direct investment among firms located into the more developed markets, to the detriment of firms located into peripheral regions. They also explain that whether the target of the direct investment is to exploit intangible assets, the consequences of European integration over capital flows can be difficult to forecast. Firstly, it can be argued that long run strategies of the firms may change as it is not necessary anymore their presence in every country of the Union. Secondly, location advantages may run in very varied directions.

These two groups of theories may explain, respectively, the capability of exploiting comparative advantages and economies of scale in the regions located in the periphery. The description of trade

patterns and the study of the variables that explain this picture may be an interesting task.

We will start by studying trade patterns in Europe in 2001 through the utilization of the Grubel-Lloyd index. In second place, we will monitor some indicators of comparative advantages and of firms' size. Finally, we will address summarily the directions of foreign direct investment (FDI) flows.

2. The Main Characteristics of Candidate States

In March 1998, the enlargement process that affected to 10 states -Cyprus, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Malta, Poland, Slovak Republic and Slovenia- began and they are members of the EU since May 2004. This last enlargement had special traits: the high number of candidate states (10), a territorial increase of 23% and a population increment of almost 75 millions people (with a wide range of cultural endowments).

The adhesion of these ten countries will considerably increase population (half of which is from Poland), though both, their fertility rate and their expectation of life are under EU standards. However, in spite of the fact that the GDP growth of candidate states was higher since 1996 to the EU average, in 2001 GDP per head was in every single case under the EU mean (23 thousand €), being their average equal to 10,700 €.

Comparing the departure situation of the candidate states with that of Spain, Portugal and Greece at the time of their adhesion to the EU, we can see, first of all, that their GDP per head was in 2001 higher than that of Spain, Portugal and Greece in 1986. Secondly, the ratio exports/GDP was more favourable for candidate states. Thirdly, although the share in the economy of agriculture in the candidate states was higher than the European average - 4 % in 2001, twice the EU average – it was well below the ratio corresponding to Spain, Portugal and Greece in 1986.

Table 1. Some indicators of candidate states in 2001

	Population	GDP per head	Unemployment rate (%) 2002	Agricultural share	Exports% of GDP
Czech Republic	10285	13700	7.3	4.2	71
Estonia	1364	9240	9.1	5.8	91
Cyprus	762	17180	5.3	4	47
Latvia	2355	7750	12.9	4.7	45
Lithuania	3476	8960	13	7.1	50
Hungary	10185	12250	5.6	4.3	61
Malta	393	-	7.5	2.4	88
Poland	38638	9410	20	3.8	28
Slovenia	1992	16210	6	3.1	60
Slovakia	5397	11200	19.4	4.6	73
Candidate states	74850	10700	15.1	4.1	47
EU-15	377850	23210	7.5	2.1	36

Source: Own elaboration from Eurostat data. Gdp per head is at € 2001 PPP, Population in thousands. Agriculture share in % on total Value Added.

In Table 2, we can notice that agrarian employment is considerably higher, representing the 13% of total employment in candidate countries, whereas the employment in services is sensibly lower than that of the EU-15.

Candidate states in which agriculture has a bigger share in total employment are Poland (19.2%), Lithuania (16.5%) and Latvia (15.1%). In the EU-15, only Greece with a 16% in 2001, reaches this magnitude, though this figure was still worse in 1985 (28.9%). In Hungary and the Slovak Republic the share of agriculture in total employment is similar to that of Spain in the present, only 6%. Only Cyprus has a lower figure (5%) due to the important role of tourism in the island (71% of total employment in services).

Table 2. Employment by branch of activity (percentage of total)

	Year	Agriculture	Industry and Building	Services
Candidate states	2001	13.3	33.1	53.6
EU-15	2001	4.2	28.7	67.1
Spain	1986	14.6	30.8	54.6
Portugal	1986	24.1	40.2	35.7
Greece	1985	28.9	27.4	43.7

Source: Own elaboration from Eurostat data

3. Trade Patterns in the EU-15 and the Candidate States

In this section, we identify and analyse trade patterns in Europe in 2001 through the utilization of the adjusted Grubel-Lloyd index (TI) applied to national data. International trade patterns respond to some varied influences.

$$IT_{ijk} = 1 - \frac{\left| \frac{X_{ijk}}{X_{ij}} - \frac{M_{ijk}}{M_{ij}} \right|}{\frac{X_{ijk}}{X_{ij}} + \frac{M_{ijk}}{M_{ij}}}$$

where: X_{ijk} (M_{ijk}) are exports (imports) of sector k of country i (from) to country j and X_{ij} (M_{ij}) are total exports (imports) of country i to (from) country j .

Tables 3.1 and 3.2 present the average over 23 industries¹ of the trade indices for every bilateral trade flow in 2001: $IT_{ij} = \frac{1}{23} \sum_{k=1}^{23} IT_{ijk}$

¹ The 23 industries considered are Food and live animals, Feeding stuff for animals, Beverages, Tobacco, Textiles, Clothing, Leather-fur, Footwear, Wood, Wood furniture, Paper, Chemicals, Medical and pharmaceutical products, Petroleum and petroleum products, Rubber manufactures, Non-metallic mineral manufactures, Iron and steel, Non-ferrous metals, Manufactures of metal, Machinery, Electrical machinery, Transport equipment, Medical and optical instruments.

Table 3.1. Adjusted Grubel-Lloyd indices for 2001
(industrial averages for Germany, Austria, Belgium, Denmark,
Spain, Finland, France, Greece, the Netherlands and Ireland)

	De	At	Be	Dk	Es	Fi	Fr	Gr	Ne	Ir
De		0.73	0.73	0.62	0.70	0.47	0.81	0.50	0.73	0.37
At	0.73		0.69	0.59	0.62	0.41	0.61	0.39	0.54	0.28
Be	0.73	0.69		0.59	0.64	0.42	0.74	0.41	0.67	0.29
Dk	0.62	0.59	0.59		0.47	0.52	0.58	0.38	0.67	0.56
Es	0.70	0.62	0.64	0.47		0.41	0.76	0.40	0.65	0.39
Fi	0.47	0.41	0.42	0.52	0.41		0.40	0.26	0.36	0.36
Fr	0.81	0.61	0.74	0.58	0.76	0.40		0.47	0.71	0.49
Gr	0.50	0.39	0.41	0.38	0.40	0.26	0.47		0.40	0.23
Ne	0.73	0.54	0.67	0.67	0.65	0.36	0.71	0.40		0.47
Ir	0.37	0.28	0.29	0.56	0.39	0.36	0.49	0.23	0.47	
It	0.62	0.67	0.65	0.50	0.67	0.30	0.67	0.49	0.51	0.34
Pt	0.53	0.37	0.49	0.35	0.77	0.26	0.48	0.25	0.47	0.28
Uk	0.81	0.65	0.63	0.64	0.57	0.38	0.75	0.44	0.66	0.66
Se	0.60	0.62	0.51	0.67	0.48	0.69	0.55	0.41	0.49	0.42
BS	0.44	0.33	0.37	0.31	0.33	0.43	0.42	0.28	0.39	0.32
Sn	0.55	0.60	0.38	0.41	0.38	0.36	0.47	0.16	0.38	0.15
Cz	0.60	0.54	0.51	0.52	0.54	0.45	0.62	0.24	0.57	0.31
Hu	0.57	0.66	0.46	0.45	0.53	0.42	0.55	0.42	0.44	0.30
Pl	0.60	0.56	0.51	0.55	0.43	0.37	0.57	0.19	0.48	0.28
Sk	0.61	0.58	0.45	0.36	0.50	0.28	0.51	0.32	0.53	0.33
Av.	0.69	0.67	0.64	0.60	0.67	0.45	0.71	0.45	0.65	0.48

Source: *OECD. Foreign Trade by Commodities*. National averages have been weighted with total trade flows.

Inter-industrial trade reflect the existence of comparative advantages between countries. If inter-industrial trade is dominant TI will have a value close to zero. Intra-industrial trade reveal the presence of scale economies, which prevent each country of producing the whole range of commodities it consumes. Intra-industrial trade patterns cannot be forecasted.

Table 3.2. Adjusted Grubel-Lloyd indices for 2001 (industrial averages for Italy, Portugal, the United Kingdom, Sweden, Baltic States, Slovenia, Czec Rep. Hungary, Poland and Slovakia)

	It	Pt	Uk	Se	BS	Sn	Cz	Hu	Pl	Sk
De	0.62	0.53	0.81	0.60	0.44	0.55	0.60	0.57	0.60	0.61
At	0.67	0.37	0.65	0.62	0.33	0.60	0.54	0.66	0.56	0.58
Be	0.65	0.49	0.51	0.63	0.37	0.38	0.51	0.46	0.51	0.45
Dk	0.50	0.35	0.64	0.67	0.31	0.41	0.52	0.45	0.55	0.36
Es	0.67	0.77	0.57	0.48	0.33	0.38	0.54	0.53	0.43	0.50
Fi	0.30	0.26	0.38	0.69	0.43	0.36	0.45	0.42	0.37	0.28
Fr	0.67	0.48	0.75	0.55	0.42	0.47	0.62	0.55	0.57	0.51
Gr	0.49	0.25	0.44	0.41	0.28	0.16	0.24	0.42	0.19	0.32
Ne	0.51	0.47	0.66	0.49	0.39	0.38	0.57	0.44	0.48	0.53
Ir	0.34	0.28	0.66	0.42	0.32	0.15	0.31	0.30	0.28	0.33
It		0.54	0.60	0.50	0.41	0.63	0.55	0.58	0.58	0.46
Pt	0.54		0.52	0.35	0.13	0.31	0.42	0.51	0.39	0.36
Uk	0.60	0.52		0.53	0.29	0.56	0.52	0.59	0.47	0.36
Se	0.50	0.35	0.53		0.46	0.35	0.49	0.48	0.52	0.48
BS	0.41	0.13	0.29	0.46			0.47	0.31	0.46	0.27
Sn	0.63	0.31	0.56	0.35			0.50	0.46	0.44	0.40
Cz	0.55	0.42	0.52	0.49	0.47	0.50		0.58	0.59	0.70
Hu	0.58	0.51	0.59	0.48	0.31	0.46	0.58		0.65	0.61
Pl	0.58	0.39	0.47	0.52	0.46	0.44	0.59	0.65		0.61
Sk	0.46	0.36	0.36	0.48	0.27	0.40	0.70	0.61	0.61	
Av.	0.61	0.57	0.68	0.56	0.41	0.54	0.58	0.56	0.55	0.58

Source: Own elaboration, from *OECD. Foreign Trade by Commodities*. 2002. Note : National averages have been weighted with total trade flows.

TI will be equal to unity when trade between two countries is entirely intra-industry. Both types of trade - inter and intra-industrial - depend upon the existence of similarities and differences among countries. If their economies are alike, intra-industrial trade will be pre-eminent. If they are not so similar, inter-industrial trade (based on comparative advantages) will flourish.

Table 4. Adjusted Grubel-Lloyd indices (national averages in %)

Year	De	At	Be	Dk	Es	Fi	Fr	Gr	Ne	Ir	It	Pt	UK	Se
86	66	65	70	59	59	49	68	36	66	58	57	44	67	55
92	69	66	71	59	64	51	70	40	71	60	58	48	71	54
01	71	68	68	61	68	45	73	45	65	50	61	58	68	57

Note: Candidate states not included in the calculation of coefficients.

Source: Own elaboration based on OECD Foreign Trade by Commodities.

In candidate states, the intra industrial trade is dominant, with average figures over 0.55, but for the Baltic States, in which is stronger the inter industrial trade, with a value of the index slightly lower than that of Finland, Greece or Ireland. In fact, with the exceptions of Slovenia and the Baltic states, trade relations among candidate states present high values of the indices (IT reaches 0.7 between the Czech Republic and Slovakia, or 0.65 between Hungary and Poland) showing the importance of intra industrial trade.

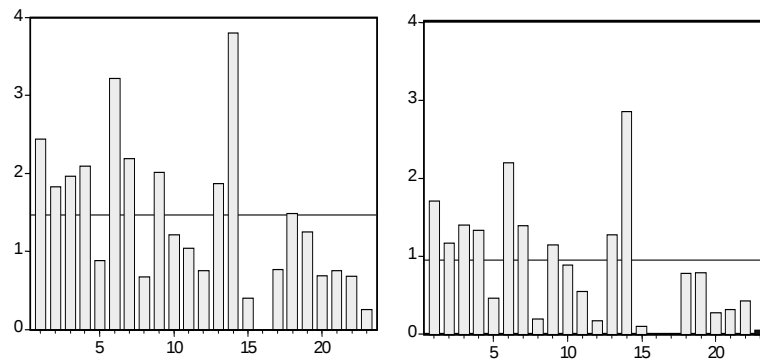
Candidate states are closer to the position of Spain in 1986, with similar values for the indices, than to that of Greece or Portugal. At that moment, the inter-industrial trade was prevalent in Greece and Portugal, though the share of intra industrial trade increased in last years, as it can be noticed in table 4.

4. Comparative Advantages and Firms' Size

In this section, we will observe some indicators of an important component of comparative advantages -human capital endowment- and of firms size in order to study the departure position of candidate states.

Total R&D expenditure in candidate states is similar, in percentage, in almost every instance to the expenditure of Greece and Portugal. The only exceptions are Slovenia, which is around the average expenditure of the future EU-25, and the Czech Republic. Graph 1 shows as expenditure in R&D of private sector enterprises, in percentage of GDP, is higher in candidate states than in Greece and Portugal, and for some of them even than in Spain.

Graph 1. Total expenditure in R&D and Private Sector Enterprises expenditure in R&D. Percentage of GDP (1999)



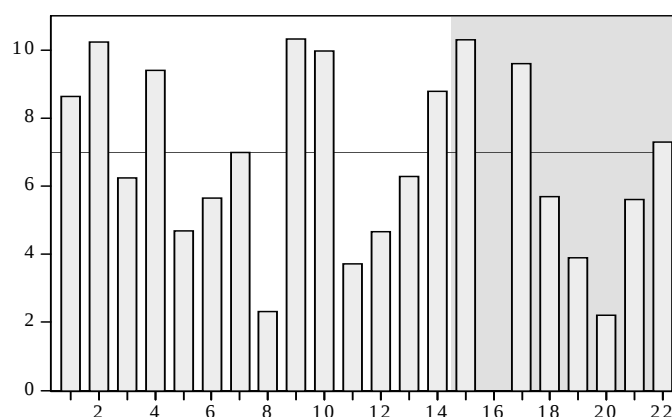
1. Germany, 2. Austria, 3. Belgium, 4. Denmark, 5. Spain, 6. Finland, 7. France, 8. Greece, 9. The Netherlands, 10. Ireland, 11. Italy, 12. Portugal, 13. United Kingdom, 14. Sweden, 15. Estonia, 16. Latvia, 17. Lithuania, 18. Slovenia, 19. Czech Republic, 20. Hungary, 21. Poland, 22. Slovakia, 23. Cyprus.

Source: Eurostat. *R&D Annual Statistics* & Unesco. *Statistical Yearbook 1999 on-line*. Note: : Data for Latvia and Malta were not available. Data for Slovenia is for 1998, Ireland for 1997 and Belgium for 1998.

In relation to the size of business enterprises we know that countries would be better off if they specialized in the production of a small range of commodities due to the existence of *scale economies*. When an industry is characterized by the presence of increasing returns, it would be more efficient if it worked at a bigger scale. Besides, consumers would rather to have a wider range of produces to choose. International trade may link both issues, it will allow each individual country to specialize in the production of a small range of commodities at a very big scale without sacrificing the variety in consumption. Increasing returns will drive the economy towards an imperfect competition market structure. A pure monopolistic situation is exceptional because a firm that is obtaining such big profits will eventually attract competitors. The *Monopolistic*

Competition Model, which is a more conceivable situation, shows how international trade can improve the relationship between the scale of production and the variety of goods available for consumption. Whether this situation is dominant - as among similar economies - there will be big gains from interchange and small losses related to income re-distribution. Thus, in spite of the effects of trade over income distribution, all the participants may be better off. Data of average size of firms presented in graph 2, may shed some light about the evolution of scale economies in Europe after 1992. Obviously, it would be highly desirable to have more and better indicators. We use this because of its availability.

Graph 2. Average employment in the EU-15 (1996) and candidate states firms (1997)



Source: Eurostat. *Sixth Report (2001) Enterprises in Europe (data 1987-97) & (1999) Development of enterprises in Central European countries 1995-1997*. The order of countries is the same of graph 1. Cyprus is not included.

Looking at this indicator, there are not big differences among the size of enterprises in the EU and the candidate states. Curiously, the two more potent economies, the Czech and the Hungarian, are those that show a stronger capacity to increment the size of their enterprises, and thus, a bigger capacity to benefit from scale economies in production.

Table 5. Percentage of total employment in firms by size in 1997

	0 employees	1-49 employees	> 50 employees
Lithuania	3.3	32.8	63,9
Estonia	4.0	45.1	50,9
Poland	11.4	39.8	48,8
Czech R.	18.8	35.9	45,3
Slovakia	10.2	34.6	55,2
Hungary	16.7	30.0	53,3
Slovenia	9.3	27.7	63
<i>EU-15 (1996)</i>	<i>10.0</i>	<i>43.2</i>	<i>46.9</i>

Source: Own elaboration, Eurostat. *Sixth Report (2001) Enterprises in Europe (data 1987-97) & (1999) Development of enterprises in countries 1995-1997*. Note: Data for Latvia, Malta and Cyprus not available.

After the table above, we can confirm the capability of firms to grow in size specially in the Czech Republic and Hungary in order to increase their competitiveness. However, the percentage of total employment in firms under 50 employees was in general under the EU-15 average, which is not very conclusive since many firms in this group may be capable of reaching a higher scale of production.

The enormous difficulties that firms face in their transition toward the market may be observed in the Eurostat report over Central and East European enterprises. In 1995 survey, it was apparent that around 30% of enterprises had not survived for more than two years. This situation of business weakness, which was unequal among countries, was specially severe in Estonia, Lithuania and Hungary.

5. A Short Perspective of the Mobility of Factors in Europe.

Regions within a country are usually more specialized than countries, and also have a stronger mobility of factors of production. As a result of the unification of the national markets, the geography

of production in the EU may go closer to that of a big national economy.

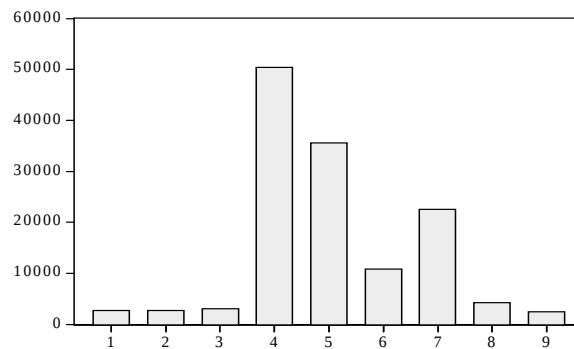
Mobility of labour, which has not been too important in last decades among developed countries, is typically stronger within a country than among countries. The incorporation of new states to Europe, will make the movements of their nationals around the EU easier. However, in spite of the wage differentials, Europeans have shown a deep attachment to their homelands. Conversely, there have been a considerable increase in the movements of capital. Eventually, the regions of the EU will have to compete in order to attract and even maintain the mobile factors and, from this competition it may start an accumulative process of unequal growth.

FDI is a way of international loan, by which those countries that have better investments opportunities at the present borrow from those that have capital surplus. For less developed countries, FDI can be an important instrument to fuel their economic growth. In this connection, we should bear in mind that FDI can, on the one hand, encourage technological development and, on the other, support the accumulation of physical capital. Borensztein et al (1998), analysing 69 developing countries, concluded that it can be empirically proved that there is a process of technological transmission associated to FDI in those countries that have reached the threshold needed for technological absorption. In the context of the candidate states, which still have a deep technological and development gap with the EU member states, FDI can play an important role in promoting real and technological convergence. Multinational enterprises are the main instrument in order to channel FDI. In this connection, the key issue would be to investigate the main determinants in the localization of multinational enterprises, which are those that explain the direction of trade flows internationally (i.e. factor endowment, transportation costs and barriers to trade).

Graph 3 presents FDI flows in manufacturing by countries in thousand 1995 US\$. In order to assess the effect of FDI over

economy, gross capital inflows are usually used. Otherwise, we would be attributing to capital outflows an opposite and symmetrical role over technological development and capital accumulation to the positive effects of capital inflows. The main receivers of foreign investments have been Poland, the Czech Republic, Hungary and Slovakia.

Graph 3. FDI inflows by countries between 1993 and 2002.
Thousands of 1995 US\$. (1995 Exchange rates)



1. Latvia, 2. Lithuania, 3. Estonia, 4. Poland, 5. Czech Republic,
6. Slovakia, 7. Hungary, 8. Slovenia, 9. Malta.

Source: Elaborated from IMF data.

In table 6, we may recognize the openness of the EU economies to international capital flows between 1993 and 2002. The indicator has been calculated as the ratio of foreign capital flows to total output (and total investment).

Table 6. Percentage of FDI flows over Gross Investment in fixed capital (GIFC) and GDP. FDI per head 1995 US\$ (Exchange rates)

	1993-2002					
	GIFC		GDP		FDI per head	
	A	B	A	B	A	B
Latvia	21.94	22.44	5.13	5.25	115.21	117.82
Lithuania	13.96	18.51	3.60	4.10	73.79	72.42
Estonia	27.66	22.40	6.06	4.91	223.86	181.27
Poland	15.89	15.69	3.41	3.37	130.39	128.82
Czech R.	23.19	22.46	6.76	6.54	346.70	335.75
Slovakia	16.50	16.50	5.18	5.18	119.26	119.29
Hungary	22.48	19.84	4.56	4.04	218.86	194.03
Slovenia	8.70	7.80	2.02	1.81	211.79	189.85
Malta	26.58	25.22	6.98	6.62	636.71	604.31
Average	19.66	17.08	4.86	4.18	230.73	194.35

Source: Own elaboration, IFM 1 and IFM International Financial Statistics.

Note: A Inflows. B Net inflows

Table 7. Percentage of FDI flows over Gross Investment in fixed capital (GIFC) and GDP. FDI per head 1995 US\$ (Exchange rates).

	1980-1986				1993-2002			
	GIFC		GDP		GIFC		GDP	
	A	B	A	B	A	B	A	B
Spain	5.23	4.39	1.02	0.86	12.16	-3.45	2.77	-0.79
Portugal	3.02	2.82	0.7	0.65	11.09	-0.28	2.78	-0.07
Greece	6.62	na	1.1	na	3.51	1.63	0.74	0.34
Average	4.96	3.61	0.94	0.76	8.92	-0.70	2.10	-0.17

Source: Own elaboration, IFM 1 and IFM International Financial Statistics.

Note: A Inflows, B Net Inflows.

Tabled 8.1 and 8.2 present the FDI stock by origin. The 50% of total FDI stock was originated in Germany (19.2%), the Netherlands and France. The 14% of FDI comes from the USA, which has invested mainly in Poland and the Baltic States, in which also Sweden, Denmark and Germany had made important investments.

Both, Germany and the Netherlands, have addressed their FDI flows towards the Czech Republic, Slovakia and Hungary. The 20% of the French FDI was headed for Poland. Austria, which has made the 8% of total FDI in the candidate states, is the main investor in Slovenia with the 52% of total FDI.

Table 8.1. FDI stock in the candidate states in 2000, from Germany, Austria, Belgium, Denmark, Spain, Finland, France and Greece.

Country	De	At	Bl	Dk	Es	Fi	Fr	Gr
Latvia	18.5	0.9	0.1	17.6	0.1	10.3	0.0	0.0
Lithuania	10.0	0.9	5.6	24.6	0.1	8.1	1.5	0.0
Estonia	2.9	0.3	0.4	4.6	0.0	34.0	0.6	0.0
Poland	15.3	3.2	1.6	1.9	1.0	0.7	20.5	1.3
Czech R.	28.0	12.2	5.9	1.4	0.2	0.7	4.7	0.0
Slovakia	33.5	17.0	2.0	0.5	0.1	0.1	3.9	0.0
Hungary	28.5	13.5	5.9	0.5	0.4	1.8	7.2	0.0
Slovenia	14.2	51.7	1.5	1.7	0.0	0.0	12.1	0.0
Total	19.2	8.0	2.9	2.6	0.6	2.1	13.4	0.7

Note: Own elaboration from UNTAD WID Country Profiles.

Table 8.2. FDI stock in the candidate states in 2000, from Netherlands, Ireland, Italy, Portugal, United Kingdom, Sweden, Japan and the USA.

Country	Ne	Ir	It	Pt	UK	Se	Jp	US
Latvia	4.6	2.6	0.2	0.0	8.3	21.0	0.0	15.7
Lithuania	1.5	1.6	0.3	0.2	9.0	23.4	0.0	13.2
Estonia	2.8	0.7	0.5	0.0	2.8	45.2	0.1	5.2
Poland	11.0	2.7	8.9	0.9	5.7	5.3	1.2	19.1
Czech R.	33.0	0.0	0.9	0.0	3.8	1.5	0.6	7.1
Slovakia	28.6	0.0	1.8	0.0	3.7	0.5	0.0	8.1
Hungary	24.8	0.7	3.0	0.1	1.2	1.0	2.3	9.1
Slovenia	3.3	0.0	6.1	0.0	4.1	0.5	0.2	4.4
Total	17.2	1.6	5.5	0.5	5.0	5.9	0.9	14.0

Note: Own elaboration from UNTAD WID Country Profiles.

6. Main Conclusions

The average GDP per head in candidate states was of 11 thousand € in 2001. In fact, GDP per head was under the EU average (23 thousand €) in every candidate country. The agriculture share in GDP was in candidate states of 4% in 2001, twice EU average. However, this share of agriculture in GDP was under that of Spain, Portugal and Greece in 1986. In candidate states intra-industrial trade is mainly dominant, except in the Baltic countries. R&D expenditure in the private business sector is higher in candidate states than in Greece and Portugal and in some countries even than in Spain. Last years, candidate states have received FDI inflows of 231 1995\$ per head, which is almost the 20% of gross investment in fixed capital and around a 5% of GDP. These figures were higher than those of Spain, Portugal and Greece in the years before their adhesion. 50% of FDI in candidate states comes from Germany, the Netherlands and France. An additional 14% comes from the USA. Germany, but also the Netherlands, invests mainly in the Czech Republic, Slovakia and Hungary, whereas 20% of the investment in Poland has come from France. As a single conclusion it can be stated that candidate states will join the EU in better conditions than Greece, Portugal and Spain in almost every single item: more favourable general economic situation, relatively good foreign trade indicators and receiving a considerable amount of FDI inflows. Thus, it is predictable that they will managed to overcome any difficulties arising from their adhesion to the EU and even that they will be able to undergo a solid economic development path. However, they will still have to overcome their principal weaknesses: the subsidised mentalities of their nationals, fragile economic institutions and political systems and other legacies of their past as central planned economies. Thus, in order to overcome latter problems it is extremely important to foster research in social sciences.

7. Bibliography

Borensztein, de Gregorio & Lee (1998) "How does foreign direct investment affect economic growth?" *Journal of International Economics* 45, pp. 115-135.

Brander & Krugman(1983). "A Reciprocal Dumping Model of International Trade." *Journal of International Economics* 15, pp.313-321.

Fluviá, M. & Gual, J. "Comercio Internacional y desarrollo regional en el marco de la Integración Económica Europea."

Frías, I, Iglesias, A. & Vázquez, E.(1998). "Crecimiento y empleo en las regiones europeas, 1975-1995". *Revista Galega de Economía* Vol.7 N° 2. Servicio de Publicaciones USC.

Frías, I, Iglesias, A. & Vázquez, E.(1998). "Un Análisis Económico de la Concentración Industrial de las regiones españolas". XXIV Reunión de Estudios Regionales, Zaragoza.

Guisan, M.C. & Frías, I.(1996). "Economic Growth and Social Welfare in the European Regions." Working Paper of the series *Economic Development* no. 9, on line.¹

Guisan, M. C. y Neira, I.(2001). "Capital humano y capital físico en la OCDE, su importancia en el crecimiento económico". *Estudios Económicos de desarrollo internacional*. Vol.1- 2, on line.¹

Helpman, H. & Krugman(1985). "Market Structure and Foreign Trade". Cambridge, Ma., The MIT Press.

Krugman, P.(1979). "Increasing returns, monopolistic competition and internal trade". *Journal of International Economics*, 9, 4 November, pp.469-479.

Krugman, P.(1991a). "Increasing Returns and Economic Geography". *Journal of Political Economy*, Vol. 99, n° 3.

- Krugman, P.(1992). “*Geografía y Comercio*”. Antoni Bosch Editor.
- Leontief, W.(1953). “Domestic Production and Foreign Trade: The American Capital Position Re-examined”. *Proceedings of the American Philosophical Society* 97. pp. 331-349.
- Murphy, R.M., Shleifer A. & Vishny(1989). “Industrialization and the Big Push.” *Journal of Political Economy*, Vol.97, nº 5.
- Neira, I & Guisan, M.C.(2001): “Modelos Económicos de Capital Humano y Crecimiento Económico”. Working Paper of the series *Economic Development* no. 62, on line.¹
- Neven, D.N. (1990) “Gain and Losses from 1992.” *Economic Policy* 10, April.
- Porter, M.(1991). “*La Ventaja Competitiva de las Naciones*”. Barcelona: Plaza y Janés.

¹ articles available at <http://www.usc.es/economet/ea.htm>