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Foreign Direct Investment in Spain after 1992

—— Emergence of New Rivals ——

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Spanish foreign direct investment (FDI) inflows have declined in the 1990s, contrary to those of the late 1980s. Instead, Eastern Europe has attracted more FDI, that is, they are the new rivals as FDI recipients. This paper examines the determinants necessary for inducing FDI in this decade. Although Spain still has skilled labor and sufficient infrastructure to operate with foreign capital, increased labor costs have shifted FDI to Eastern Europe with cheaper labor, or to France and the UK with more skilled labor and advanced infrastructure. Spain will not depend on FDI for growth, but have to increase productivity.

Keywords: Foreign direct investment ; Spain ; Eastern European countries ; Increased wage ; Skilled labor.

JEL Classification : F21 ; F23 ; O52.

1. Introduction

The EU (the EC, then)[1] accession of Southern European countries (Spain, Portugal, and Greece) in the 1980s anticipated giving rise to a new problem, that is, expansion of disparity among the member states. Until then, the EU had consisted of homogeneous countries, and the southern countries had developed to a lesser extent than the original member states. The EU had to tackle intra-EU disparity in order to realize upward equalization. Otherwise, the meaning or existence of the EU would be questioned. A stage in the integration process of the free movement of goods, services, persons, and capital was realized within the intra-EU market in 1992. Among them, the free movement of various factors, especially foreign direct investment (FDI), was expected to decrease disparity among the member states, together with the introduction of Structural Funds, which was another drive for development. After the EU accession, Southern European countries then faced different eco-

1 After the Treaty of Maastricht came into effect in November 1993, the European Community (EC) was renamed the European Union. In this paper, the present name, the EU, will be used, even though we deal with facts before 1993.

nomic situations. On the one hand, Spain had attracted substantial EU FDI, and achieved remarkable growth in the second half of the 1980s. On the other hand, Greece had not received much EU FDI, relying instead on Structural Funds, but without recovering its economy. Some studies point out such difference and problems deriving from it.[2] Moreover, FDI has been regarded as an engine of development and industrialization also in Asia.

After completion of the internal market program in 1992, the EU has looked for deepening and enlargement. With respect to deepening, the EU has faced a new stage in the integration process, that is, the introduction of EURO in 1999. As regards enlargement, some Eastern European countries are going to participate in the EU in the near future. Some advanced countries actually regard these countries as new FDI recipients, which are less developed than Southern European countries. Hence, this paper is to examine FDI in the southern countries, especially Spain, after completing the 1992 program. While there are some studies on FDI up to 1992, few studies have mentioned FDI after 1992, especially pertaining to the European integration process and FDI. Therefore, this study will be useful when we examine FDI in Eastern European countries, some of which are going to enter the EU.

The analysis proceeds as follows. In the next section, some data on the FDI after 1992 are presented in order to observe the FDI evolution of Southern Europe and Eastern Europe. The determinants of FDI in Spain are examined, comparing them with those of Portugal and Greece, the EU advanced countries, and some Eastern European countries in order to clarify which factors remain in Spain or which have been lost in Section 3. Some concluding remarks are given in the last section.

2. FDI in Southern and Eastern Europe

<FDI in Southern Europe>

Firstly, data on FDI in Southern European countries (Spain, Portugal, and Greece) are presented in order to observe the evolution of FDI inflows into these countries.

Table 1 obviously shows that Spain decreased FDI inflow after 1992, even if it received more than Portugal and Greece. FDI inflow fell from $13,276 million in 1992 to $6,454 million in 1996. Since the annual average during 1986-91 was $8,325 million, Spain has apparently received less FDI since 1992. Portugal and Greece have the same tendency : Portuguese inward investment decreased from $1,873 million in 1992 to $708 million in 1996; Greek from $1,144 million to $1,058 million. FDI in Spain does not correspond to that in

2 For example, Georgakopoulos, et al. (1994) and Leonardi (1995) argue on this matter.

the EU, because total FDI in the EU rose from $ 83,794 million in 1992 to $ 92,398 million dollars in 1996. In fact, Spain has decreased its share of total FDI in the EU. According to FDI inflows as a percentage of the total EU inflow (Table 2), Spain had attracted substantial FDI during 1986-91 (13.2% per annum), almost the same as France had (14.6%). However, even if it was above 10% until 1994, Spanish share declined to between 5 and 7% during 1995-97. On the other hand, France and the UK have received much FDI, about 20% of total FDI in the EU respectively. Portuguese and Greek shares were much lower, and have not changed substantially: the Portuguese share was around 2 %, and the Greek about 1%.

A decrease in Spanish FDI inflow leads to a decreased share of FDI to GDP and gross fixed capital formation (GFCF).[3] According to FDI as a percentage of GDP, Spanish rates fell from 7.3% in 1992 to 1% in 1997. Portuguese shares were around 1 - 2% during this period. Although the Greek rate in 1992 (1.2%) was less than that of Spain and Portugal (2.0%), the decrease in rates of these countries led to almost the same rates among them. FDI as a percentage of GFCF provides that Spain and Portugal have a higher rate until 1994, 10.5% and 8.3% respectively, than the EU average of 5.5% in 1992, while Greece has the same rates of 5.5% as the EU average. However, these three countries' rates have been less than the EU average since 1995, except for the Greek rate in 1997. In 1995, the EU average was 7.3%, Spain 5.4%, Greece 4.8%, and Portugal 2.7%.

To sum up, Spain ceased to attract FDI after 1992, even if it received more inward investment than Portugal and Greece. In fact, Spain and Portugal have worried about shifting FDI to lower labor location, such as Eastern Europe (Thomsen and Woolcock, 1993). Now, FDI in each southern country will be observed in detail.[4]

<Spain>

Table 3 provides that, by country of origin, the EU invested much in Spain. The share of EU FDI in Spain remained high in the 1990s. It accounted for 79.9% in 1993, and more than 70% after 1995. However, the amount of EU FDI fell from $ 8,960 million in 1992 to $ 4,348 million in 1997. Among the EU, France, Germany, the Netherlands, and the UK were the main investors in Spain. In particular, French FDI in 1992 and German FDI in 1994 and 1995 outweighed $ 2,000 million, accounting for the high share of FDI in Spain. FDI

3 Shares to GDP are calculated using data from UN (1998) and OECD (1999a). Data source of shares to GFCF is UN (1998).

4 Using data from OECD (1998a) in observing FDI inflows below, total FDI inflows are different from those in UN (1998).

from the US, which was one of the largest investors until the 1980s, was low level, decreasing from $ 1,183 million in 1992 to $ 591 million in 1997.

According to Table 4, by the industrial sector, little FDI in the primary sector was realized during this period. Much FDI was carried out in manufacturing until 1995, most of which went to food products, petroleum and chemical products, and transport equipment. In 1994, Spanish manufacturing received 55.7% of the total FDI. In particular, investment in the automobile sector is important in Spain. Substantial FDI projects had been carried out since the 1960s, and the automobile industry is now almost totally controlled by foreign car makers, which is proven by the fact that motor-vehicle manufacturing is one of the industries most penetrated by foreign capital. The main car makers, such as GM, Ford, Renault, Peugeot, and VW, operate in Spain now. Moreover, non-residential equity capital accounted for 68.17% of this industry's total in 1993 (Martín and Velázquez, 1996), which is highest of all the industries in Spain. Now Spain is one of the main car producers in the world, whose 15 plants involving 11 car makers employed about 260,000 workers and produced about 2.3 million units in 1995. With the increasing value of exports in transport equipment, this sector accounted for 20% of total exports in the 1990s, most of which were directed to the EU. Hence, the Spanish automobile industry has played a decisive role in development. Most FDI projects in manufacturing are carried out for the expansion of production and reconstructing, which aim at reorganizing the international division of labor due to monetary integration in 1999. On the other hand, some firms, e.g., SEAT and Suzuki, divested from Spain, or shifted their production to other countries in the 1990s.[5] Although FDI in services increased and surpassed that of manufacturing during 1996 and 1997, there is little difference between manufacturing FDI and services FDI, $3,049 million and $3,356 million respectively.

<Portugal>

According to Table 5, by country of origin, the EU invested much in Portugal, as well as in Spain. While the share of EU FDI to total FDI in Portugal was kept high during 1992-97 (highest rate 82.2% in 1993), the amounts of FDI continued to decrease from $ 1,455 million in 1992 to $ 810 million in 1996, corresponding to a decrease in EU FDI in Portugal. Among the EU nations, Spain, the UK, France, and Germany invested substantial FDI. In particular, Spain was the largest investor in 1993 and 1996, investing $428 million and $579 million respectively. The US also invested substantial FDI ($461 million) in 1997.

5 In 1993, SEAT's enormous loss led to the closure of its Barcelona plant and to the reduction of its workforce. Suzuki sold its equities to the Andalusian government and withdrew from Spain because of long-term losses.

Table 6 shows that, in the industrial sector, much FDI went into services throughout this period, especially to financial activities, and to real estate and business activities. The percentage of FDI to manufacturing in 1995 was 38.7% and that to services 56.8%. Nevertheless, motor-vehicle manufacturing is also one of the most important industries in Portugal, and substantial FDI has been directed to the automobile industry. In particular, it received $250 million in 1994, which accounted for about half of the total FDI in manufacturing. In 1994, about 125,000 units were produced in Portugal, 83.7% of which was exported.[6] Portugal, however, also faced the problem of restructuring or withdrawal.[7]

<Greece>

Concerning OECD (1998a) data on FDI inflow to Greece, detailed data after 1992 are not available due to abolition of the institution responsible for the collection of data. Here the available data from JETRO (various years) and FDI outflow of the OECD countries by OECD (1998a) are used to observe FDI in Greece.

According to OECD (1998a) that deals with FDI outflow from Greece by country of origin, the EU and the US invested substantial FDI, and the UK and Germany were the main investors during this period.[8] The UK was the largest FDI investor in Greece in 1992 and 1995, pouring in $278 million and $272 million respectively, and Germany invested $311 million in 1996, both of which accounted for about half of FDI from OECD countries.

In the industrial sector, foreign capital was directed mainly to communication, commerce, construction, and manufacturing industries. Contrary to Spain and Portugal, the automobile industry has not developed in Greece and it received less FDI inflow. Nissan now produces only about 10,000 cars per year, and the internal demand depends on imports.

<FDI in Eastern Europe>

FDI in Eastern Europe (the Czech Republic, Hungary, and Poland) is observed, and these three received much FDI inflow among the eastern countries. While annual averages of FDI inflow during 1986-91 were $99 million, $430 million, and $84 million respectively, the amounts of FDI increased to $1,301 million, $2,085 million, and $5,000 million in 1997 (Table 1). In particular,

6 These figures are from Nikkan Jidohsha Shinbunsha (1997).

7 In 1995, Renault decided to close the plant in Setúbal due to excess capacity, decline of demand, and non-profitability. Since no firm was interested in using Renault's plant, it closed in December 1997.

8 There is a large difference between data on Greek FDI inflow from the EU and those of EU FDI outflow to Greece.

Poland and Hungary received more FDI than Greece ($1,500 million) and Portugal ($1,713 million). This implies that these three countries have been granted attention as promising FDI recipients in the 1990s.

According to Table 7, by country of origin, Eastern European countries also attracted much EU FDI to account for about 70% of total FDI in these countries: the Czech share was 70.0%, Hungarian 73.4%, and Polish 68.2 % in 1995. In particular, Germany, France, and the Netherlands were the main investors in these countries, and Austria carried out substantial FDI in Hungary. The US was also one of the largest investors among the non-EU countries. By industrial sectors, the Czech Republic and Hungary received more FDI in services than in manufacturing after 1995, but food products and petroleum and chemical products industries also attracted much foreign capital. In Poland, much FDI went to manufacturing, e.g., food products, petroleum and chemical products, and transport equipment.

In particular, many foreign carmakers, such as GM, Ford, Peugeot, and Fiat, entered Eastern Europe and extended their production.[9] As a result, in 1995, about 700,000 cars were produced in the Czech Republic, Hungary, and Poland. In addition to the financial resources, FDI is regarded as promoting economic growth through the transfer of technology, various skills, and by effecting structural change. In many eastern countries, a few key investment projects can have a marked impact on exports (UN Economic Commission for Europe, 1998, p. 161). Industries in these countries are also penetrated by foreign capital; for example, firms with foreign participation operating in Hungary produce around 32% of GDP, 45% of the manufacturing value added, and employ 25% of private sector workers (OECD, 1999b, p.72). High shares of FDI to GDP and GFCF also show the importance of FDI in Eastern Europe. The shares to GDP per annum during 1992-97 were 2.8% in the Czech Republic, 5.8% in Hungary, and 2.3% in Poland, which three were higher than those of Southern Europe. Shares to GFCF were also very high: 17.5% in the Czech Republic, 52.8% in Hungary, and 18.1% in Poland.

The above FDI evolution suggests that Spanish FDI inflow decreased during 1992-97. Instead, FDI in Eastern Europe increased remarkably in the 1990s, although Spain has received more FDI than these countries. This indicates that FDI can be shifted to Eastern Europe, because these countries have emerged as rivals against Spain of FDI recipients. The importance of FDI in a national economy is demonstrated by the fact that shares of FDI to GDP and GFCF have decreased in the 1990s. On the other hand, its shares to GDP and

9 As regards investment of each automobile producer, see Wells and Rawlinson (1994), p. 64, or Nikkan Jidohsha Shinbunsha (1997). For Hungary, see OECD (1999b), p. 77.

GFCF have increased in the Czech Republic, Hungary, and Poland. Nevertheless, FDI, especially from the EU, has played an important role in Spain. The main manufacturing industries in Spain are almost totally controlled by foreign capital, especially the Spanish automobile industry. Portugal also has received much EU FDI, but its amount has been less than FDI in Spain. Greek automobile industry has not developed. The automobile industry in Eastern Europe has been developing considerably in this decade, the reason for which will be examined in the next section.

3. What Are the Determinants?

According to the observation of FDI in Southern and Eastern European countries in the previous section, the phenomenon of FDI is to be theoretically examined in this section.

The tremendous increase of FDI after World War II and the emergence of multinational enterprises led to various studies on international capital movement. MacDougall (1960) argues that capital movement between two countries whose marginal factor productivity is different occurs from the country where marginal productivity is lower towards the country where it is higher. This equalizes marginal productivity or profit rates between the two countries, and generates benefit to both capital exporting and importing countries (MacDougall, 1960; Robson, 1998). This could be the case when we consider capital movement between countries with the same development level and the same production functions. Since the EU does not consist of homogenous countries with the same production function (Southern Europe is less developed than other member states, for example), this model is not suitable for explaining intra-EU FDI. As regards relations between the formation of single market and intra-EU FDI, there is a question as to whether FDI substitutes for exports, but FDI has generally been realized in order to restructure or to utilize a different factor endowment between the countries.[10]

FDI itself has been examined by various scholars such as Hymer (1960), Kindleberger (1969), and Buckly-Casson (1976).[11] Moreover, Dunning (1988) synthesizes various FDI theories and suggests "eclectic paradigm" or "OLI paradigm" that FDI activity derives from integrating the three factors of ownership, internalization, and locational advantages.[12] Locational advantages

10 See Martín (1997), pp. 210-211. This point is also discussed in Yannopoulos (1989), Chap. 8.

11 Hymer (1960), Kindleberger (1969), and Buckly-Casson (1976) studied why firms engage in foreign production relating to industrial organization, and concluded that the possession of a monopolistic advantage induces FDI.

12 See Dunning (1988). The possession of ownership-specific advantages alone will generate exports. Licensing will be chosen in the presence of ownership and internalization advantages. If a firm satisfies all three conditions, it will prefer FDI rather than the other two kinds of foreign involvement.

are important for consideration in less developed areas where more inward FDI has been received than outward. In this sense, FDI in France and the UK (which have attracted more FDI) is not mentioned here, because FDI in advanced countries can have different characteristics. His model, however, cannot distinguish relationships among locational variables. Sasaki (1994) revises the Ricardian model by incorporating the difference in production functions, and points out two conditions of FDI: the first is "Kindleberger's condition" that foreign capital must have a competitive advantage against local capital; and the second is "Lenin's condition" that the host country must have both quality and quantity of labor and a developed infrastructure in order to operate with foreign capital.[13]

Moreover, according to Narita (1999), some conditions of FDI were showed as equations based on Sasaki's model.[14] The idea derives from the following stylized facts. Firstly, FDI in the EU periphery is expected to reduce intra-EU disparity, and to contribute to industrialization. Moreover, in the EU peripheral countries, especially Spain, foreign capital is not utilized for import substitution in order to supply the domestic market but to supply the EU market. Hence, it would be better not to depend on a model based on diminishing marginal productivity or diminishing returns to scale.

Secondly, notice that FDI has concentrated mainly on tradable goods in the case of manufacturing, and has been associated with restructuring in the international division of labor. According to the general rule that decrease of intra-EU disparity depends on development of industry rather than that of services, this would suggest that it is necessary to consider FDI associated with trade.

Suppose two countries (home and foreign) produce tradable goods. Capital goods are also regarded as tradable goods, and utilized for production. The firms employ the same qualitative labor force in their location with an average wage rate. Therefore, the labor force inherent to this location has a decisive effect on production. Since profit rates after tax deduction are different from one sector to the next, capital is internationally mobile in order to seek higher profit rates. Now assume that the 'advanced' foreign country invests as FDI

13 Referring to a Ricardian model and focusing on tradable goods, he indicates that the difference in profit rates generates the international capital movement, as MacDougall pointed out. He also argues that the international capital movement takes place if, in addition to Lenin's condition,"Kindleberger's condition" is also operative, when foreign capital must have a competitive advantage against local capital and it becomes necessary for foreign firms to invest in other countries.

14 In Narita (1999), I examined why Spain attracted much FDI in the second half of the 1980s, and concluded that Spain had a labor force cheaper than that of the EU advanced countries, a high quality of labor and sufficient infrastructure compared with other Southern European countries, and that increased labor costs shifted FDI from Spain to other countries such as Eastern European countries.

in the 'less advanced' home country. In this case, the profit rate of capital for the i-sector, r_i', is represented as

$$r_i' = \frac{Ep_{iw} - wl_i}{K_i} - r_i t_i - 1, \tag{1}$$

which consists of the foreign exchange rate in terms of national currency (E), world market price (p_w) expressed in terms of the foreign currency, wage rates (w), labor coefficient (l), sum of capital per unit of output (K), and tax rates (t).[15] Note that p_w is represented by foreign currency, and so E is important for determining a comparative advantage when the law of one price holds in the world market.

Notice that FDI occurs when the following condition holds:

$$r_i' > r_{if}'. \tag{2}$$

This implies that if the profit rate from operation in another location is higher than from operation within the country, that country will invest abroad. Here, the subscript f represents the foreign country.

Moreover, if a third country exists as a recipient country from foreign investors, the following condition is necessary for the home country to receive investment,

$$r_i' > r_{is}', \tag{3}$$

where subscript s means a third country.

Furthermore, both Kindleberger's condition and Lenin's condition have to hold in order to enable foreign capital to operate in the 'less advanced' home country, that is,

$$l_{ih} > l_i \geq l_{if}, \tag{4}$$

where l_{ih} is the labor coefficient of the home country. This also implies that the foreign country invests in the advantageous sector of the home country.

It is clear in the previous section that, while Spain ceased to attract FDI, much FDI in Eastern Europe increased in the 1990s. Based on these equations, factors that Spain still has, or has lost, for attracting FDI inflow, will be analyzed below.

Some studies point out that the increase of Spanish inward FDI in the late 1980s can be attributed to relatively lower labor costs compared to that in EU advanced countries, and to the availability of a skilled labor force and in-

15 Note that this equation is based on the price equation, that is, $Ep_i = wl_i + K_i(1+r)$, and r_i', and derives from profit after tax deduction divided by the sum of capital, K. See Narita (1999).

frastructure, as compared with other Southern European countries. For example, Salmon (1995) points out that FDI in the automobile industry was promoted by relatively low labor costs, a protected and expanding domestic market, access to the EU, economies of scale, and government assistance. Pallares Barbera (1993) indicates that Spain's advantages were infrastructure, relatively cheap labor force, and access to the EU markets. In the econometric studies, Bajo Rubio and Sosvilla Rivero (1994) examine the determinants of FDI.[16]

According to the above consideration, labor costs, quality of labor, infrastructure, tax rates (investment incentives), the sum of capital per unit of output, and foreign exchange rates are to be examined, comparing Southern Europe and Eastern Europe.[17] We will clarify the FDI determinants in the 1990s and why Spain ceases to attract FDI. Here, the analysis concentrates on FDI in manufacturing. Although Spain received substantial FDI in services during 1992-97, FDI is generally expected to be an engine for industrial development, and to decrease the intra-EU disparity relying on it.

<Labor Costs>

Many scholars have pointed out that a cheaper labor force is one of the most important factors of FDI. In spite of this fact, Spanish labor costs have increased remarkably since the second half of the 1980s. What is the relation between increased labor costs and the fact that Spanish inward FDI has declined?

Comparing wages per hour in Southern Europe, EU advanced countries, and Eastern Europe, Table 8 indicates that in 1992 Spain had the highest wages (8.15 ECU) of the three southern countries and higher than France (7.21 ECU). Even if Spanish wages had increased since the late 1980s, they did not rise remarkably in the 1990s, and were 8.72 ECU in 1997, lower than 13.63 ECU in Germany and 12.32 ECU in the UK. On the other hand, wages in Eastern Europe, despite a lack of data, were apparently lower than those in EU advanced countries and Southern Europe. In 1996, Polish wage was 1.47 ECU, Hungarian 1.82 ECU, and Czech 1.66 ECU, much less than Spanish 8.16 ECU in 1996.

Comparing labor costs per hour in the manufacturing industry, Table 9

16 The results of other studies, e.g., Bajo (1991), Bajo and López (1996), and Martín and Velázquez (1996), are summerized in Buesa and Molero (1998), pp. 176-177.

17 Several studies indicate national market size as an important factor for FDI. Here it is not ignored, but, when we deal with intra-EU FDI: FDI from EU advanced countries to Southern European countries, market size will rather be considered from the viewpoints of acquiring an adequate labor force. Since Eastern European countries have not participated in the EU, market size is one of the most important factors for FDI, as mentioned in OECD (1999b), p. 76.

shows the same facts. Spanish costs were 15.17 ECU in 1992, much higher than Greek 6.68 ECU and Portuguese 5.41 ECU. According to a comparison of major FDI investors (Germany, France, and the UK), Spain has lower costs than Germany (23.26 ECU) and France (19.43 ECU), but higher than the UK (12.57 ECU). However, Spanish costs are much higher than Polish 2.33 ECU, Hungarian 2.84 ECU, and Czech 2.62 ECU, which were lower than Greek and Portuguese in 1995.

The above comparison suggests that Spanish wage and labor costs are on the same level as those of some EU advanced countries, and much higher than those of Eastern Europe, which has attracted much FDI in the 1990s. Therefore, it can be said that a cheaper labor force is a factor resulting in higher profit rates and attracting much FDI, and that increased labor costs without an improvement in quality of labor causes foreign firms to shift their interest of FDI location from Spain to Eastern Europe. Nevertheless, it is difficult to regard them as only a decisive factor for FDI, and it is futile to examine labor costs alone. In fact, despite the highest labor costs, FDI has concentrated on Spain among Southern European countries. This implies that other factors also have to be considered when making the FDI decision (Bajo Rubio and Sosvilla Rivero, 1994).[18]

<Quality of Labor>

The quality of labor is a representative variable of the labor coefficient because it reflects on technology. It is a decisive factor determining whether or not the labor force can operate with capital or technology of the originating countries in a host country. Otherwise, firms do not invest, even if wages are lower. Therefore, the quality of labor is to be examined, using various indicators such as labor productivity or education level, although we are unable to capture 'quality' numerically.

As for labor productivity: GDP per person employed (Table 10), Spain has higher labor productivity,[19] 35,179 ECU in 1992 which is almost the same as that of the UK (31,272 ECU) and of the Netherlands (37,265 ECU). On the other hand, the Czech Republic, Hungary, and Poland have obviously much less productivity (4,712 ECU, 7,028 ECU, and 4,281 ECU respectively) than Spain and the EU advanced countries; this is also the case in Greece (20,581 ECU) and Portugal (16,273 ECU). The annual average growth rates of productivity, however, show that Eastern European countries have attained high

18 Using econometric analysis, they show that there was no significant correlation between FDI and labor costs, and conclude that the quality of labor was the more important factor.

19 Among European automobile producing plants, plants in Spain have relatively higher productivity. See the result of studies by Andersen Consulting in the Ministry of Economy and Finance of Spain (1997).

growth rates of 15.0% in the Czech Republic, 9.6% in Hungary, and 12.8% in Poland. During this period, Spanish productivity has not increased substantially (0.6%) due to a large decrease in productivity during 1992-93.

As regards some indicators about education, it could be said that the Spanish education level is high. The number of students in secondary education (e.g., high school) per 100,000 (Table 11) indicates that Spain had about 12,000 students by 1995, which is larger than Greece (8,000) and Portugal (9,000). This figure outweighs that in the UK (11,000), largest of the EU advanced countries, except in 1995/96. On the other hand, while the Czech Republic and Hungary have more than 10,000 students (almost the same as the EU nations), Poland had 6,578 in 1995/96, much less than the EU has, and even than Greece (7,954), which has the least number. Data on the number of students per 100,000 in higher education (e.g., university) show that Spain had more students (3,506) than Germany (2,602), France (3,383), the Netherlands (3,314), and the UK (2,625) in 1993 (Table 12). The Czech Republic (1,484), Hungary (1,301), and Poland (1,942), have fewer students than Southern European countries and the EU advanced countries. Therefore, Eastern European countries have a relatively lower level of education compared with the EU. Another indicator (participation rates in education of 19-21 years old in 1996) also indicates a higher level of education in Spain (50%), compared with the EU average rate, excluding Italy and Belgium(48%), and higher than Greece, Portugal, Germany, and the UK.

Although these comparisons imply that Spain has a relatively high quality of labor among the EU member states, some evidences on the actual labor force point out that Spain still has less skilled labor. According to a percentage of the population aged 25-59 in 1997, of those having completed at least upper secondary education, Spain has a much lower rate of 35.1%, compared with the average rate of 58.0% in the EU-15.[20] Moreover, the labor force in Eastern Europe attained to substantially higher education. A comparison of educational attainment in the working-aged (25-64) population shows that the population with at least a secondary education is higher in the Czech Republic and Poland, and lower in Southern Europe (OECD, 1998c, p.103).

While the Spanish educational level of its workers is not high, Spain still has a relatively high productivity and educational level. This implies that Spanish workers have improved their productivity by utilizing foreign capital. Moreover, it can be said that there is further opportunity to acquire highly skilled labor in Spain, and that it is necessary to improve productivity within a country.

20 The above comparisons come from, http://europa.eu.int/eu/comm/eurostat/facts/wwwroot/en/index.htm.

<Infrastructure>

Besides high profit rates, equipping infrastructure is indispensable for host countries in order to enable foreign capital to operate; that is, infrastructure is deeply related to Lenin's condition. It regulates productivity on one hand; it effects an access to markets on the other. Moreover, since infrastructure is generally regarded as public goods, its supply accrues a difference in the investment environment. Although various indicators on infrastructure are available, we choose to consider transport and communication.[21]

Concerning transport infrastructure, according to the annual average number of passenger cars in use during 1992-97, Spain has 348 and Portugal 344, less than Germany (477), France (426), and the UK (369). Eastern Europe, however, has much fewer cars than the EU; the Czech Republic has 271, Hungary 228, and Poland 181. Comparison of net ton-kilometers carried by railway provides that France (49,720 million tkm) and Germany (71,814 million tkm) obviously have greater amounts than other countries, but Poland has the greatest number (81,736 million tkm). In 1994, Hungary and Spain attain almost the same level (7,707 million tkm and 8,966 million tkm respectively). As regards international maritime transport, a comparison of vessels entered and cleared net registered tons provides that Spain has a substantial number of entered tonnage at 154 million tons and cleared tonnage at 48 million tons compared with other Southern and Eastern European countries, although the tonnage is less than that of Germany (221 million tons and 197 million tons respectively).

Regarding communication, for example, the number of telephones in use per 100 inhabitants in 1995 provides that Greece, which is larger than Spain (38.5) and Portugal (36.1), and almost the same as Germany (49.3) and the UK (50.2). Three eastern countries have a smaller number of telephones, i.e., the Czech Republic has 23.6, Hungary 18.5, and Poland below 15. Although the above comparisons imply that Eastern Europe has a less advanced infrastructure than Southern Europe, they also show that infrastructure in Southern Europe is not yet well advanced, as compared with that in EU advanced countries. For example, lengths of railway and motorway in Spain per 10,000-kilometer squares (243 km and 128 km) are much less than the German at 1,144 km and 317 km.[22] Infrastructure is apparently one of the most important factors for attracting FDI, and, in fact, France and the UK, whose infrastructure is sufficiently equipped, have received much FDI in the 1990s. Hence, not only Eastern Europe but also Spain will have to improve further infrastructure, as Martín (1997, p. 226) indicates.

21 Data source for infrastructure of transport and communication are from UN (1997).

22 Calculated on data in 1995 from Eurostat (1997), p. 184.

The network of component industries is also important to the location of car makers. Over 1,000 car component firms are located near the main assembly firms in Spain. On the other hand, despite cheaper labor costs, Portugal lacks supplier networks and has been unable to attract firms (Pallares Barbera, 1993). It will be necessary for Eastern Europe to construct a network of component industries in order to enable foreign carmakers to operate there.

<Tax Rates : Investment Incentives>

Since foreign capital is very important for Southern Europe, each country has introduced various policies for attracting investment, such as liberalization of capital movement, revised investment laws, or other incentives.[23] Agarwal (1980) argues that whether a country attracts FDI also depends on investment incentive or political stability. Furthermore, when the location is determined, e.g., among the EU member states, incentives can play a decisive role in choosing where foreign firms operate (UN, 1998). In effect, revising investment laws and offering investment incentives contributed to increased Spanish FDI inflow in the late 1980s. Here, tax rates are considered as a variable representing investment incentives. If tax rates differ between countries, firms will sometimes be tempted to invest in a low tax country, even though it may cost more to produce there (Devereux and Pearson, 1989).

Concerning corporate tax rates in the EU, Greece imposes at a rate of 40%, Portugal 36%, and Spain 35%. EU advanced countries levy almost the same rate as Southern Europe, e.g., Germany, 42% (International Bureau of Fiscal Documentation, 1996). Although tax rates in the Czech Republic, Hungary, and Poland are not low compared with those in Southern Europe, each country has decreased corporate tax rates after 1992, which results in a Hungarian lower tax rate at 18%, a Polish gradual cut of tax rate from 38% to 32% by 2000, and a Czech decrease from 45% to 42% in 1994 and to 39% in 1996.

As for withholding tax, the larger the proportion of the subsidiary owned by a parent company, the lower the withholding tax rates. Among the EU, Portugal imposes 15%, Germany 5 %[24] and the rest levy no withholding tax.

The above observation suggests that investment incentive is one of the most important factors for attracting more FDI. Eastern European countries, however, still have resentment against FDI, especially in the process of privatization (Sinn and Weichenrieder, 1997, p. 182), which will have to be solved in the future.

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23 As far as the revision of investment law or incentives is concerned, see JETRO (various years). In particular, see Arthur Andersen (1994), which mentions in detail the incentives in Spain, and OECD (1999b) that deals with FDI regulation in Hungary.

24 As July 1 in 1996, no withholding tax is levied.

<Two Other Factors: The Sum of Capital Per Unit of Output and Foreign Exchange Rates>

The sum of capital here means capital-output ratio. Since capital goods are regarded as tradable goods here, they are available in any place. Moreover, capital goes to the country where adequate qualitative workers are acquirable for production. Hence, this point could be omitted from the discussion. Rather, it is more important to discuss whether wages are lower, or whether an adequate labor force is available.

As regards foreign exchange rates, the equation also provides that, the larger the E (depreciation), the higher the profit rates. This is so in the case of the survey by Agarwal (1980): depreciation corresponds to much inward investment. However, concerning real effective exchange rates (1990=100) presented by IMF (1998),[25] these rates are not considerably related to FDI evolution. Spanish inward FDI has declined since 1992, even if exchange rates have depreciated as compared with the beginning of the 1990s. Moreover, in spite of the appreciation in the Eastern European countries (the Polish rate in 1996 was 210.9), they have received substantial FDI. Thus, we cannot affirm that foreign exchange rates have an effect on the evolution of FDI. Although depreciation of real effective exchange rates in the late 1980s corresponded to an increase of FDI inflow into Spain, and appreciation at the beginning of the 1990s reflected the decline of FDI in Spain, it could be said that foreign exchange rates had no significant effect on FDI during the period 1992-97. This was caused by uncertainty as to the future of the EURO and the effect on exchange rates by the EU accession of Eastern Europe.

The remarkable increase in Spanish FDI inflow in the 1980s is explained by relatively lower labor costs than those in the EU advanced countries, and by a higher quality of labor and infrastructure compared with that of Portugal and Greece. This study suggests that this is the case when we argue that FDI determinants in the 1990s, especially a high quality of labor and sufficient infrastructure (Lenin's condition) are prerequisite to attract FDI in Spain, which is proven by an increase of FDI in France and the UK. Investment incentives and capital-output ratio are also decisive factors in attracting FDI to Spain. As regards foreign exchange rates, the relation with FDI inflow is not clear. Despite these facts, liberalization in Eastern Europe, increased Spanish labor costs, improving infrastructure in other countries, and offering investment incentives do contribute to a regard for other countries (especially Eastern Europe) as promising FDI recipients, and to the cessation of direct foreign

25 An increase in the index means an appreciation.

capital to Spain. Foreign firms have paid attention to Eastern Europe with a cheaper labor force, or to France and the UK with a high quality of labor and sufficient infrastructure. As a result, Spain does not rely on foreign capital (FDI) for development, but has to strengthen its productivity and improve its infrastructure within its own country.

Although Eastern European countries are expected to receive more inward FDI after their EU accession, according to the experience of Spain, they nevertheless have various problems to solve, e.g., difficulties installing the appropriate legal and institutional framework, insufficient funds for the public infrastructure, substantial economic and political risk, and unwillingness to attract too much FDI (Sin and Weichenrieder, 1997, p. 180). Therefore, these ex-socialist countries will have to solve their own political and economic problems by themselves.

4. Concluding Remarks

Observation of the evolution of FDI shows that Spain has decreased her FDI after 1992. Increased labor costs in Spain led to a shift of foreign capital to Eastern Europe with lower labor costs in the 1990s, or to France and the UK with more skilled labor and sufficient infrastructure. It can be said that FDI for development is not continuous but temporal. Although Spain still has some factors that attract FDI, it will be necessary to improve the quality of labor, and to strengthen the industrial structure within the country. If Eastern European countries participate in the EU, the present EU members will be imposed upon with more burdens. Hence, Southern Europe does not expect to be financed by the Structural Funds, nor to depend on FDI for development.

As regards Eastern Europe, which has received substantial FDI in this decade, some countries, including the Czech Republic, Hungary, and Poland, are going to enter the EU. Although this prospect leads to a further increase of FDI in these countries (as when Southern Europe entered the EU), Eastern Europe will need to upgrade her infrastructure and legal framework. Moreover, since GDP per capita in Eastern Europe is much less than the EU average, the EU will face another effort to reduce disparity when the EU accession of these countries is realized.

Lastly, Spain, which has been one of the largest recipients since the latter half of the 1980s, recently increased FDI outflow, and Spanish FDI outflow outweighed FDI inflow into Spain in 1997, $10,042 million and $5,556 million, respectively.[26] Spain has invested much in the South America by countries, and services by sector. Therefore, Spain can be incorporated in the two kinds

26 These two figures are from UN (1998). According to data of JETRO (various years), FDI inflow is still larger than outflow.

of international division of labor: it has tightened the relationship with the EU on FDI inflow, and with less developed areas such as the South American countries on FDI outflow. It is necessary to examine further the fact that Spain has arrived at a new development level, which Narula (1996) argues.[27] If this be true, then Spanish FDI inflow will have to be analyzed from another point of view; that is, it will be treated such as FDI in advanced countries such as France and the UK, although Spain has been regarded as a less advanced country up to now. Moreover, further research will be needed on whether Spanish development depending on FDI since the late 1980s has solved intra-EU disparity.

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27 Narula (1996) argues that when FDI outflow exceeds inflow and the growth rate of outward investment is higher than that of inward investment, an economy reaches a level of competitive saturation.

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Table 1 : FDI Inflows (millions of dollars).

	1986-91 annual average	1992	1993	1994	1995	1996	1997
Spain	8,325	13,276	8,144	9,359	6,201	6,454	5,556
Greece	826	1,144	977	981	1,053	1,058	1,500
Portugal	1,403	1,873	1,534	1,270	685	708	1,713
EU total	63,186	83,794	80,935	71,580	116,792	92,398	108,172
Czech Republic	99	1,003	568	862	2,259	1,428	1,301
Hungary	430	1,471	2,339	1,146	4,453	1,982	2,085
Poland	84	678	1,715	1,875	3,659	4,498	5,000

Note : According to the UN (1999), FDI inflow for each country in 1997 was : Spain $ 6,388 million, Portugal $ 2,544 million, Greece $ 984 million, and Poland $ 4,908 million. The other two countries received the same FDI inflow as shown in this table.

Source : UN (1998).

Table 2 : FDI Inflows as a Percentages of Total EU Inflows.

	1986-91 annual average	1992	1993	1994	1995	1996	1997
EU	100	100	100	100	100	100	100
Austria	0.7	1.1	1.2	1.8	0.5	0.4	1.6
Belgium-Luxembourg	8.6	13.5	13.3	11.9	9.0	15.3	11.6
Denmark	1.2	1.2	2.1	7.0	3.5	0.8	2.4
Finland	0.6	0.5	1.1	2.2	0.9	1.2	1.4
France	14.6	26.1	25.6	22.1	20.3	23.8	16.9
Germany	4.7	3.2	2.4	2.5	11.5	-2.9	-0.2
Greece	1.3	1.4	1.2	1.4	0.9	1.1	1.4
Ireland	0.6	1.4	1.4	1.2	1.2	2.7	3.8
Italy	5.8	4.7	5.4	3.0	4.2	3.7	3.3
Netherlands	10.1	9.4	10.6	10.5	9.8	8.4	8.1
Portugal	2.2	2.2	1.9	1.8	0.6	0.8	1.6
Spain	13.2	15.8	10.1	13.1	5.3	7.0	5.1
Sweden	3.6	—	4.6	8.8	12.8	5.9	8.9
United Kingdom	32.9	19.3	19.3	12.8	19.3	28.1	34.1

Source: UN (1998).

Table 3: FDI in Spain: Inflows by Country of Origin (millions of dollars).

	1992	1993	1994	1995	1996	1997
Total	13,351	8,075	9,422	6,217	6,463	5,541
EU-15	8,960	6,453	6,443	4,824	4,603	4,348
% of EU-15	67.1	79.9	68.4	77.6	71.2	78.5
France	2,034	1,241	1,413	344	1,184	607
Germany	1,617	947	2,560	2,056	1,149	1,371
Italy	432	502	936	651	549	344
Netherlands	752	1,490	455	504	1,122	791
UK	1,873	1,214	-99	420	304	1,373
Other EU	2,252	1,059	1,177	848	296	-139
US	1,183	431	1,612	464	1,093	591
Japan	375	153	295	75	324	226
Other OECD	804	602	719	476	279	292
Non-OECD	2,036	329	279	297	204	128

Note: Unallocated FDI is not included in this table.
Source: OECD (1998a).

Table 4: FDI in Spain: Inflows by Industrial Sector (millions of dollars).

	1992	1993	1994	1995	1996	1997
Total	13,351	8,075	9,422	6,217	6,463	5,541
Primary	150	110	828	51	58	60
Manufacturing	4,387	4,532	5,245	3,303	3,049	2,454
Services	3,693	3,433	3,349	2,863	3,356	3,027
% of Manufacturing	32.9	56.1	55.7	53.1	47.2	44.3
% of Services	27.7	42.5	35.5	46.1	51.9	54.6
Primary, of which						
Agriculture & fishing	74	50	27	20	29	11
Mining & quarrying	75	60	801	31	29	49
Manufacturing, of which						
Food products	588	796	1,446	419	441	468
Textile & wood activities	491	486	387	286	230	156
Petroleum, chemical, rubber & plastic products	1,082	861	1,110	917	1,119	557
Metal & mechanical products	432	302	295	222	151	152
Office machinery, computers, radio, TV & communication equipment	223	250	189	126	91	60
Vehicles & other transport equipment	228	796	1,357	538	493	688
Services, of which						
Electricity, gas & water	–	20	137	36	8	1
Construction	97	111	42	72	54	27
Trade & repairs	1,115	719	648	589	914	667
Hotels & restaurants	–	176	176	124	197	63
Transport & communication	–	61	94	79	106	67
Financial activities	1,405	1,131	849	973	615	476
Real estate & business activities	–	1,159	1,248	922	1,311	1,549
Other services	39	57	154	69	150	178

Note: Unallocated FDI is not included in this table
Source: OECD (1998a)

Table 5 : FDI in Portugal: Inflows by Country of Origin (millions of dollars).

	1992	1993	1994	1995	1996	1997
Total	1,904	1,516	1,254	662	708	1,729
EU-15	1,455	1,246	806	509	810	1,095
% of EU-15	76.4	82.2	65.7	77.1	—	63.4
France	318	216	141	148	75	103
Germany	151	124	332	126	-73	223
Netherlands	190	- 4	54	110	150	23
Spain	156	428	190	-145	579	450
UK	656	281	-17	183	194	90
Other EU	-16	201	106	87	-115	206
US	106	39	43	17	-121	461
Other OECD	73	148	197	55	150	-50
Non-OECD	150	83	206	79	-114	222

Note: Unallocated FDI is not included in this table.
Source: OECD (1998a).

Table 6 : FDI in Portugal: Inflows by Industrial Sector (millions of dollars).

	1992	1993	1994	1995	1996	1997
Total	1,904	1,516	1,254	662	708	1,729
Primary	32	21	4	5	15	6
Manufacturing	269	422	574	256	-79	-27
Services	1,548	1,032	666	376	632	1,608
% of Manufacturing	14.1	27.8	45.8	38.7	—	—
% of Services	81.3	68.1	53.1	56.8	89.3	93.0
Primary of which						
Agriculture & fishing	17	15	3	1	11	5
Mining & quarrying	15	6	1	4	4	1
Manufacturing of which						
Food products	—	—	51	-49	- 8	-262
Textile & wood activities	—	—	78	115	18	- 3
Petroleum, chemical, rubber & plastic products	—	—	115	-88	-28	15
Metal & mechanical products	—	—	18	41	20	33
Office machinery, computers, radio, TV & communication equipment	—	29	58	84	-33	41
Vehicles & other transport equipment	—	—	250	25	-87	27
Services of which						
Electricity, gas & water	—	—	11	275	-87	-105
Construction	134	44	20	32	20	-13
Trade & repairs	-75	110	43	176	251	599
Hotels & restaurants	—	—	95	9	- 4	10
Transport & communication	30	16	24	—	48	612
Financial activities	1,450	855	240	-362	-54	383
Real estate & business activities	—	—	132	146	422	108
Other services	9	7	4	3	36	14

Note: Unallocated FDI is not included in this table.
Source: OECD (1998a)

Table 7 : FDI in Eastern Europe (millions of dollars).

	1992	1993	1994	1995	1996	1997
Czech Republic						
Total	1,003	568	862	2,558	1,428	1,300
EU	590	245	624	1,713	993	942
% of the EU	58.8	43.1	72.4	70.0	69.5	72.5
Primary	–	–	–	31	7	9
Manufacturing	577	365	366	766	579	355
Services	361	160	275	1,670	782	878
Hungary						
Total	4,741	7,001	7,830	10,361	10,119	–
EU	3,351	4,782	5,798	7,603	6,413	–
% of the EU	70.7	68.3	74.0	73.4	63.4	–
Primary	109	178	179	212	253	–
Manufacturing	2,507	3,458	3,824	4,446	3,923	–
Services	2,125	3,349	3,828	5,703	5,975	–
Poland						
Total	–	1,109	1,095	3,659	4,498	–
EU	–	868	693	2,496	3,509	–
% of the EU	–	78.3	63.3	68.2	78.0	–
Primary	–	–	6	29	-29	–
Manufacturing	–	–	725	1,779	251	–
Services	–	–	364	1,186	21	–

Note: The Hungary data represent the FDI inward position.
Source: OECD (1998a).

Table 8 : Wages Per Hour in Manufacturing Total (ECU).

	1992	1993	1994	1995	1996	1997
Spain	8.15	7.77	7.68	7.75	8.16	8.72
Greece	3.56	3.61	3.81	4.10	4.42	4.75
Portugal	2.40	2.31	–	2.40	2.54	2.71
Germany	11.15	12.29	12.77	13.60	13.82	13.63
France	7.21	7.63	–	–	–	–
United Kingdom	9.61	9.55	9.73	9.47	10.10	12.32
Poland	–	–	1.09	1.24	1.47	–
Hungary	–	–	–	–	1.82	1.76
Czech Republic	–	1.04	1.20	1.40	1.66	–

Source: ILO (1998).

Table 9 : Labour Costs Per Hour in Manufacturing Total (ECU).

	1992	1993	1994	1995	1996	1997
Spain	15.17	14.39	14.00	14.31	12.59	12.66
Greece	6.68	6.67	7.18	7.83	8.93	10.14
Portugal	5.41	5.42	5.47	5.83	—	—
Germany	23.26	25.44	26.42	28.09	28.93	—
France	19.43	—	—	—	—	—
UK	12.57	12.83	13.34	13.16	—	—
Poland	—	—	—	—	2.33	—
Hungary	2.62	3.01	3.15	2.88	2.84	3.11
Czech Republic	—	1.72	1.95	2.26	2.62	—

Source: ILO (1998).

Table10: Productivity, GDP/Persons Employed (ECU).

	1992	1993	1994	1995	1996	1997	growth rates(%) annual average
Spain	35,179	33,853	34,008	34,890	36,359	36,161	0.6
Greece	20,581	21,166	21,929	23,202	25,094	27,290	5.8
Portugal	16,273	16,032	16,490	17,936	18,903	19,275	3.5
Germany	41,151	44,797	47,481	50,583	50,898	51,566	4.7
France	45,204	47,913	50,356	52,394	53,972	54,630	3.9
United Kigdom	31,272	31,563	33,366	32,587	34,648	42,399	6.6
Netherlands	37,265	40,221	42,400	44,223	44,499	44,213	3.5
Czech Republic	4,712	5,989	6,740	7,030	8,936	9,284	15.0
Hungary	7,028	8,613	9,301	9,196	9,659	10,957	9.6
Poland	4,281	4,931	5,259	6,096	7,024	7,812	12.8

Source: OECD (1997) and (1999a).

Table11: Number of Students in Secondary Education per 100,000.

	1992/93	1993/94	1994/95	1995/96
Spain	12,165	12,373	12,135	10,503
Greece	8,188	8,186	8,102	7,954
Portugal	9,076	9,481	9,546	—
Germany	9,507	9,939	10,015	10,111
France	9,710	10,369	10,369	10,293
Netherlands	9,010	10,040	9,797	9,546
United Kingdom	7,822	11,153	11,435	11,428
Czech Republic	11,460	11,553	11,585	11,560
Hungary	—	11,232	10,960	10,903
Poland	5,289	6,105	6,488	6,578

Notes: 1. From 1993/94, change in data coverage excluding the Czech Republic, Portugal, and Greece.
2. In Spain, change in the educational structure in 1995.
Source: UNESCO (various years).

Table12: Number of Students in Higher Education per 100,000.

	1992	1993	1994	1995	1996
Spain	3,338	3,506	3,757	3,895	4,051
Greece	1,942	2,875	3,019	2,819	3,133
Portugal	1,929	2,505	2,788	3,131	—
Germany	2,524	2,602	2,639	2,639	2,618
France	3,206	3,383	3,598	3,568	3,697
Netherlands	3,250	3,314	3,455	3,245	3,174
United Kingdom	2,388	2,625	2,849	3,094	3,185
Czech Republic	—	1,484	1,603	—	—
Hungary	1,140	1,301	—	—	—
Poland	1,605	1,942	—	—	—

Source: EU, Eurostat (1997); Czech Republic, Hungary, and Poland, UN (1997).