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Spain and the 2004 Expansion of the European Union: A Case of FDI Diversion?

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Abstract

With the expansion of the European Union there have been concerns over increasing competition for FDI attraction between member states. This study will examine to what extent, if to any extent at all, the admission of the Central and Eastern countries to the EU has raised competition for FDI in Spain. Spain and the CEECs will be compared in terms of advantages in FDI attraction. Ultimately, evidence and analysis will suggest that given current trend, there is no serious threat to diverting foreign assets from Spain to the CEECs.

Introduction

With globalization on the rise, the movements of persons, goods, services, and capital have increased substantially throughout the world. Economic integration is aimed to reduce the barriers to these movements and increase the welfare of all member states and persons. The European Union is the largest unit of economic integration in the world, with economic output valued at €11.8 trillion—the single largest GDP in the world.¹ The European Union was officially created in 1993 with the Treaty of Maastricht, although history dates back to the formation of the European Coal and Steel Community in 1951. Since the creation of the European Union, countries have continually sought to join the establishment to take advantage of the free trade policies to advance their economies. Spain, the country in focus in this paper, was admitted to the EU in 1986. As the EU continues to grow, however, the countries seeking admission tend to have lower GDPs and economic power relative to the existing member states. The effects of allowing lesser-developed nations into the EU upon existing members are a topic of debate among scholars and policymakers alike; how do these countries affect the flows of persons, goods, services and, specifically, capital within the EU? While the goal of the EU is to increase welfare for all member states, countries such as Spain have expressed concerns that these countries may receive resources that would normally be allocated to their economies. Spain benefited tremendously from admission to the EU as vast foreign capital inflows accelerated infrastructural developments and output growth.

¹ Eurostat, 2010

The countries granted admission into the EU in 2004—Cyprus, Malta, Estonia, the Czech Republic, Hungary, Lithuania, Latvia, Poland, Slovakia and Slovenia—all have fairly similar economies in relation to Spain by the time it was allowed access to the EU in 1986 (with the exception of the extremely small tax-haven countries of Cyprus and Malta). These countries were still modernizing their economies and had medium labor and capital intensities with enormous potential to benefit from foreign investment. Foreign Direct Investment (FDI) is a long-term investment from one country to another that usually involves participation in management, joint-venture, transfer of technology and expertise.² The threat of the Central and Eastern European countries (all of the states granted EU membership in 2004 with the exception of Cyprus and Malta) or “CEECs”, in terms of FDI will be assessed in this paper.

To determine the validity of FDI diversion between Spain and the CEECs, the FDI-attraction models will be compared. It will be proven that Spain has government expenditures (specifically for R&D and education) and large domestic markets that are very advantageous for foreign investors to maximize revenues via sales volume. The CEECs have advantages in labor costs and geographic location that maximize foreign firms’ revenue via an export-orientation model. Ultimately the comparison between FDI attraction in Spain and the CEECs will demonstrate that FDI diversion is not taking place from Spain to the CEECs.

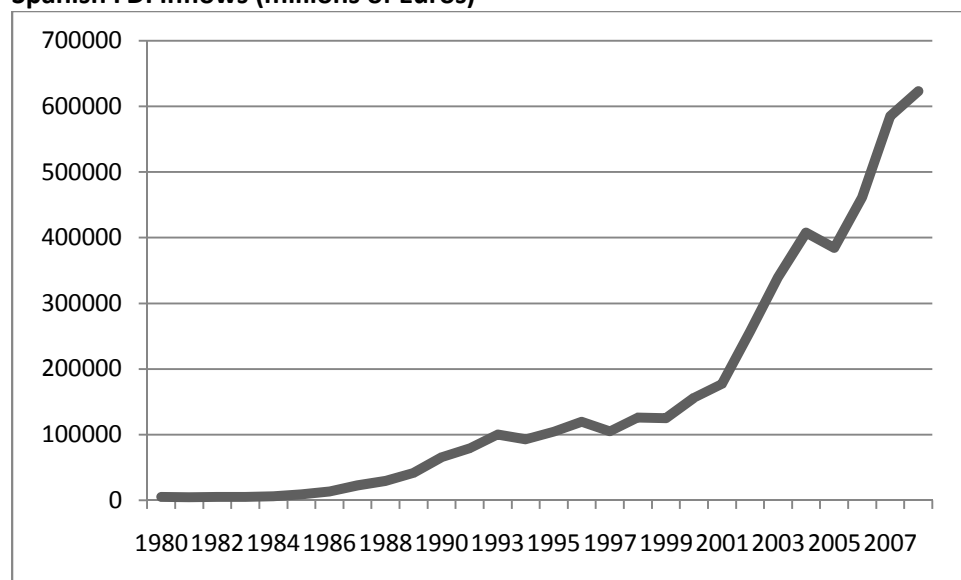
Chapter 1: General Characteristics of FDI in Spain and the CEECs

Foreign direct investment plays a very significant role to the Spanish economy as well as the economies of the CEECs. Spain and the CEECs were in similar economic situations before joining the European Union; Spain was still recovering from the transition of dictatorship under Franco, with economic instability and inflation running rampant in the late 70s and early 80s. Joining the European

² CIA World Factbook, 2010

Union in 1986 was crucial to the development of the Spanish economy (as it was to the CEEC economies in 2004) because it reduced barriers to financial, labor, goods and service flows that helped to stabilize the economy via inflation stability and GDP growth. Foreign direct investment growth coincided with economic transition following accession to the EU. Figure 1.1 demonstrates how joining the European Union has resulted in a clear overall increase in inward foreign investment flows, although growth rates increased significantly following the year 2000.

Figure 1.1
Spanish FDI inflows (millions of Euros)



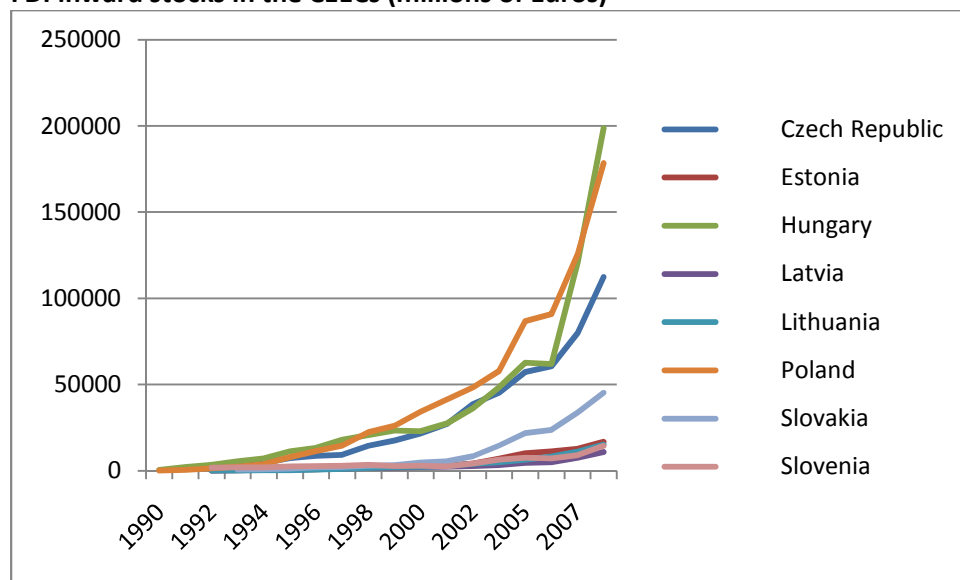
Source: UNCTAD 2010

The story was quite similar, but to a greater extreme in the CEECs. With the collapse of the Soviet Union, the centrally-planned economies of the CEECs had their entire economic model disappear. Free markets and capitalism were virtually shoved down the throats of the CEECs, and foreign capital helped ease the transition by providing funds that domestic entities simply could not provide. This process was accelerated with the fifth-round of EU accession in 2004 as eight former Soviet bloc countries—Hungary, Poland, the Czech Republic, Slovenia, Slovakia, Lithuania, Estonia and Latvia—were admitted, as well as Malta and Cyprus. This is the largest expansion of the European Union yet in terms of population, while

the GDP weight of the enlargement countries represents around 4% of the EU total.³ As demonstrated by Figure 1.2, inward FDI flows to the CEECs increased dramatically with accession to the EU in 2004.

Although FDI stocks rose by 50% between 1997 and 2003, for instance, figures rose by 500% following accession into the EU, between 2003 and 2008.⁴

Figure 1.2
FDI inward stocks in the CEECs (millions of Euros)



Source: UNCTAD 2010

But what was the contribution of FDI to this growth, and to what extent are Spain and the CEECs dependent on foreign investment? According to Figure 1.3, foreign investment has increased in relative importance to total GDP from pre-accession to today, although there are some slight dips. Spain has the 8th largest total FDI inflows in the world amounting to \$239.8 billion.⁵ More than 11,000 foreign companies (48 of which are *Fortune 100* companies) employ 1.27 million persons in Spain, amounting to

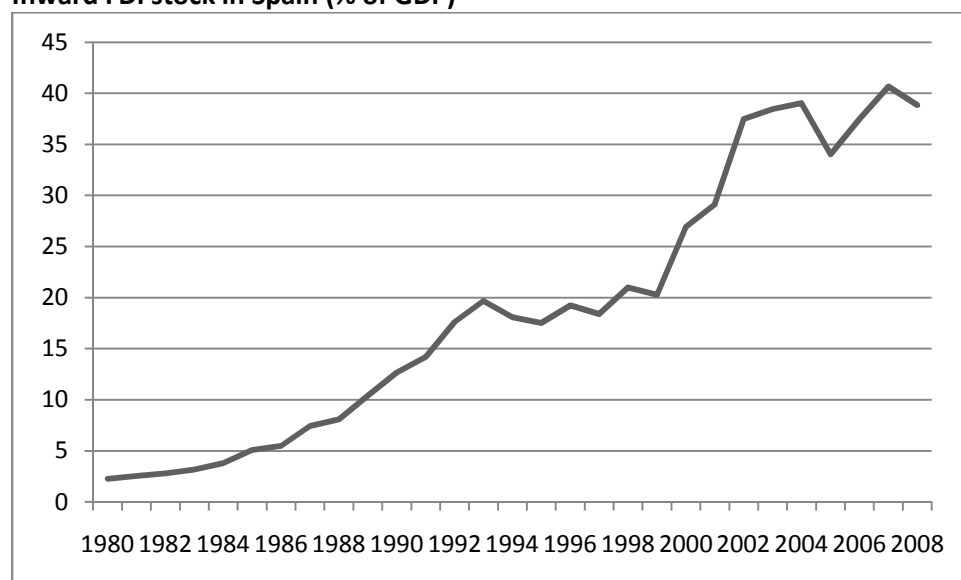
³ Esther, Gordo. (2004). The effects of EU Enlargement on the Spanish Economy: Productive Structures and Trade Flows. *Economic Bulletin*, Banco de Espana (2004): 85-96.

⁴ Foreign Direct Investment in Central and Eastern Europe: a case of boom and bust? *Economic Views*, PriceWaterhouseCoopers (2010): 1.

⁵ Chislett, William. Foreign Direct Investment in Spain. *Real Instituto Elcano* (2007): 1.

6.6% of total employment.⁶ Figure 1.4 shows similar results for the CEECs. Clearly, for both Spain and the CEECs, FDI continues to grow in contribution to overall economic output.

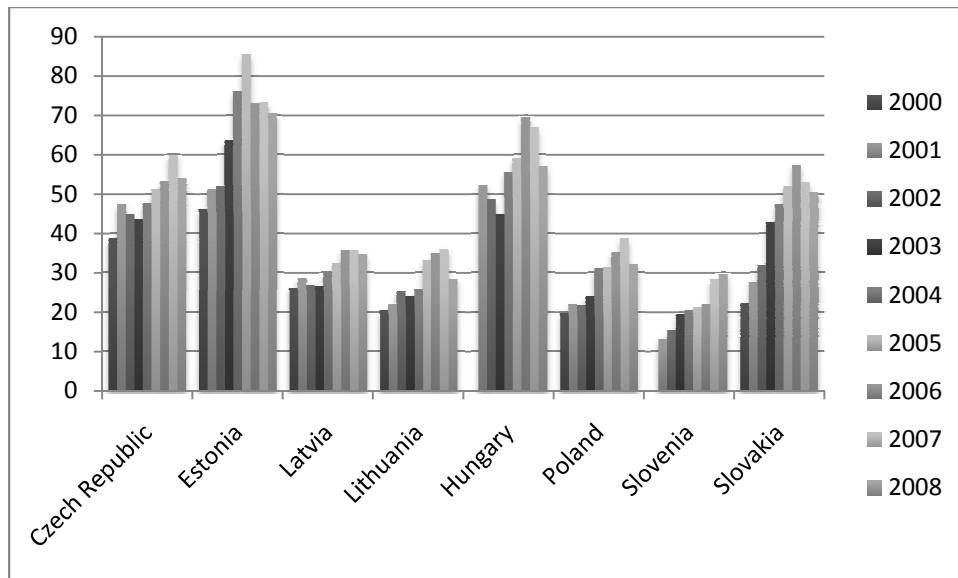
Figure 1.3
Inward FDI stock in Spain (% of GDP)



Source: UNCTAD 2010

Figure 1.4
Inward FDI stock in the CEECs (% of GDP)

⁶ Ibid, 2.



Source: UNCTAD 2010

Foreign investment originates from many of the same countries in Spain as in the CEECs although there are some differences. 93.2% of all FDI in Spain originates from within the EU.⁷ Within this realm, the United Kingdom is the largest investor (46% of total investments) followed by Germany (26%), France (8%) and the Netherlands (4%).⁸ Funding from the US and Mexico make up the majority of the remaining 7%. While German finances compose a large portion of total FDI in Spain, the story is quite similar in the CEECs. German investments make up 25% of total FDI in Hungary, 26% in the Czech Republic, 15% in Slovakia and 14% in Poland.⁹ Unlike Spain, Austrian investments are crucial to the CEECs—13% of total FDI in Hungary, 11% in the Czech Republic and 7% in Slovakia—as well as French investments (6% in Slovakia and 20% in Poland).¹⁰ The remainder of funding comes mostly from the United States, the Netherlands, and Russia.

In terms of FDI-recipient sectors, manufacturing receives the majority of FDI in both Spain and the CEECs. The automobile industry has traditionally received the majority of FDI in this sector, but

⁷ Spanish Foreign Investment Registry.

⁸ Ibid.

⁹ Hungarian Investment and Trade Development Agency, CzechInvest, Slovak Investment and Trade Development Agency.

¹⁰ Ibid. Kornecki, Lucya. The Importance of Foreign Direct Investment in the Polish Economy. Embry Riddle Aeronautical University.

electronics fabrication has risen in importance with the computer revolution. Also, a significant portion of FDI in Spain goes to the export sector, as foreign companies account for nearly 40% of total exports.¹¹ However, foreign investment is much more significant to exports in the CEECs, exact details of which will be laid forth in Chapter Three. Commerce accounts for 47% of total Spanish FDI inflows, followed by the production and distribution of electricity, gas and water (27%); services (particularly financial mediation and banking) have risen to 9.4% of FDI total, while real estate activities compose 7% of total FDI.¹² Foreign investment has accumulated in the high-tech sector as well; the Information and Communications Technology (ICT) sector, which includes telecommunications and computer hardware/software, accounted for 11% of total greenfield projects (defined as investment in a manufacturing or production plant in an area where little or no physical infrastructure or facilities exists¹³) and renewable energy accounted for 10% in 2008.¹⁴ The high-tech sector represented nearly 25% of all Spanish greenfield investments in 2008.¹⁵

Following the collapse of the Soviet Union, foreign investments in the CEECs were focused on heavy industries that make intensive use of unskilled labor and natural resources, concentrated mainly in manufacturing.¹⁶ Combined with GDP and FDI growth, economic modernization has led towards a shift towards production in activities with higher technological requirements, although still primarily in manufacturing.¹⁷ Office equipment, computers, ICT and particularly automobile fabrication receive the majority of FDI in the CEECs.

Foreign investment has played a critical role for developing the economies of Spain and the CEECs, both of which utilized foreign investment to accelerate modernization following accession to the

¹¹ Chislett, 4.

¹² Spanish Investment Registry.

¹³ Reuters financial glossary. http://glossary.reuters.com/index.php/Greenfield_Investment (accessed November 25, 2010).

¹⁴ Spanish Investment Registry.

¹⁵ Ibid.

¹⁶ Gordo, 86.

¹⁷ Ibid, 86.

European Union. Foreign investment has only continued to increase its contributions to these economies, as seen by the growing dependency of overall output on FDI. Many of the countries investing in Spain also invest heavily in the CEECs, particularly Germany and to a lesser extent France. Furthermore, the relative advantages in Spain for foreign investment will be compared and contrasted with the advantages of the CEECs, followed by their impact on FDI diversion from Spain.

Chapter 2: Advantages of the Spanish FDI Attraction Model

In this section the specific advantages present in the Spanish economy for foreign investors, whether already invested in the economy or considering the option, will be analyzed. These advantages will be weighed in the CEECs for comparison to demonstrate to what effect these advantages play a part in FDI attraction. Tax structure will first be compared between the regions, followed by the advantageous allocation of tax revenues in Spain. Most importantly, the enormous Spanish domestic market, specific to the sectors receiving the largest quantities of FDI, will be compared with the domestic markets of the CEECs. Ultimately, FDI is not diverting from Spain to the CEECs as a result of these advantages.

2.1 Tax Incentives for FDI

For national governments, tax regimes are a delicate matter as there exists a desire to offer a competitive tax environment for multinational corporations, while ensuring that sufficient amounts of revenue is collected for expenditure. Tax policies also matter to foreign companies, as higher taxes mean lower net value and lower revenues. But are tax policies alone enough to make or break a firm's decision to invest in a country? Tax policies between Spain and the CEECs will be compared, as to what extent this plays a role in the FDI attraction model.

The tax framework in Spain is modern and competitive compared to that of neighboring countries.¹⁸ Corporate tax rate in Spain is 30%, as stated by Legislative Royal Decree 4/2004. Another issue of FDI taxation is double taxation; firms might lose incentive to open a subsidiary or branch office if they are taxed not only in their country of origin, but in Spain. Spain offers tax credits to avoid domestic and international double taxation, as well as a highly attractive dividend and foreign-source capital gains exemption system.¹⁹ Tax incentives are provided for certain activities, with relevance placed on the deduction for the reinvestment of extraordinary profits, which gains access to a fixed rate of 18% (normally 30%) for certain types of income. Tax incentives are also provided for foreign-security holding companies; not only is a Spanish holding company not taxed on its foreign-source income and/or gains, but also it is not taxed on the income it distributes to its shareholder, or on the gains arising when the shareholder sells its stake in the holding company.²⁰ “Accelerated depreciation” is also permitted for businesses opening new property, plants or equipment that have the same amount of employees twelve months following the time of the investment.

While corporate taxes are very pertinent for foreign companies, the treatment of personal taxes on non-resident employees could affect the desire of foreign employees to move to Spain. Taxpayers with a permanent establishment in Spain pay the same rate as residents, although there is an additional 19% tax on amounts transferred abroad out of income obtained by PEs of non-resident entities (there are relevant exceptions).²¹ Spanish legislation allows individuals to choose whether they are to be taxed under resident or non-resident rules for five tax periods; if they choose the latter, expatriates are only taxed on income and/or gains considered to have been obtained in Spain, at a standard rate of 24% (versus 30% for residents).²² Overall, Spain has a favorable tax system for foreign firms and employees

¹⁸ Spanish Investment Registry.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

²² Ibid.

that is set up to avoid double taxation, incentivize research and development, and keep non-resident employees working in Spain.

Next, the tax structures of the Central and Eastern European Countries will be examined. It is apparent from Figure 2.1 that the corporate tax rates of the main CEEC FDI-recipients are fairly low. The Czech Republic, for instance, provides corporate tax relief for up to 10 years in the manufacturing sector under the Act on Investment Incentives for new investments that expand or modernize production lines.²³

Figure 2.1
Tax Rates in the CEECs

Taxation	Czech Republic	Hungary	Poland	Romania	Slovakia
Corporation tax	21% (20% from 2009 and 19% from 2010)	16% <i>A 4% solidarity tax is also payable resulting in an effective tax rate of 20%.</i>	19%	16%	19%
VAT (general rate)	19%	20%	22%	19%	19%
Personal income tax rate	15% (12.5% from 2009)	18% – 36%	19% – 40% <i>(18% – 32% from 2009)</i>	16%	19%
Export tax	VAT payable on import from a non-EU country; import from EU countries subject to common EU VAT rules.				

Source: Allen & Overy, 2008

Under the Investment Tax Incentives Decree in Hungary, tax allowances are granted for the initial year of investment and the five following years if a project creates new jobs and is valued at twelve million Euros.²⁴ Aside from tax incentives in the manufacturing sector, CEECs provide a favorable environment the development of industrial parks and technology centers for foreign firms. Slovakia, for instance, may

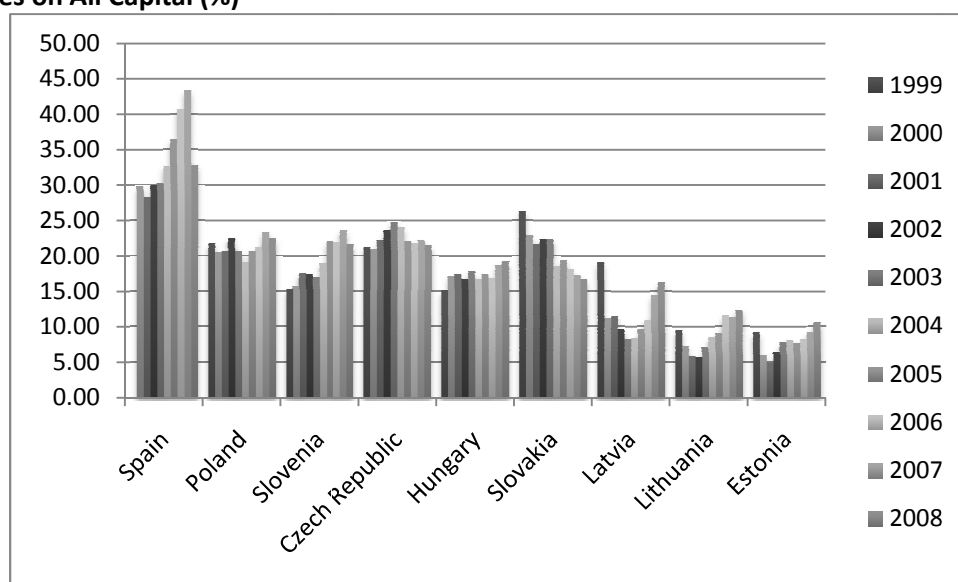
²³ Allen & Overy LLP. Foreign Direct Investment in Central and Eastern Europe, (2006): 22.

²⁴ Ibid, 28.

subsidize up to 85% of costs for improving the infrastructure of industrial parks, while Poland provides grants to assist job creation up to the equivalent of 4000 Euros per job.²⁵

There are some differences in the tax structures between Spain and the Central and Eastern European Countries. One noticeable difference is that corporate taxes are slightly higher in Spain than in the CEECs. Spain also has higher tax rates on capital (including households, businesses and corporations) than in the CEECs, as demonstrated by Figure 2.2. Personal tax rates, however, are similar (19-21% in Spain and 19-22% in the CEECs).

Figure 2.2
Tax rates on All Capital (%)



Source: Eurostat

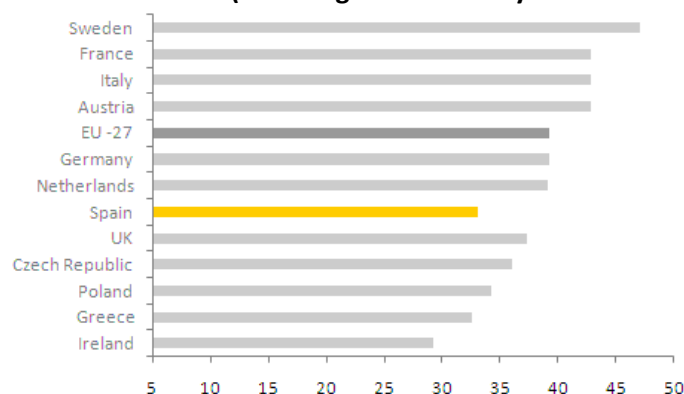
The significance of tax regimes with regards to attracting foreign investment is called into question: Just how vital is a tax policy to attracting FDI in Spain and the CEECs? The answer is that tax policy is important for both, but is not a stand-alone determinant for FDI. If all firms sought to maximize their present value from a solely a tax perspective, all countries would have tax structures with near-zero rates. Figure 2.3 shows that Spain has lower tax revenues than some of the most developed economies in Europe, such as Germany, the UK and France. If taxes were so vital to FDI attraction, how

²⁵ Ibid, 32.

do high tax-rate countries such as Germany receive \$ 3.12 billion more FDI than Spain and France \$4.62 billion more FDI than Spain?²⁶ On the opposite side of the tax spectrum, high levels of public capital (collected from taxes) might result in an increase in tangible infrastructure that would increase producer rent.²⁷

Figure 2.3

Total Tax Revenue (including social security contributions) in 2008 (% of GDP)



Source: Spanish Investment Registry

Thus there appears to be a tradeoff: higher taxes mean lower profitability for foreign firms, but could benefit infrastructure that could supplement a pro-business environment. Although Spain and the CEECs both provide favorable tax regimes for foreign investors, the effects of tax policy alone upon FDI flows are difficult to isolate. Both regions have similar tax rates and credit systems for foreign investors with only minute differences. Thus, tax policy does not provide sufficient evidence of FDI diversion from Spain to the CEECs. Overall infrastructure (and the manner by which these countries allocate tax revenue to develop infrastructure) must be examined and compared between Spain and the CEECs in order to gain a better perspective of FDI attraction factors.

2.2. Government expenditures to attract FDI

²⁶ UNCTAD 2010.

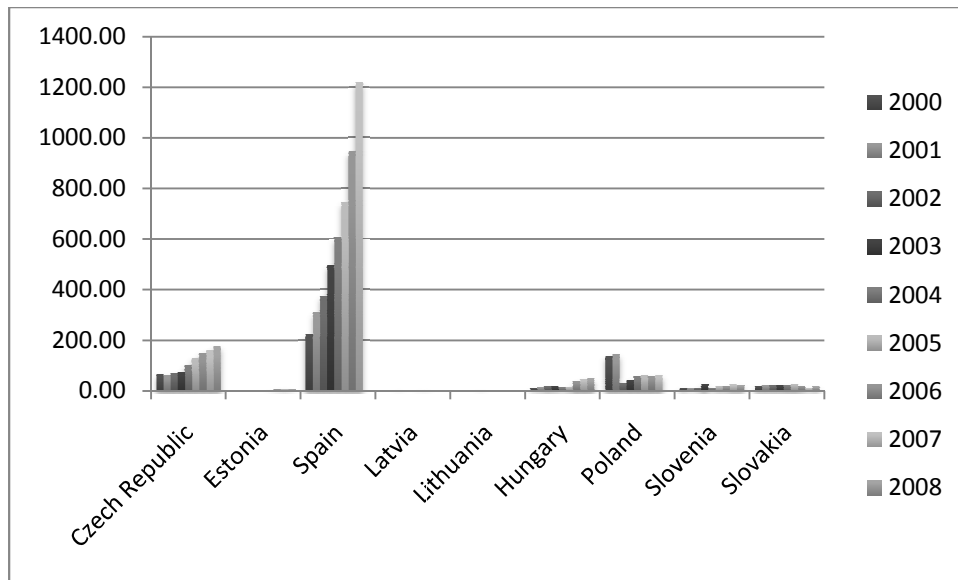
²⁷ Bellak, C., Damijan, P., Leibrecht, M. "Infrastructure Endowment and Corporate Income Taxes as Determinants of Foreign Direct Investment in Central and Eastern European Countries". *The World Economy*, 32 (2009): 267-290.

The previous section has made clear that tax policy cannot be a sole determining factor for attracting FDI, as both Spain and the CEECs have many tax incentives that are favorable for foreign investors. How a central government allocates tax revenues is pivotal to foreign firms, as they may do so in ways that will eventually raise profits. If a government provides funding for Research and Development then foreign firms may move to country to take advantage of these favorable terms. The extent to which a government funds the educational system within a country is also very important because a more educated population translates to a workforce that can perform high-skill tasks. Government expenditures specific to R&D and education will be compared between Spain and the CEECs. Spain has an advantage in R&D funding and education expenditures relative to the CEECs. Because of these advantages, FDI is not diverting from Spain to the CEECs.

2.2.1 Research and Development

Research and Development is critical to the sustainability and innovative nature of any economy. High levels of government expenditure in R&D demonstrates a government's emphasis on raising overall levels of technology and a desire to keep domestic firms competitive; foreign firms see that Spain places particular emphasis on R&D and may allocate their funds there to take advantage of the R&D-friendly environment. Figure 2.4 shows how the Spanish government clearly spends tremendous amounts of funding on R&D in comparison to the CEECs.

Figure 2.4
R&D Expenditures, by central government (in millions of euros)



Source: Eurostat 2010

Not only are overall levels of R&D spending higher, but they are growing at a seemingly exponential rate. This indicates that not only is R&D a top priority, but the Spanish government sees R&D as becoming more and more important to the economy. The *Avanza Plan*, effective until 2010, was endowed with €1.76 billion to finance R&D in the ICT sector and grant young people computer and broadband equipment.²⁸ The *Inovación Plan* is intended to generate 93,000 jobs specifically targeted at firms in business parks. Business parks are considered vital to R&D because they effectively lower economies of scale; as more firms of the same industry are concentrated geographically, information flows, labor mobility and managerial know-how all run smoother within high-tech industries. Spain has devoted a public organization, the Center for Industrial Technology Development, specific to allocating loans and grants to the 5115 companies within the 80 business parks of Spain.²⁹ By comparison, the Czech Republic has only 50 technology parks and Hungary has 130 parks with a total of 143 firms.³⁰ Vodafone and Ericsson, for example, opened a new tech center in Madrid in 2010 to accelerate the

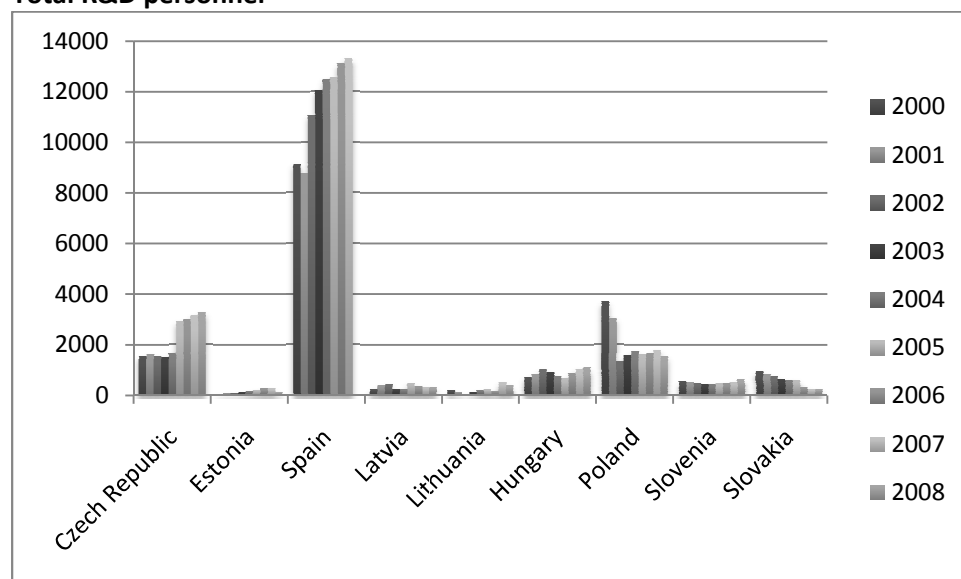
²⁸ Garcia, Andres. ICT Investor Services Manager, Spanish Investment Registry (2008).

²⁹ Spanish Investment Registry.

³⁰ Bormann, S., Plank, Leonhard. (2010). Under Pressure: Working Conditions and Economic Development in ICT Production in Central and Eastern Europe. WEED.

development of state-of-the-art radio access technologies.³¹ Siemens moved a new division in the Murcia technology park, and Renault plans to expand R&D at their Valladolid plant for electric cars.³² Employment figures also illustrate the superiority of the Spanish R&D industries, as seen by Figure 2.5. More and more persons are getting involved in R&D in Spain, presenting foreign firms with the opportunity to take advantage of this large labor force. And the numbers do not lie: Figure 2.5 shows just much more foreign firms are investing in Spanish R&D than in the CEECs.

Figure 2.5
Total R&D personnel

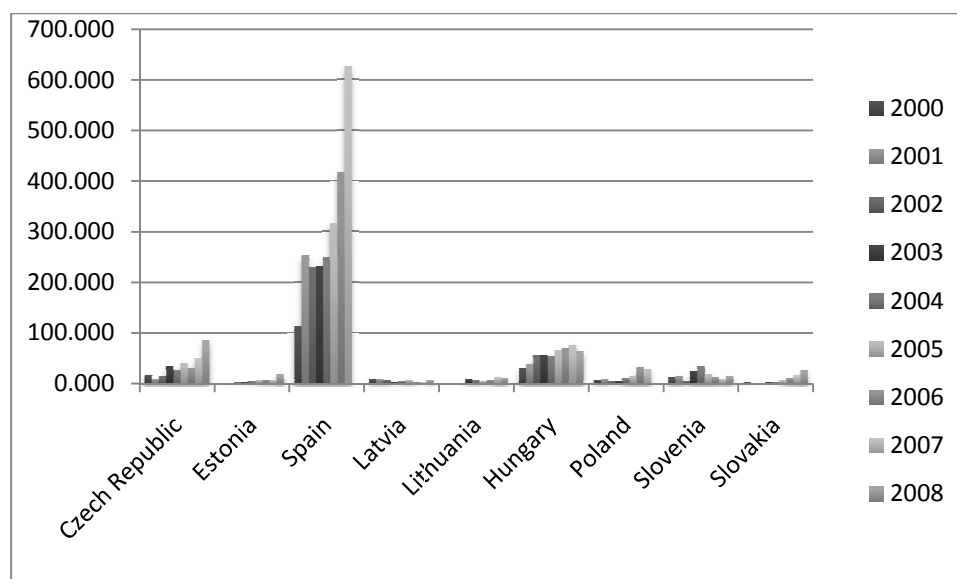


Source: Eurostat 2010

Figure 2.6
R&D expenditures, from abroad (in millions of euros)

³¹ Ericsson. http://www.ericsson.com/news/100607_vodafone_244218601 (accessed November 20, 2010).

³² Drive. <http://www.drive.com.au/Editorial/ArticleDetail.aspx?ArticleID=68412&vf=1> (accessed November 20, 2010).



Source: Eurostat 2010

Foreign funding for R&D seems to be increasing exponentially in Spain as well, demonstrating that foreign firms are not only confident, but increasing confidence in the Spanish high-tech sector. How can FDI be diverting from Spain to the CEECs if foreign R&D funding is increasing at a faster rate than in the CEECs? It simply cannot and if current trends continue, high-tech industries in Spain will suck up more and more foreign capital.

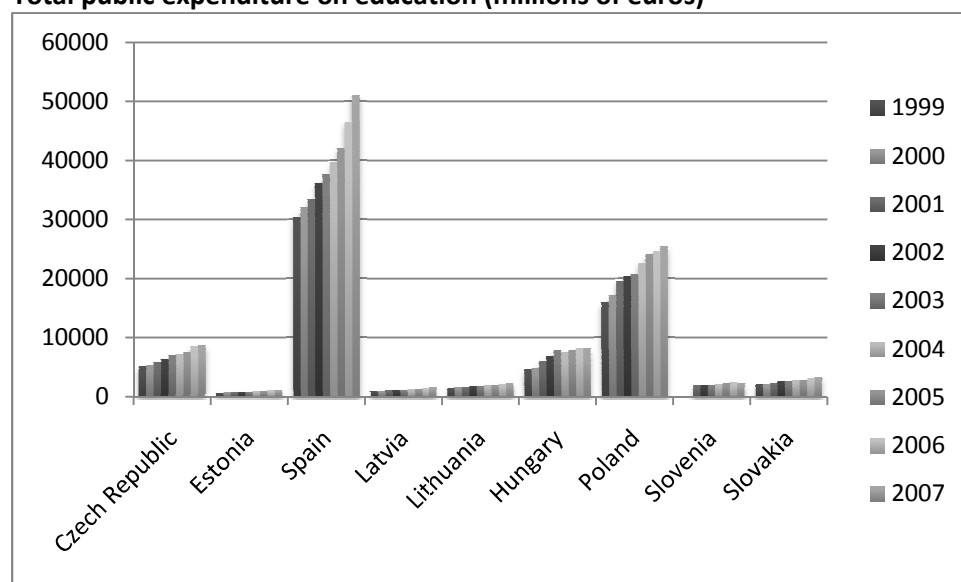
In summary, government expenditure figures show that R&D is a higher priority for the Spanish government than those of the CEECs. This develops the domestic R&D infrastructure (as seen by technology park development) that attracts foreign funding for R&D as firms seek to take advantage of subsidies and reduced economies of scale. The R&D work force is larger in Spain and higher growth rates than in the CEECs show the greater importance of R&D to Spain. The CEECs simply do not provide a R&D environment that can compete with that of Spain. FDI is not being diverted from Spain to the CEECs in R&D-intensive, high-tech industries.

2.2.2 Educational expenditures

Government expenditures on education are also important for FDI decision-making. The more a government spends on education, the more educated the workforce, which translates into higher

productivity and skill. Figure 2.7 shows that overall public expenditures in Spain are clearly higher than in the CEECs. However, it is worth noting that university education rates are higher in the CEECs than

Figure 2.7
Total public expenditure on education (millions of euros)

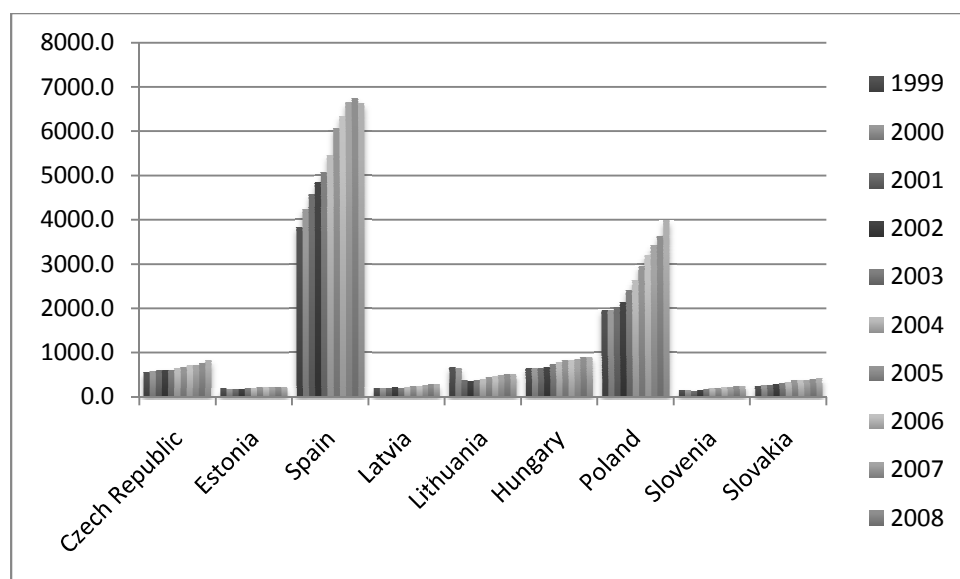


Source: Eurostat 2010

in Spain. Education rates for people aged 15-24, for instance, are 61% in the Czech Republic, 60% in Estonia, 69% in Lithuania, 64% in Hungary, 70% in Poland, 71% in Latvia and 56% in Latvia compared to 55% in Spain.³³ Although these rates indicate a higher percentage of education in the CEECs, foreign firms are more concerned with overall numbers on educated employees, not percentages; there are more available highly-educated people in the country that a foreign firm can tap into for employment, as seen by figure 2.8.

Figure 2.8
Employment, Ages 17-64 with Tertiary Degrees (in thousands)

³³ Eurostat 2010.



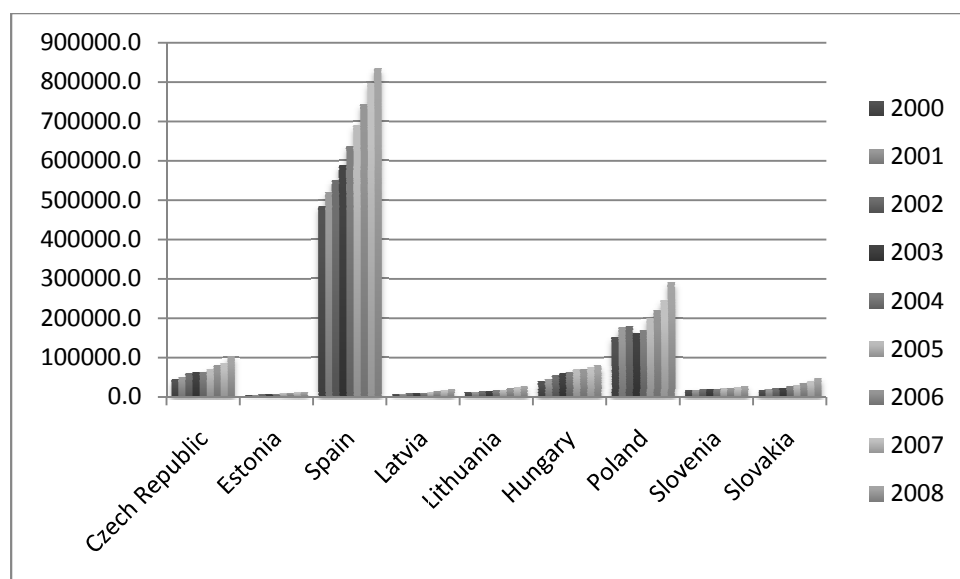
Source: Eurostat 2010

In summary, the Spanish government spends more on education than the CEECs. Spain has a larger endowment of educated workforce while rates of education are higher in the CEECs. To foreign investors, this larger availability of persons to perform high-skill tasks is more advantageous in Spain than in the CEECs. However, education is not the only factor that dictates the quality and attraction of a labor force. The cost of labor is a crucial component of the labor market that must be examined. This will be done specifically in Chapter Three, as labor costs factor more heavily in the export-oriented FDI structure of the CEECs.

2.3 Domestic market comparisons

The structure of a domestic market is critical to foreign investment decisions. Does a specific country have a large market with lots of consumers? Are these consumers wealthy with a high propensity to consume? These are crucial points that any firm wishing to sell their product must ask. Spain is an enormous domestic market for a broad range of goods and services. Not only does Figure 2.9 show that total consumption is much higher in Spain than any of the CEECs, but consumption

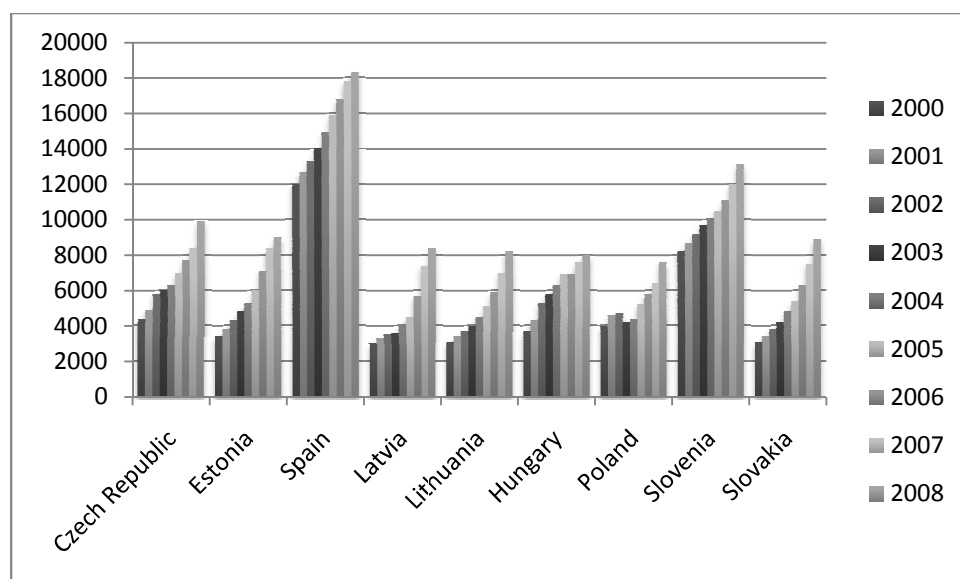
Figure 2.9
Total consumption (millions of euros)



Source: Eurostat 2010

rates are increasing. This is significant to foreign firms because there are more available consumers to purchase their product. Individual propensities to consume are also crucial to firms wishing to sell their products. So there are more consumers in the Spanish market; but are they more likely to consume higher quantities of goods and services? Figure 2.10 shows that Spanish individuals do, in fact, have higher consumption rates than individuals in the CEECs. While Spain is a larger market overall, this does not give the complete picture; foreign firms are not selling “everything” and thus specific markets must be examined. Comparisons of the markets that receive the largest quantities of FDI in Spain will be compared with those of the CEECs, followed by an assessment of FDI diversion.

Figure 2.10
Consumption per capita (euros)



Source: Eurostat 2010

2.3.1 Information and Communications Technology market comparisons

The ICT sector is a huge market in Spain—the 5th largest in Europe to be exact.³⁴ Growth has been steady, at an average of 4% over the last 7 years and represents 9.6% of total GDP.³⁵ The ICT sector employs nearly 1.5 million persons, or around 7.5% of total employment.³⁶ Within the industry, telecommunications is of particular importance to the Spanish economy, employing over 81,000 people in 2008 versus 21,000 in the Czech Republic, 6,000 in Lithuania and 54,000 in Poland.³⁷ These figures demonstrate how telecommunications is a larger market in Spain than in the CEECs. Figure 2.11 shows that cellular phones are much more prominent in Spain. There are 51 million cellphone users in Spain, with a rate of penetration at 110%.³⁸ The main foreign firms invested in Spain are Nokia, Siemens, Vodafone and Ericsson. These firms have diversified throughout the Spanish economy, as seen by

³⁴ Spanish Investment Registry.

³⁵ Eurostat, 2010.

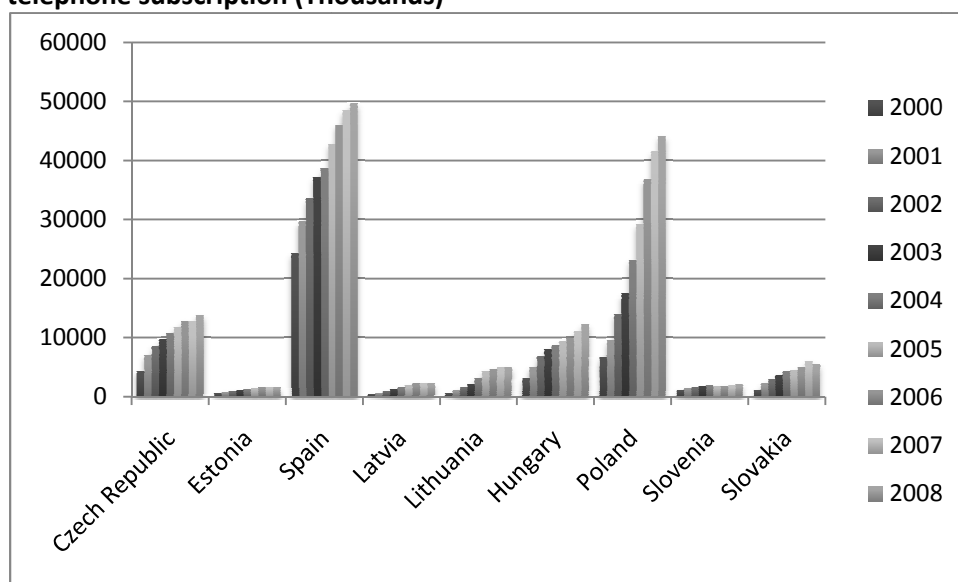
³⁶ Spanish Investment Registry.

³⁷ Eurostat, 2010.

³⁸ Ibid.

Siemens investing \$132 million in hospital equipment in Madrid and €100 million in scanning devices in Barajas airport.³⁹ Total Siemens sales in Spain amount to \$1.9 billion.⁴⁰

Figure 2.11
Mobile telephone subscription (Thousands)



Source: Eurostat 2010

However, it is worth noting that these ICT firms are also investing in the CEECs. Siemens, for instance, has investment figures in Hungary amounting to \$370 million and \$570 million in the Czech Republic.⁴¹ The majority of these investments are to develop local infrastructure; Siemens, for example, has invested in the Czech Tusimice electrical installation, the Harku electric substation in Estonia, as well as the metro systems of Poland and the Czech Republic.⁴²

FDI diversion in the ICT sector is difficult to measure; while the telecommunications market is not as large in the CEECs as in Spain, this could actually attract foreign firms that seek to develop the market and find new customers. However, these ICT firms that are invested in Spain as well as the CEECs have not reduced investments in Spain, making it difficult to identify whether total Spanish ICT FDI

³⁹ Spanish Investment Registry.

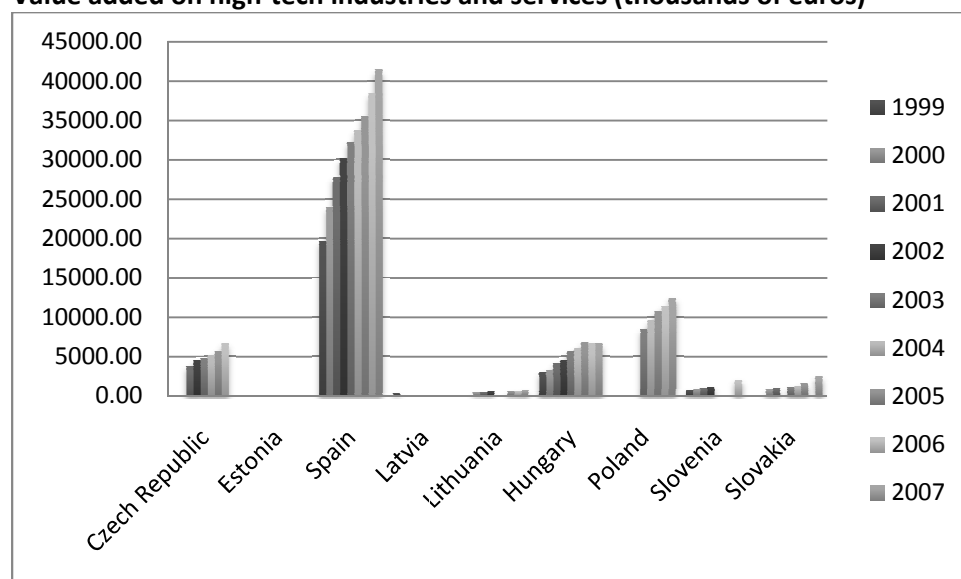
⁴⁰ Siemens Global Website. http://www.siemens.com/about/en/worldwide/spain_1154676.htm (accessed November 20, 2010).

⁴¹ Ibid.

⁴² Siemens Worldwide. http://www.siemens.com/about/en/worldwide/czech_republic_1154603.htm (accessed November 20, 2010).

would be at higher levels in the absence of the CEECs. Value added on high-tech industries and services, as seen by Figure 2.12, indicates that the Spanish market continues to receive investment figures that are accelerating growth relative to the CEECs. This means that, although the CEECs are receiving increasing levels of FDI in this sector, Spain is receiving more and at a faster growth rate.

Figure 2.12
Value added on high-tech industries and services (thousands of euros)



Source: Eurostat 2010

A large proportion of ICT investments in Spain have been in the R&D sector (ICT R&D represents 17% of total R&D spending⁴³), while the CEEC has not experienced the same levels of investment as Spain. In summary, significant levels of FDI diversion do not seem to be occurring from Spain to the CEECs.

Although ICT and high-tech FDI is growing in the CEECs, the opportunities of the Spanish market seem to be growing in comparison.

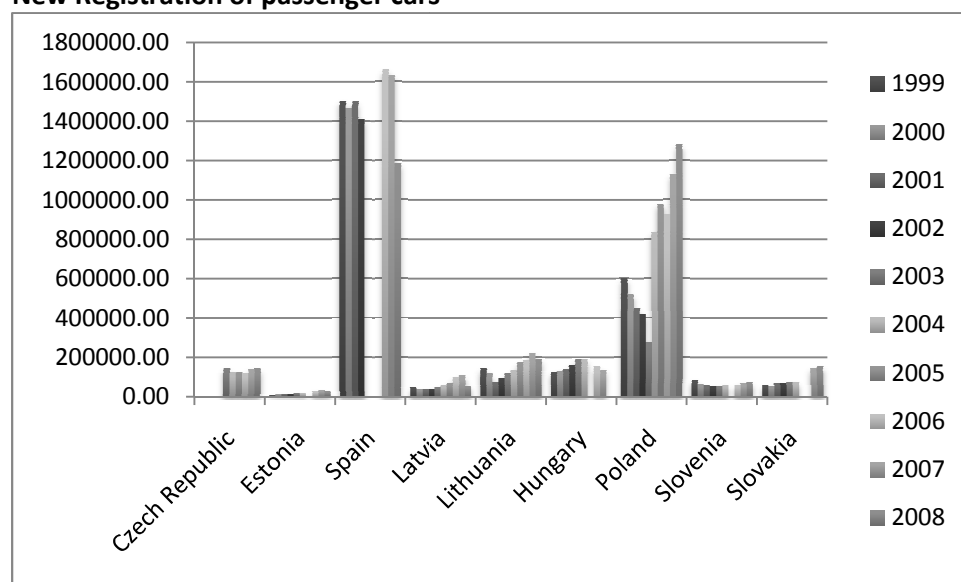
2.3.2 Automotive market comparisons

The auto industry also makes up a huge market in Spain, with many foreign firms invested in the country. The main foreign firms in the country are Peugeot, Renault and SEAT (an affiliate of Volkswagen).

⁴³ Cruzanda, V., Sieber, S., Valor Sabatier, J. "ICT: Fourth Strongest Sector in Spain." <http://www.ieseinsight.com/doc.aspx?id=1042&ar=5> (accessed November 21, 2010).

These firms have a total of 18 production sites throughout Spain, several of which are within the top 10 production sites in Europe.⁴⁴

Figure 2.12
New Registration of passenger cars



Source: Eurostat 2010

Although there are some holes in Eurostat data, Figure 2.12 illustrates how the domestic auto market has consistently remained enormous. Only Poland comes close to Spain in terms of number of new vehicle registration. Although 58% of auto production in Spain is exported, this is actually a smaller percentage than auto exports in the CEECs.⁴⁵ Chapter Three will discuss auto exports in greater detail, but this ties into the fact that Spain presents itself as an enormous domestic auto market. Even though many of the same auto companies (such as Volkswagen and Renault) produce in both Spain and the CEECs, Spanish consumers are a target while the CEEC is solely a production site. Thus, FDI diversion seems to be insignificant in the auto industry.

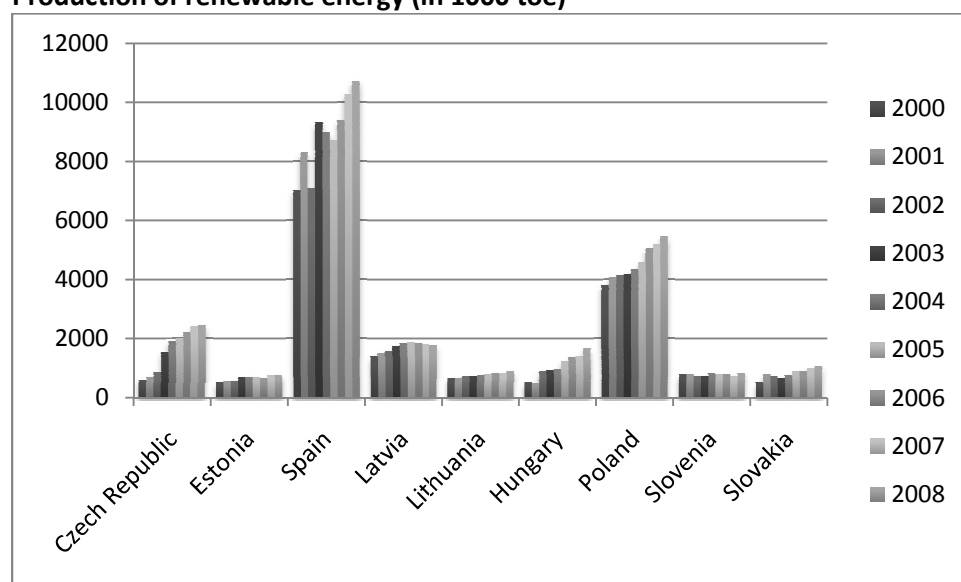
2.3.3 Renewable energy comparisons

Lastly, renewable energy presents itself as an enormous market in Spain and attracts vast quantities of foreign investment. As seen by Figure 2.13, Spain produces vast amounts of energy from

⁴⁴ Spanish Investment Registry.

⁴⁵ Ibid.

Figure 2.13
Production of renewable energy (in 1000 toe)



Source: Eurostat 2010

renewables, primarily solar and wind sources. Spain is the second most attractive market for renewable energy in the EU, according to Ernst & Young (2008). Spain is also the fourth largest producer of wind energy in the world.⁴⁶ The largest foreign renewable energy firms in Spain are Aleo (Germany), Vestas (Denmark), and Enercon (Germany). Aleo, for example, has more than twelve solar parks throughout Spain, with 24,000 solar units in the Viana Solar Park alone.⁴⁷ Aleo also has significant investments in the Czech Republic. The domestic market of the CEECs, however, is not as competitive as that of Spain. The infrastructure for renewable energy development is much more advanced in Spain; the government has developed the Centre for the Control of the Special Regime (CECRE) that is the first consolidated network for optimizing the integration of renewables into the national grid.⁴⁸ This appeals to foreign investors because their investments are immediately integrated into the market, with no need for additional infrastructural developments (that incur sunk costs), effectively reducing economies of scale.

⁴⁶ Renewables: Made in Spain. <http://www.renovablesmadeinspain.es/tecnologia/pagid/2/titulo/Wind%20power/>.

⁴⁷ Aleo. <http://www.aléo-solar.com/products/references/spain> (accessed November 20, 2010).

⁴⁸ Renewables: Made in Spain. <http://www.renovablesmadeinspain.es/tecnologia/pagid/2/titulo/Wind%20power/> (accessed November 20, 2010).

All of these analyses clearly indicate that the Spanish domestic market is much larger than that of the CEECs. Overall consumption and consumption rates are higher in Spain; this appeals to foreign firms because there are more people to buy their product, and the likelihood that Spanish consumers will purchase their product is higher. While aggregate consumption is higher in Spain than the CEECs, consumption within the ICT, automotive and renewable energy is higher as well. But how does this affect foreign investment decisions? Firms maximize their profits in Spain with sales volume, and the CEECs simply cannot match that volume. However, there is evidence that the CEEC domestic markets are expanding, as well as FDI flows. ICT firms are investing in infrastructure and expanding mobile telephone networks. Vehicle registration is, overall, not increasing too fast in the CEECs, with the exception of Poland. Renewable energy is increasing, although slowly, in the CEECs. Many of the firms invested in Spain have done so in the CEECs as well. So are the CEECs absorbing financial assets that would go to Spain? This does not seem to be the case; although the domestic markets of the CEECs are expanding, the Spanish market seems to be growing faster and receiving relatively higher FDI flows, particularly in the ICT and renewable energy sectors. Spain has already incurred the sunk costs that reduce economies of scale in these industries (R&D incentives, as discussed in Chapter 2 are the main factor here), incentivizing FDI in a manner that outweighs that of the CEECs. With current trends, FDI is not being diverted from Spain to the CEECs in terms of exploiting domestic markets.

Chapter 3: Advantages of the CEEC's FDI Attraction Model

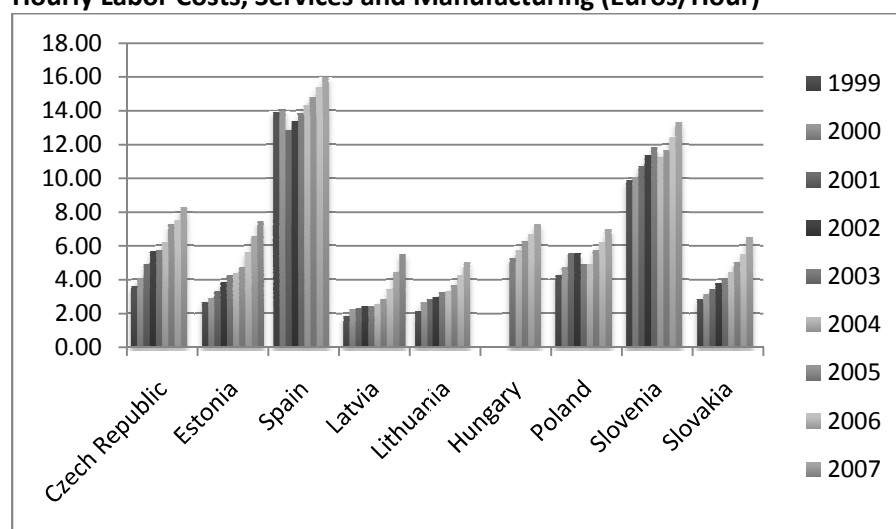
The advantages of the Spanish FDI attraction model have been laid forth, and the same will now be done for the Central and Eastern European countries. With relatively lower price levels, the CEECs present a much different story for FDI attraction. The single most significant determinant for foreign investors in the CEECs is the labor market. Geographic proximity to the wealthy markets of Europe (such

as Germany, the Netherlands, and other Northern European countries) also has its advantages that will be discussed. In summary, foreign investors go to the CEECs for entirely different reasons than those investing in Spain.

3.1 Labor Cost Comparison

Chapter Three briefly compared the impact of education upon the workforce in both Spain and the CEECs. To get a bigger picture of how labor plays into FDI decision-making, the cost structure of labor must be compared. Once labor costs are analyzed, an overall comparison of labor between Spain and the CEECs can be made. Labor costs are a huge input to productive structure and firms take this into account when deciding whether or not to invest in a country. The single largest component of labor costs is wage rates. Figure 3.1 shows that the hourly labor costs in the manufacturing and service sectors are significantly higher in Spain than the CEECs.

Figure 3.1
Hourly Labor Costs, Services and Manufacturing (Euros/Hour)

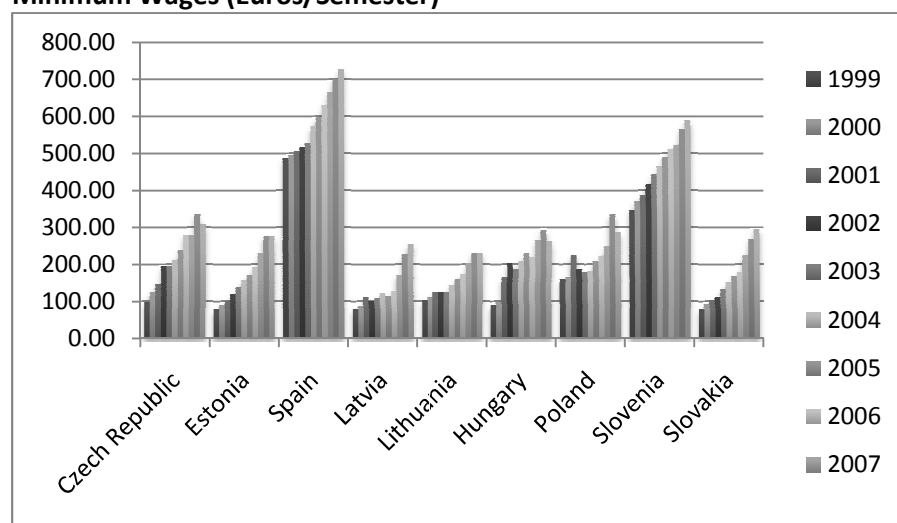


Source: Eurostat 2010

Thus it appears that skilled labor in these industries is more expensive in Spain. However, firms demanding skilled labor are not the only sources of FDI. To examine unskilled labor costs, minimum wages of Spain and the CEECs are compared (as seen by figure 3.2). The story is much the same for

unskilled labor, as Spanish labor costs are much higher than in the Central and Eastern European countries. It can be said that overall, the price of labor is much higher in Spain than in the CEECs.

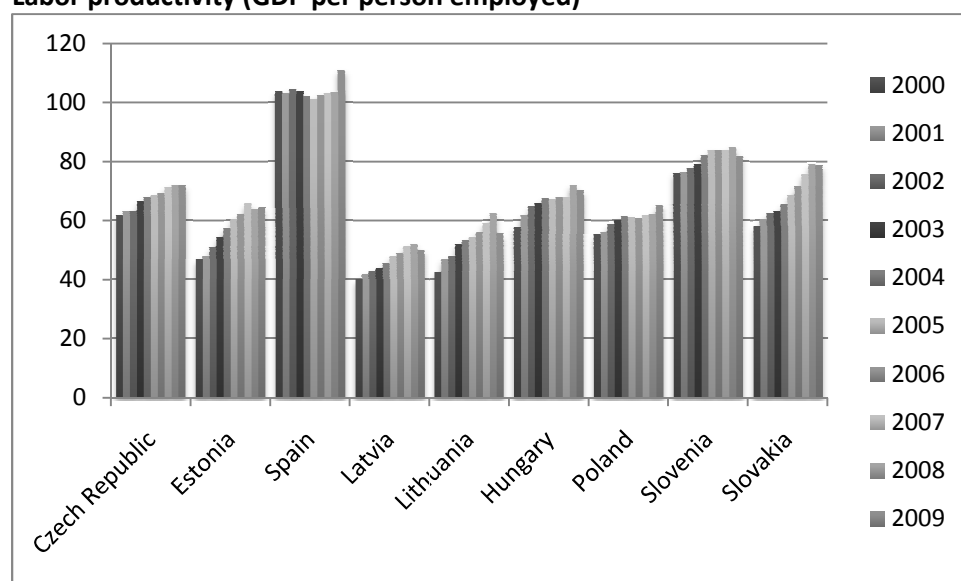
Figure 3.2
Minimum Wages (Euros/Semester)



Source: Eurostat 2010

While labor is cheaper in the CEECs than in Spain, it is not necessarily of lower skill; the workforce in the CEECs is educated, as discussed in Chapter Two, although productivity still remains higher in Spain than in the CEECs, as Figure 3.3 illustrates.

Figure 4.3
Labor productivity (GDP per person employed)



Source: Eurostat 2010

So what are the implications of these labor market differences for foreign investment? Spain has a larger endowment of educated persons (although education rates are similar in both regions) and a more productive workforce. However, the CEECs have dramatically lower labor costs and a trend of increasing labor productivity while Spanish productivity remains fairly constant. Firms will primarily invest in the CEECs to take advantage of the lower labor costs; firms that do so will outsource jobs and resources to this region and then distribute their production to the European Union. Selling these cheaper products in the CEECs is not as advantageous because their purchasing power is lower relative to the richer countries of the EU. Thus, firms investing resources in the CEEC are doing so for export purposes, as they are effectively reducing their input costs by producing in the CEECs and then distributing to the wealthier, more consumption-oriented countries of the EU. Specific industries that take advantage of this labor cost will be discussed in greater detail later in this chapter, but geographical factors must be analyzed first.

3.2 Geographical Comparisons

The Central and Eastern European countries are geographically closer to the major sources of funding in Europe, specifically Germany, than Spain. This plays out as an advantage in two ways: cultural ties and reduced transportation costs.

The CEECs and Germany have a rich, intertwined history that has brought the people of these regions closer together. Throughout different points in history, they have been united under political rule in a way that has brought crossovers not only in trade, but culture and ways of life. There has been a process of assimilation between the two regions that makes their people feel connected to each other, such as rule under the Austro-Hungarian Empire and Soviet Union. This is an intangible benefit of being so close to the financial powers of Europe; people likely to trade with people they can relate to, have similar beliefs and have ridden the waves of history together.

There are also tangible benefits from being situated so closely to Germany, specifically a reduction in transportation costs. Transporting freight is much cheaper with a close trading partner, as well as the transportation of human capital. However, with increasing integration, these costs have been reduced significantly. Spain, for instance, has invested significant resources to enhance the transportation network. Spain has the third most air traffic in Europe, with over 1.5 million passengers per year.⁴⁹ Spain also has the second longest road network in the EU and fourth longest railway network in the EU as well as ambitious plans to develop high-speed trains.⁵⁰; all of these effectively reduce the transportations costs in Spain.

Clearly, there are geographical advantages of the CEECs in terms of attracting foreign investment. The historical ties with Germany and Northern Europe, although intangible, are conducive to a friendly business atmosphere between the regions. Transportation costs are also reduced significantly, although this factor is becoming less important with developments in road and train networks. These geographical advantages, combined with the lower labor costs discussed earlier, are the main factors that attract FDI into the Central and Eastern European countries, specifically as exporters to the European market.

3.3 Export-Orientation in FDI attraction within the CEECs

By 2000, for instance, multinational corporations accounted for 90% of total exports in Hungary.⁵¹ Hungary also has a very low value-added/employment ratio, which demonstrates how cheap labor is a driving force for investments.⁵² Next, the export-orientation of the CEECs will be examined specifically to the ICT, automotive and renewable energy industries.

⁴⁹ Eurostat, 2009.

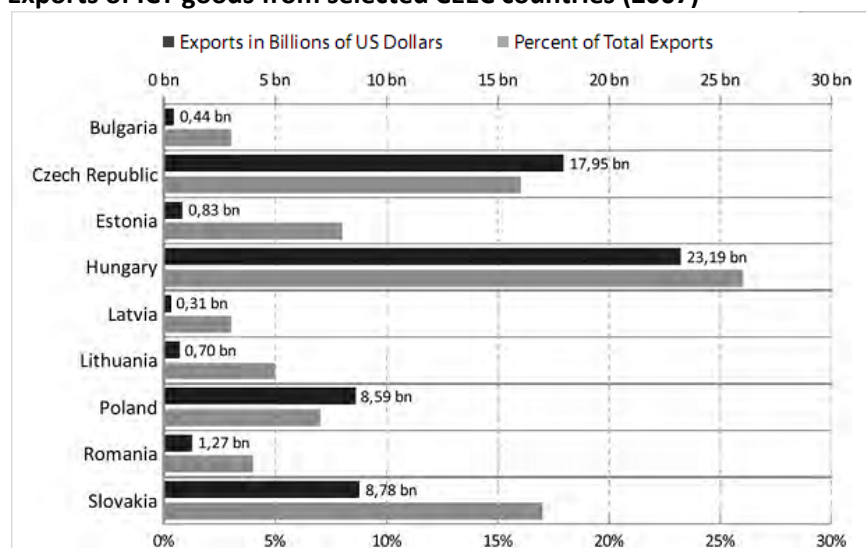
⁵⁰ Spanish Investment Registry.

⁵¹ Bormann, S., Plank, Leonhard. "Under Pressure: Working Conditions and Economic Development in ICT Production in Central and Eastern Europe." WEED (2010) 17.

⁵² Ibid, 20.

The ICT industry is growing in the CEECs, predominantly as a fabrication center for electronics. The Czech Republic, for example, is responsible for 40% of all computer assembly in the European Union, with turnover increasing tenfold from 2000.⁵³ Hungary is also a huge exporter of electrical components, with the second largest trade deficit in this area behind Mexico.⁵⁴ Hungary is also the primary recipient of FDI in the CEECs, accounting for 60% of total ICT investment in the CEECs.⁵⁵ Poland is also a huge manufacturer of televisions, 90% of which are exported and it is estimated that by 2010 half of all televisions in the EU will be fabricated in Poland.⁵⁶ Slovakia is a major manufacturer of car electronics, such as radios, while Estonia received finances from Norwegian countries for manufacturing telecommunications components.

Figure 3.4
Exports of ICT goods from selected CEEC countries (2007)



Source: UNCTAD

⁵³ Ibid, 12.

⁵⁴ OECD, 2008.

⁵⁵ Bormann, S., Plank, Leonhard. "Under Pressure: Working Conditions and Economic Development in ICT Production in Central and Eastern Europe." WEED (2010) 12.

⁵⁶ Polish Information and Foreign Investment Agency. *Poland's Electronic's Industry*. Warszawa (2008).

Figure 3.4 clearly portrays the reliance of the ICT sector in the CEECs on exports. By comparison, Spanish ICT goods and services were aimed at more of a domestic market than an external market, with exports accounting for only a small part of total turnover in the ICT market.⁵⁷

The CEECs are also crucial to automobile manufacturing in Europe. 99% of automobile production in Slovakia, for instance, is exported.⁵⁸ Automobiles account for 30% of total exports in Slovakia, 20% in Hungary and 25% in the Czech Republic versus 17% in Spain.⁵⁹ As Figure 3.4 illustrates, the majority of intra-EU funding for the automotive industry in the CEECs comes from Volkswagen, Fiat and Renault. Volkswagen's factor in Gyor, Hungary is the largest producer of Audi engines in the world and Hungary's largest single exporter.⁶⁰ Foreign firms are also responsible for over 70% of automotive employment in the Czech Republic, Hungary and Poland.⁶¹

It is quite clear from the mentioned figures that the auto industry is not only a crucial to overall exports in the CEECs, but that foreign funding is the driving force behind this importance.

Contrary to the ICT and auto sectors, renewable energy is not a very competitive export sector compared to Spain. For instance, Spain is very competitive in solar energy production and exports 80% of this electricity to Germany.⁶² The CEECs simply cannot compete with Spain's solar energy sector because Spain receives significantly more hours of sunlight than these more northern countries. As mentioned in Chapter 2 by Figure 2.13, energy generation from renewables is also significantly higher in Spain than in the CEECs.

⁵⁷ Pérez, Marisol. "Size and Structure of the ICT Sector in Spain." *The UCLA Anderson Business and Information Technologies Project* (2010): 299-327.

⁵⁸ Jakubiak, M., Kolesar, P. "Car Industry in Slovakia: Recent Developments and Impact on Growth." *Center for Social and Economic Research*, 27.

⁵⁹ Radosevic, S., Rozeik, A. Foreign Direct Investment and Restructuring in the Automotive Industry in Central and Eastern Europe. *Centre for the Study of Economic and Social Change in Europe*. University College London. (2005): 27. Spanish Investment Registry. Hungarian Investment and Trade Development Agency.

⁶⁰ Jakubiak & Kolesar, 5.

⁶¹ Radosevic & Rozeik, 17.

⁶² Environment News Service. "Sunny Spain to Host Europe's First Large Solar Thermal Plant." <http://www.ens-newswire.com/ens/jun2006/2006-06-30-02.asp> (accessed November 20, 2010).

Figure 4.4
Top automotive MNCs in the CEECs (1990-2000)

Ranking	Country ranking	Country	Company	Type	Host economy	Home economy	Sales (\$mn)
1	1	Skoda	Automobilova	Assembly	Czech R	Germany	3292.5
2	1	Audi	Hungaria Motors	Engines	Hungary	Germany	3190.6
3	1	Fiat	Auto Poland	Assembly	Poland	Italy	1847.2
4	2	Centrum	Daewoo	Assembly	Poland	Korea	918.2
5	1	Revoz		Assembly	Slovenia	France	888.6
6	3	Volkswagen	Poznan	Assembly	Poland	Germany	662.6
7	6	Opel	Magyarorszag Jamugyarto	Assembly	Hungary	United States	629.5
8	1	Volkswagen	Slovakia	Assembly	Slovakia	Germany	507.7
9		Suzuki		Assembly	Hungary	Japan	446.4
10	6	General Motors	Poland	Assembly	Poland	United States	412.0
11	1	Automobile	Dacia	Assembly	Romania	France	405
12	2	Daewoo	Automobile Romania	Assembly	Romania	Korea	384.5
13	8	Renault	Polska	Assembly	Poland	France	361.3
14	17	Opel	South East Europe	Assembly	Hungary	United States	288.6
15	2	Skoda	Auto Slovensko	Assembly	Slovakia	Germany	286.1
16	12	Opel	Polska	Assembly	Poland	United States	271.2
17	20	NABI		Car parts	Hungary	United States	249.8
18	16	Ford	Poland	Assembly	Poland	United States	240.2
19	18	Skoda	Auto Poland	Assembly	Poland	Germany	210.4
20	5	Siemens	Automobilovi Technika	Car parts	Czech R	Germany	208.6
21	23	Visteon	Hungary	Car parts	Hungary	United States	207.1
22	7	Autopal		Car parts	Czech R	United States	201.3
23	19	Daewoo	Motor Polska	Assembly	Poland	Korea	200.8
24	24	Lear	Automotive	Car parts	Hungary	Austria	194.5
25	3	Porsche	Slovenia	Car parts	Slovenia	Austria	181.2
26	9	Robert Bosch		Car parts	Czech R	Germany	162.6
27	26	Volvo	Poland	Assembly	Poland	Sweden	143.8
28	19	Daewoo	Avia	Car parts	Czech R	Korea	85.8
29	10	Porsche	Slovakia	Car parts	Slovakia	Austria	67.7
30	35	Debica		Car parts	Poland	United States	60.6
31	2	BP	Cycle	Car parts	Serbia/Monten	Germany	39.4
32	15	Daewoo	Motor Slovakia	Assembly	Slovakia	Korea	31.4
33	11	Norma		Car parts	Estonia	Sweden/US	30.9
34	16	Sachs	Slovakia	Car parts	Slovakia	United Kingdom	23.5
35	30	Scania	Eesti	Car parts	Estonia	Sweden	7.6
36	12	Ilta	Kiev	??	Ukraine	Switzerland	4.8
	7	Cimos	Buzet	Car Parts	Croatia	Slovenia	
	36	Showa	Aluminium	Car parts	Czech R	Japan	---
		AvtoVAZ		Assembly	Russia	United States	
		Avtoframos		Assembly	Russia	France	
		BMW	Avtotor Kaliningrad	Assembly	Russia	Germany	
		Daewoo	Tagenrog	Assembly	Russia	Korea	
		Ford	Vsevolozhsk	Assembly	Russia	United States	
		Nizeghorod	Motors	Assembly	Russia	Italy	
		ZIL	AMO	Assembly	Russia	Sweden	
		AvtoZAZ	Daewooo	Assembly	Ukraine	Korea/Russia	
		MAZ	- MAN	?	Belarussia	Germany/Russia	

Source: UNCTAD World Investment Directory

The CEECs are, however, taking measure to develop their domestic renewable energy infrastructures (see Chapter Two).

It is clear that the CEECs do present some significant advantages for attracting foreign investment that Spain does not have, the most prominent FDI-attraction factor being the low cost of labor. Cheap labor means lower input costs, thus raising profits and net values. Although labor productivity is slightly lower in the CEECs than in Spain, growth is increasing at a faster rate than in

Spain, and Spain's relative advantage here is declining. The geographical proximity of the CEECs to the wealthiest European nations (predominantly Germany, Austria and Northern Europe) also presents advantages for foreign investment in the CEECs. Cultural ties and reduced transportation costs instigate significant levels of foreign investment in the region. However, transportation costs are significantly reducing not only throughout the EU, but for Spain; a modern Spanish transportation infrastructure greatly reduces this relative advantage of the CEECs. In effect, the labor-cost and geographical advantages of the CEECs produces an export-orientation attraction model for foreign investment. As mentioned in Chapter Two, foreign firms investing in Spain are looking to exploit the enormous domestic market to increase revenues via sales volume. In the CEECs, investing firms are looking to take advantage of the lower production costs and distribute their products to the entire European market.

Chapter 4: Final Assessment of FDI Diversion from Spain to the CEECs

Foreign direct investment does not seem to be diverting from Spain to the Central and Eastern European countries. This is mainly because the FDI-attraction models of Spain and the CEECs do not overlap, with firms investing in Spain for different reasons than those investing in the CEECs. Firms participating in foreign investment do so because they believe they can maximize their revenues; revenue is maximized in Spain through domestic sales volume versus export-distribution in the CEECs.

As discussed in Chapter Two, tax policies do not play a role in FDI diversion in this case. Government expenditures, however, are in Spain's favor for attracting foreign investment. More government revenue goes to the development of new technology in Spain that provides a much more hospitable environment for high-tech firms to finance R&D. The numbers make this clear, as R&D foreign investment is not only substantially higher in Spain than in the CEECs but continues to grow at a faster rate, thus demonstrating that foreign firms continue to put their confidence in the Spanish R&D

sector. Spain also has an educated workforce, which translates into labor of higher skill. Although population rates with university and graduate degrees are high in the CEECs, the superior quantity of educated persons in Spain is more attractive to foreign investors. Most importantly, the domestic market in Spain is significantly larger than that of the CEECs. Regardless of the product or service being sold, aggregate and per capita consumption are both higher in Spain. Any firm wishing to maximize their revenues through domestic sales will choose Spain over the CEECs.

The Spanish FDI-attraction model has advantages in R&D, an educated workforce, and domestic market structure. The CEECs do have some advantages for foreign investment, although these advantages do not, for the most part, overlap with those of Spain. The most significant advantage for foreign investors in the CEECs is the lower cost of labor; the workforce is skilled and educated but most importantly, cheap. Foreign investors seeking to reduce their production costs and then distribute to an international market will go to the CEECs over Spain. The geographic proximity of the CEECs to Germany and Northern Europe also plays into this model of export-orientation; historical ties and reduced transportation costs incentivize foreign investors to come to this region and invest in local production for international distribution.

With economic modernization and growth, however, the domestic economies of the CEECs have begun to present themselves as growing sales markets for foreign investors in a manner that may reduce the relative advantage of the Spanish FDI-attraction model. Foreign investment has increased in infrastructural developments throughout the CEECs, such as utility monitoring systems and transportation networks. Developments such as these enhance the essential infrastructure (such as electricity distribution and ease of transportation) that raise the overall ease of conducting business; foreign firms may invest their funds in the CEECs in light of these new developments.

Regardless of these recent developments in the Central and Eastern European countries, the highlighted advantages for foreign investors in Spain continue to grow. Firms that are investing in Spain

have demonstrated their confidence in the Spanish market and continue to finance those investments as well as fund new greenfield investments. Given current trends, FDI diversion to the CEECs is not a valid concern for Spain, although the future or any changes in trends may prove otherwise.