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A Comparative Analysis between the Economies of Greece and Ireland

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Abstract

This paper aims to compare the economies of two of the EU countries of cohesion – Greece and Ireland – which are countries displaying similar initial macroeconomic and structural characteristics. Greece and Ireland have been included in the EU countries of cohesion because of their low level of development. However, Ireland showed higher growth rates in comparison to Greece. The article examines the factors that contributed to the difference in growth rates between the two countries under study. Amongst the most important factors to the advantage of Ireland are: the higher emphasis that Ireland laid on research and technology, the reforms that Ireland performed in education and training, its developmental strategy to attract foreign investments, its neighborhood with the United Kingdom, as well as the financial transfers of the European Union to Ireland.

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Keywords: Comparison, Economies, Greece, Ireland.

1. Introduction

This article aims to a comparative analysis between the economies of Greece and Ireland based on the hypothesis why Ireland deviated from its route with a particularly high degree of development while both Greece and Ireland had a similar starting point as to their macroeconomic characteristics. The key issues of investigation are: the macroeconomic and social characteristics of Greece and Ireland and their respective similarities and differences, the contributing factors which differentiated the economic and business environment of the two countries, the position that Greek and Irish economies hold so that competitiveness, entrepreneurship and innovation indicators can be compared, the policy measures and the relevant experience of Ireland so that Greece can exploit them to its own advantage.

2. Theoretical references

Greece and Ireland, being two of the oldest members of the European Union (EU) (1981 the first and 1973 the latter), are regarded among the smaller countries of the European Union. In the early years as EU members, they were both reported as those countries with a relatively low level of development and low Gross Domestic Product (GDP) per capita (Greece 7.255 dollars and Ireland 6.199 dollars in 1980). Consequently, they were funded with significant resources in proportion to their extent and population, applying fiscal consolidation and stability programs, thus joining the Economic and Monetary Union (EMU) and the EU. More specifically, Greece and Ireland along with Spain and Portugal, joined the Cohesion Fund as member states whose GDP was lower than the 90% of the EU average (EC-European Community Regulation 1164/94). After the 2004 enlargement, the ten new EU member states were chosen to provide for a review at mid-term power based on GDP before the end of 2003 according to EC Regulation 1264/1999. While reviewing 2003, it was found that Ireland from the first January 2004 was no longer eligible for the Cohesion Fund. Regarding EC Regulation 1084/2006, the ten new member states along with Spain, Greece and Portugal, joined the objective *"Convergence"* of the renewed cohesion policy during the period 2007-2013.

The postwar evolution of the economies of the two countries (1950-1980) showed less divergence and more affinity or convergence between them, yet, after joining the EEC-EU, there was noticed significantly greater growth in the Irish economy compared to the Greek one (Exarchos G., 1992, pp. 52-57).

From the analysis of the mechanisms of integration and convergence in the cohesion countries (Greece, Spain, Portugal, Ireland) during the period 1960-1973, imbalance in the labor market is recognized as a primary factor, despite the failure of Ireland to converge, which later harmed the convergence of Spain, whereas from the study conducted during the period 1974-1986, emphasis is placed on the loose monetary and economic policy, facing the same consequences. In the subsequent period, the convergence was facilitated by the control of macroeconomic policy and the expansion of regional EU assistance by the labor market reforms in Spain, by increasing Foreign Direct Investment (FDI) inflows in Ireland and by the strongest commitment to administrative reform in Greece (Barry Frank, 2003, pp. 916-917).

Greece and Ireland had a similar starting point regarding their macroeconomic characteristics but then Ireland began experiencing particularly high growth. The estimations of the European Commission (2001, p. 71) show that such a development is due to: fiscal consolidation and increased investment being recognized as a major source of growth, the development strategy of FDI which

led to technology transfer and deployment of competitive and dynamic companies mainly electronic, pharmaceutical, financial and call centre services, the further training of human resources and the increased employment rate (from 52.5% in 1985 to 62.5% in 1999), the contribution of the structural funds whose resources were used to co-finance structural measures for regional development, infrastructure expansion and further training of the workforce.

Greece, falls behind compared to the developmental dynamics of Ireland because of: the country's geographical position situated away from developed EU markets while not yet been able to exploit its own advantages as the oldest member state in the Balkans as well as an FDI reception oriented in the Balkans and The Black Sea region, the small size of the Greek market coupled with non-adjacency with other developed and major markets, the weak industrial base of the country and delay of the use of new technologies, especially in industry, but also the weak link of processing to the primary sector, the excessive concentration of economic and human activities primarily in Attica and then in Thessaloniki, resulting in unbalanced regional development of the country and, to some extent, cancelling the competitive advantages of each region, the loss of comparative advantage of low labor costs available to developing countries in general and the neighboring Balkan countries in particular combined with lower tax rates, the research and technology delay, the quality of human resources in terms of training and specialization in social and technical infrastructure and enterprise networks. Also, bureaucracy and further weakness of the public sector, the inability to enhance and build on the comparative advantages of Greece, for example in tourism, shipping, culture (antiquities, the Olympics, classical antiquity), the quality of agricultural products in the beautiful and rich in diversity natural environment and geographical position of the country (Magoulios G., 2006, pp. 118-119, 123-124). Taking the above mentioned into consideration, not only Greece no longer displays those advantages of the developing countries but also lacks the structural characteristics of the developed ones.

Ireland has made a remarkable transition, particularly during the 1990s. From a traditionally *"problematic country"*, it became a country with the highest economic growth, resulting in increased employment rate in export and foreign investment areas. The main factors that contributed to such a development from the late 1980s, were coordinated fiscal, monetary and income policies, the high tax facilitation to foreign investors, the financial transfers from the EU playing a central role in the advancement of public infrastructure thus boosting public investment, as well as the fundamental reform in education and training (almost half of young people entering the labor market had acquired higher education, emphasising on knowledge of new technologies (Volz Ioachim, 1998, pp. 17, 24). In particular, with regard to Information and Communication Technology (ICT)

in the Irish educational system, the so-called Action Plan *"Schools IT 2000"* launched from 1998, there were set targets for: the integration of ICT into the school curriculum, the ICT further development and teacher training at all levels of education, the development of multimedia educational software and the transition of IT graduates from higher education to the labor market. To achieve these objectives, the state allocated 51 million euros and the Irish Telecom 21 million euros for the purchase of computing infrastructure in schools, training, market support services and additional research. Moreover, ICT units were introduced at the Ministry of Education, National Centre of Technology in Education, and local education ICT centres (Machairidis T., 2003, p. 346).

The Irish development model focused on minimizing the size of the public sector, drastically reducing the tax burden on businesses and individuals so as to improve competitiveness in the economy by implementing an income policy that ensures low growth in labor costs as measured by unit, and attracting significant domestic and foreign investments (Alpha Bank, 2006, p. 18).

In Ireland, the idea of the *"economy of knowledge"* was originally formed by the FDI of the multinational companies in North America, which later established industrial complexes benefiting from low tax incentives, the newly educated work force and neighborhood with the ever increasing number of their European consumers. However, the originally successful model seemed to be facing threat by the low cost economies of Eastern Europe, India and China. The Irish businesses were required to invent new sources of competitive advantage aiming to further creation of jobs and better living standards. In the report of the Enterprise Strategy Group (ESG) was noted that staying in front of the line of those states whose research, development and technology are implemented with a view to creating new products and services, extensive and intensive development and new policy business orientations in Ireland, is a prerequisite (Costello Gabriel *et al.*, 2006, p. 25).

According to the empirical investigation conducted about the impact the *"economy of knowledge"* has had on the Irish citizens (Casey D. and Brugha C., 2004, p. 566), among others, it was shown that the national innovation system is imperfect and hostile to innovation itself. The Irish educational system is not adapted to science and does not reflect the views of people about science in general. Ireland does not give value to science and is not willing to pay for it, as shown by its historically low investment on research and development.

Furthermore, the last thirty years, the voluntary and social sector has achieved a central place in the public life of Northern Ireland. It has grown into a respectable interlocutor of its government and advocate of its vulnerable social groups. In cooperation with the EU, the voluntary and social sector planned development projects in the areas of social services, volunteering, innovation, tack-

ling social exclusion and cross border cooperation (Birrell Derek, Williamson Arthur, 2001, p. 217).

Examining the German investments in Ireland and the countries of Central Eastern Europe (CEE), it follows that investments in CEE countries do not necessarily have a negative impact on Ireland, while parallel to previous enlargements of the EU, an increase of FDI in European countries has been noted. According to an optimistic perspective, Ireland remains a significant entry of the US firms in the EU. Other views recognize that access of CEE countries to the EU will strengthen their competition against Ireland because of their lower labor costs, particularly in labor-intensive and medium-skilled industries. Moreover, the importance of incentives in labor costs and low taxation on location decisions is also confirmed for German companies, according to the nature of the investment, while for capital-intensive industries the importance of low labor costs is minimized as the strategy of avoiding high taxes on profits, as well as all aspects of quality of work, products and suppliers, is considered most beneficial (Xiaojum Wei *et al.*, 2007, p. 166).

Relevant results of the Irish industrial sector during the period 1979-1995, suggest that the presence of multinational enterprises resulted in initial increase and then decrease of the wage gap between unskilled and skilled personnel. The introduction of new technologies by multinational corporations, led to increased demand of specialized work, which in turn led to increased income inequality between skilled and unskilled personnel. Over time, while domestic enterprises learn new technologies from multinationals, former unskilled workers specialize in new technologies, thus reducing wage inequality (Figini Paolo, Gorg Holder, 1999, p. 609).

Small countries, such as Ireland, Finland, the Netherlands, as well as Greece, display important characteristics as to the development of their productivity. The small size of their domestic market places restrictions on both research and development taking into account the complexity of new technologies which implies further basic research, therefore, small countries have to face a priority dilemma as for their technological specialization. A second feature is that small countries benefit from the dissemination of research and development that enters via FDI, being comparatively larger than that in large countries. Until the mid 1980s, innovations of multinational enterprises had been developing mainly from the parent company in the country of their establishment. Then, internationalization of investment on research and development was intensified through the establishment of subsidiaries in small countries, thus acquiring new knowledge. In addition, those countries with the ability to combine both scientific and technical activities and a sufficient number of business oriented research and development and public investment in research, progress and education, seemed to be more responsive to high-tech investment by foreign companies and display

greater ability to absorb the benefits of their presence. More specifically, Ireland presents a large influx of multinational companies, which among others, is adjacent to a major economic force, the United Kingdom, while the Irish policy is geared to attract foreign investors from the USA drawn by financial incentives such as low corporate taxes, direct subsidies for research and development and other measures intended to reduce costs or increase revenues out of research and development (Beers van Cees, 2004, pp. 205-207). This fact also affects the direction of exports of Ireland, as the main export destination countries are the USA and the UK with shares 18.70% and 17.90%, respectively, while these same countries are also the main suppliers of imports with shares 31.90% and 11.20%, respectively (Emporiki Bank, 2006).

The basic characteristic of research and technological development in Greece is mainly the transfer and diffusion of know-how based on technological investments and education and not the development of new products and knowledge. Research activity reinforces further the assimilation and application of existing technology rather than the creation of new knowledge. The technological modernization of enterprises occurs mainly through the market, by integrating technology and innovation and is more of commercial than technological content. The main reasons for these are: the lack of understanding the need of industry and business to undertake research and technological development, the lack of co-operation between research institutes and industry, the relatively limited applied research, the lack of coordination of research activities, the deficit of technological and innovative culture, an inadequate system to implement, monitor and disseminate research and technology results and finally, the delay in research and technological development compared to those in developed countries (Hatzikian J., 2007, pp. 245-246).

A comparative study of Greece, Ireland and Spain on the efficiency spillovers arising from the presence of multinational firms in the EU region, showed positive spillovers in Ireland and Spain, only for those firms with potential to absorb technological spillovers and, thus benefit from multinational enterprises operating in their area. Joint ventures with minority foreign holdings, especially in Spain and Greece, and technology diffusion in these economies play a critical role and are worth considering. The positive deficit assessment of FDI in Greece may be due to several reasons, such as: large companies seem to encourage no interaction with foreign companies relatively to the small, more responsive ones, or another reason may be the power of the majority of ownership of foreign firms. Moreover, the distribution sector of FDI may be important, since in contrast to Ireland and Spain, FDI in Greece dominates over traditional and low-tech sectors with the suspicion that diffusion of technology has probably done less in these disciplines (Barrios Salvador *et al.*, 2004, pp. 703-704).

3. Similarities and differences between Greek and Irish economies

3.1 Comparison of macroeconomic figures between Greece and Ireland

By comparing the figures of Greece and Ireland (Table 1), it follows that the latter exhibits superior performance in almost all indicators such as its GDP growth (except the year 2003), GDP per capita, public debt, government deficit, gross domestic expenditure on research and development and high-tech exports, whereas during the annual change of inflation, Greece displays lower inflation than Ireland in 2000 and higher in 1998 and 2006 respectively.

TABLE 1

Comparative macroeconomic aggregates of Greece and Ireland

Index	1998	2000	2003	2006
Percentage change of GDP (based on previous year)				
Greece	3.4	4.5	5.0	4.2
Ireland	8.0	9.4	4.5	5.7
GDP per capita in PPS (EU-27=100)				
Greece	83.5	84.3	92.21	97.2
Ireland	121.6	131	140.8	145.3
Public Debt (% GDP)				
Greece	105.8	103.2	97.9	95.3
Ireland	53.5	37.9	31.1	25.1
Government deficit (% GDP)				
Greece	NA	NA	-5.6	-2.6
Ireland	2.4	4.7	0.4	3.0
Inflation (annual change of Harmonised Consumer Price Index- HICP)				
Greece	4.5	2.9	3.4	3.3
Ireland	2.1	5.3	4.0	2.7
Gross domestic expenditure on research and development (% GDP)				
Greece	NA	NA	0,57	0.57
Ireland	1.24	1.12	1.17	1.32
High-tech exports (% of total exports)				
Greece	5.47*	7.46	7.52	5.70
Ireland	39.4*	40.54	29.91	29.01

* 1999.

Source: Eurostat.

Greece shows higher value added and employment rates in the primary sector, both in terms of Ireland and in relation to the EU average. Regarding the per-

spective sizes of the secondary industry sector, Greece responds more slowly to Ireland, whose value added industry share is twice that of Greece and that of EU-25. Value added shares and employment in the tertiary sector (trade, transport, communications) in Greece, outweigh the respective Irish and the EU-25. According to the annual productivity per worker in 2003 (EU-25=100), Greece was at 97.8% and Ireland at 129.2%, while the overall productivity of the economy over the corresponding figures is 87.3% and 121.1% (Table 2). In 2007, private consumption accounted for 71.2% of GDP in Greece and 46.2% in Ireland, whereas public consumption accounted for 16.7% and 15.9% of GDP respectively. The same year, exports of goods and services were 23% of GDP in Greece and 79.4% in Ireland, whereas imports of goods and services were 33.5% and 68.7% of GDP respectively, data which demonstrate the highest degree of extroversion in Irish economy (European Commission, 7/2008, pp.72, 74). Compared to Greece, Ireland has a stronger industry, higher productivity and extroversion. Greek development mainly relies on private consumption first and public consumption next, while that of Ireland focuses on foreign demand (exports).

TABLE 2

Value added, employment and productivity, comparative indicators of Greece and Ireland

α/α	Indices	Greece	Ireland	EU-25
1	Primary value added sector (% of value added total), 2004	5.6	2.5	2.0
2	Employment in primary sector (% of total employment), 2004	13.8	6.3	5.0
3	Secondary value added sector- industry (% of value added total), 2004	13.2	28.5	20.5
4	Employment in secondary sector- industry (% of total employment), 2004	15.2	16.0	18.2
5	Tertiary Value added sector – commerce, transportation, communication, 2004	30.5	18.0	21.6
6	Employment in tertiary sector – commerce, transportation, communication (% of total employment), 2004	27.0	26.3	25.5
7	Annual productivity per employee (EU-25=100), (GDP per employee in equivalent purchasing power), 2003	97.8	129.2	100
8	Overall economic productivity (EU-25=100)	87.3	121.1	100

Source: Ministry of Development of Greece, National Council of competitiveness and development, Annual report on competitiveness 2005.

3.2 Social indicators of Greece and Ireland

Examining certain social indicators during 1997, 2002 and 2006, it is found that the annual change in employment in Ireland is more than twice that of Greece except the year 2002. The minimum wage for workers (under the current collective agreements) is almost double in Ireland. Long term unemployment in Greece is much higher than that in Ireland, while labor productivity in Ireland is greater than approximately one third that of Greece. While the poverty rate is higher in Ireland before social costs, after social spending it seems to be moving at the same levels and income inequality in Greece is higher than that of Ireland. Regarding expenditure on social protection, Greece displays greater social characteristics than Ireland, thus providing larger percentage of GDP (Table 3).

TABLE 3

Comparative social indicators of Greece and Ireland

Indices	Greece			Ireland		
	1997	2002	2006	1997	2002	2006
Employment (annual change % of work force)	-0.5	2.0	2.5	5.6	1.8	4.3
Minimum salary (euro / month)	NA	552	668	NA	1,009	1,293
Long-term unemployment (% of economically active population)	5.3	5.3	4.8	5.6	1.3	1.4
Work productivity/employee (EU-27=100)	93.2	100.4	103.8	125.4	133.4	134.8
Poverty risk (% of population), before social spending	23	24*	23	32	31*	33
Poverty risk (% of population), after social spending	21	21*	21	19	20*	18
Income inequality (20% with high income / 20% with low income)	6.6	6.4*	6.1	5.0	5.0*	4.9
Total expenditure on social protection (% GDP)	23.3	26.2	26**	16.4	16	17**

* 2003, **2004.

Source: Eurostat.

4. Indicators of competitiveness, entrepreneurship and innovation in Greece-Comparisons

Indicators of the World Bank for the establishment, operation and closure (2004), among 34 countries compared, show that Greece occupies the 34th position in the number of procedures required, the 26th as to the time wasted dur-

ing these procedures (number of days), the 34th as to the cost of these procedures and the 32nd as to the minimum capital needed to set up a business. In the recruitment area, Greece ranks 34th facing difficulty in recruiting, on the closure index it occupies the 21st position and the 20th as to its cost of bankruptcy. In the same ranking, Ireland occupies the 7th, 18th, 20th, 4th, 19th, 1st and 14th place respectively and is ahead of Greece in all indicators.

In the *Global Competitiveness Index WEF*[1] (Global Competitiveness Report, World Economic Forum 2004-2005), Greece ranks 51st among 104 countries and 31st among 36 EU member states, of the USA and Japan, of Central-eastern and South-eastern Europe. Greece is located in a lower position than all EU countries except Italy whereas. Ireland is 26th on the corresponding index.

In the *Capital Access Index* of the Milken institution (2004), which classifies countries based on the capital accessibility of the entrepreneurs, Greece ranks 35th among 50 countries in total and is in the last position among 15 European countries. On the corresponding index Ireland ranks 12th, respectively.

In the *European Innovation Scoreboard (EIS*[2]*)* of 2004, Greece ranks 27th among 32 countries and is in the last position among 15 European countries. Ireland ranks 13th, respectively.

In the *Global Entrepreneurship Monitor Indices*[3] *(GEM)* in 2003, Greece ranks 11th among 23 countries as to its overall business activity (including all forms of self-employment), and 22nd among 22 countries as to its corporate business activity index. Ireland occupies the 5th and the 20th position, respectively.

In the *Corruption Perception Index*[4] *(CPI)* of 2004, Greece ranks 49th among 146 countries in total and is in the last place among 15 EU countries and Ireland in the 9th. In the *Opacity Index*[5] *(OI)* (2004) Greece holds the 29th place among 47 countries and the penultimate position among 15 EU countries whereas Ireland the 15th (Ministry of Development of Greece, 2006).

In conclusion, on most competitiveness indicators, Greece ranks low, almost last, among 25 EU member states and close in rank to Central-eastern Europe and Baltic countries which joined the EU in 2004. Particularly low is Greece's ranking on those indicators related to the establishment and operation of businesses, the labor market, the innovation and macroeconomic stability whereas it holds better position regarding its work force and security. In all aforementioned indicators, Ireland seems to be in a more advantageous position than that of Greece.

Regarding individual items of the *World Economic Forum Index* (Table 4), Greece lags considerably behind the Irish indicators of total business competitiveness, institutions, macroeconomics, higher education and training, market efficiency, technological readiness, sophisticated business operation and innovation whereas it is ahead Ireland with indicators concerning infrastructure and health care-basic education.

TABLE 4

Comparative analysis between Greece and Ireland- individual items of the *World Economic Forum Index (WEF)*, 2006

Index/Country	Rating* 2006	Classification 2006	Classification 2005
Global Competitiveness Index (125 countries)			
Greece	-	47	47
Ireland	-	21	NA
Business Competitiveness General Index (121 countries)			
Greece	-	49	40
Ireland	-	22	NA
*Sector: Institutions (EU 29)***			
Greece	4.36	17	18
Ireland	5.15	9	7
Sector: Infrastructure (EU 29)			
Greece	4.71	13	18
Ireland	4.61	15	17
Sector: Macroeconomics (EU 29)			
Greece	3.86	28	27
Ireland	5.27	6	3
Sector: Health care and basic education (EU 29)			
Greece	6.92	7	10
Ireland	6.78	14	11
Sector: Higher education and training (EU 29)			
Greece	4.78	19	19
Ireland	5.52	8	10
Sector: Market efficiency (EU 29)			
Greece	4.17	23	21
Ireland	5.22	4	4
Sector: Technological readiness (EU 29)			
Greece	3.58	26	25
Ireland	4.89	11	5
Sector: Sophisticated business operation (EU 29)			
Greece	4.35	21	23
Ireland	5.39	10	10
Sector: Innovation (EU 29)			
Greece	3.43	22	21
Ireland	4.54	10	10

* Ranking on scale 1 - 7.

** EU 29, 27 member states with two states to become EU members, Croatia and Turkey.

Source: SEV – WEF (World Economic Forum, Global Competitiveness Report 2006-2007).

The data collected from the Observatory of European SMEs (2003), shows that in Europe- 19, small-medium enterprises (SMEs) employed 5 people on average whereas in Greece 2 and in Ireland 7. In Europe-19 in all companies the average staff is 7 people, in Greece 2 and in Ireland 10. Businesses in inhabited areas per one thousand people are almost three times more in Ireland than in Greece, with 41.02 and 14.31 respectively. Very small businesses in Greece hold a higher share (97.6%) in total and collect more than twice a percentage of employees (56.75%), in relation to those of Ireland who represent the 85.56% of businesses and 25.18% of employment. In contrast, for SMEs in Ireland the numbers are the highest in percentage terms of businesses and employees in them, in relation to Greece. The percentage of employees in SMEs in Greece is higher than that of Ireland, while the corresponding figure for large enterprises is higher in Ireland than in Greece. Business development of GDP and labor productivity during 1991-2001, was in Greek enterprises 38.3%, in GDP 23.2%, in labor productivity -3.7%, while in Ireland 42.0%, 154.4% and 86.7% respectively (Table 5).

The structural characteristics of the dominant type of enterprises in both countries, are very small enterprises which represent a higher percentage in terms of number and employment in Greece, while Ireland is dominated by small, medium and large enterprises in percentage terms of distribution and employment. Compared to Greece, Ireland has almost a triple index in enterprises per one thousand people.

TABLE 5

Percentage of business and employment distribution in Greece-Ireland (2003)

Indices	Greece	Ireland
Enterprises per 1000 people	14.31	41.02
Very small enterprises (% total)	97.6	85.56
Employees in very small enterprises (% of employees in enterprises)	56.75	25.18
Small enterprises (% total)	2.07	12.37
Employees in small enterprises (% of employees in enterprises)	16.91	23.46
Medium enterprises (% total)	0.25	2.06
Employees in medium enterprises (% of employees in enterprises)	12.88	21.09
Small-medium enterprises (% total)	100	100
Employees in small-medium enterprises (% of employees in enterprises)	86.55	69.75
Employees in large enterprises (% of employees in enterprises)	13.38	30.24

Source: Observatory of European SMEs: SMEs in Europe – 2003 / No 7, data processing.

In *entrepreneurial culture indices* (2004), Greece excels Ireland's index on *"entrepreneurial activity as a desirable career choice"*, while lagging behind indicators of *"social status as a result of successful entrepreneurial activity"*, presenting a small deviation from the corresponding index of Ireland, and *"media coverage of a new entrepreneurial activity"* with less than twice a percentage than that of Ireland. Regarding the economic and business environment, Greece has higher indices than the corresponding ones of Ireland, in its tax revenue total, in public expenditure total, in gross public debt and gross fixed capital formation by the private sector (% of GDP). Moreover, Greece has more than twice the Irish corporate tax rate increased, falling behind Ireland's antitrust policy, while being at the same level as to the public sector share of employment in total (Table 6).

TABLE 6

Entrepreneurial Culture, Economic and Business Environment – Comparative Indicators of Greece-Ireland (2004)

Index	Greece	Ireland	EU 25
1. Entrepreneurial culture			
a. Entrepreneurial activity as a desirable career choice (% of responders)	75.7	66	NA
b. Social status as a result of successful entrepreneurial activity (% of responders)	74.7	75.9	NA
c. Media coverage of a new entrepreneurial activity (% of responders)	41.3	83.8	NA
2. Economic and business environment			
a. Tax revenue total (as % of GDP)	37.7	31.7	40.6
b. Corporate tax rate*	32	12.5	NA
c. Public expenditure total as % of GDP	49.8	33.7	47.7
d. Gross Public Debt, % GDP	109	29.8	63.4
e. Gross fixed capital formation**	11.4%	11%	NA
f. Result of anti-trust policy (on scale 1-7, where 7 excellent condition)	4.1	5.0	NA
g. Gross fixed capital formation by the private sector (% of GDP)	21.3	20.9	17.0

*2005, **2002.

Source: Ministry of Development of Greece, National Council of Competitiveness and Development, Annual report for competitiveness 2005.

All indicators related to research and development, show that Greece is subordinate both in terms of Ireland and in relation to the EU-25. More specifically, on

indicators such as gross national expenditure on research and development, business spending on research and development (of GDP percentage), new PhDs aged 25-34 (in thousand persons of the total population aged 25-34), reference numbers per scientific publication, total number of patent applications in the European Patent office (per million population), there is a marked difference between Greece and Ireland with the latter appearing particularly greater against Greece.

TABLE 7

Research and Development indicators of Greece and Ireland

Index	Greece	Ireland	EU 25
1. Gross national expenditure on research and development (% GDP), 2004	0.58	1.20	1.90
2. Public expenditure on research and development (% GDP), 2003	0.29	0.34	0.67
3. Business spending on research and development (%GDP), 2003	0.19	0.69	1.04
4. Proportion of researchers in total active population (%), 2003	0.57	0.84	0.78
5. New PhDs aged 25-34 (in thousand persons of the total population aged 25-34)	0.19	0.5	0.56*
6. Reference number per million population	525	697	639
7. Reference number per scientific publication (1998-2002)	2.76	4.06	NA
8. Total number of patent applications in the European Patent office (per million population), 2002	8.11	89.85	113.59

* EU 15.

Source: Ministry of Development of Greece, National Council of competitiveness and Development, Annual report on competitiveness, 2005.

On entrepreneurship and business innovation indicators, Greece notes lower prices than those in Ireland as to its: overall business activity, business opportunity, the reason for business activity of both sexes, the percentage of total business turnover from e-commerce. It is observed that the highest price in Greece and the lowest in Ireland have the following indices: business activity requirement, high business capacity, administrative cost of setting up a new business, number of days to establish a new business (Table 8).

TABLE 8

Entrepreneurship and business innovation indicators (2004)

Indices	Greece	Ireland
1. Overall business activity (% of adult population contributing to business activity)	6.8	8.1
2. Business activity requirement (% of entrepreneurs in the overall population having chosen business activity due to lack of alternatives)	2.6	1.3
3. Business opportunity (% of entrepreneurs in the overall population having chosen business activity foreseeing opportunities for recovery)	4.2	8.1
4. High business capacity (% of business activity possibly having an impact on the development of the country*)	16.1	15.4
5. Reason for business activity of both sexes (ratio of the percentage of men entrepreneurs in the total male population to the percentage of women entrepreneurs in the total female population)	2.4	2.54
6. Administrative cost of setting up a new business (% of income per capita)	69.6	10.4
7. Number of days to establish a new business	45	12
8. Percentage of total business turnover from e-commerce	1.0	12.8

* Potential job creation and export expansion activity.

Source: Ministry of Development of Greece, National Council of Competitiveness and Development, Annual report on competitiveness, 2005.

On all foreign trade and direct investment indicators, Greece seems to be in a worse position in relation to both Ireland and the EU-25. In particular, exports of goods and services (% of GDP) in Ireland are more than four times those of Greece, exports of technology-intensive products (% of exports of goods) more than twice, direct investment inflows in the economy (% of GDP) more than 10 times larger, direct investment outflows in foreign economies are 20 times higher in Ireland than those in Greece (Table 9). More specifically, with respect to FDI, inflows in Greece in 2006 were 5.4 and in 2007 $ 1.9 billion (-64.3%), while in Ireland -0.9 and $ 25.9 billion respectively. FDI outflows rose in 2006 in Greece to 4.2 and in 2007 to 6.3 billion dollars (28.1%), while in Ireland 14.7 and $ 22.1 billion (49.6%), respectively (OECD, 2008).

TABLE 9

Foreign trade and direct investment indicators of Greece and Ireland

Indices	Greece	Ireland	EU 25
1. Exports of goods and services (% of GDP), 2004	20	84	37
2. Imports of goods and services (% of GDP), 2004	29	68	36
3. Exports of technology-intensive products (% of exports of goods), 2003	20	50	38*
4. Direct investment inflows in the economy (% of GDP)**, 2004	0.7	7.7	0.5
5. Direct inward investment stocks (% of GDP), 2002	10.5	133	11.9
6. Direct investment outflows in foreign economies (% of GDP), 2004	0.3	6.3	1.2
7. Direct outward investment stocks (% of GDP), 2002	6.1	40.3	18.3

* EU 15.

**in 2000: Greece 1%, Ireland 27,9%, EU 25 1,3%.

Source: Ministry of Development of Greece, National council of competitiveness and development, Annual report on competitiveness 2005.

In 2005, exports of goods in Greece amounted to 11,590 million euro (0.4% of the EU-25), imports to 40,589 million euro (1.4% of the EU-25), the trade deficit reached 28,999 million euro and the ratio of exports / imports 28.6%. Greece is specializing in clothing exports, textile, leather, food, beverages, tobacco and energy, while introducing energy products, food, beverages, tobacco and non-metallic minerals. The same year, exports of goods in Ireland were 82,839 million euro (2.9% of the EU-25), imports of 48,796 million euro (1.7% of the EU25), the trade surplus reached 34,043 million euro and the ratio of exports / imports 169.8%, which is the highest in the EU-25. The export specialization in Ireland is related to chemical products, plastics, electrical machinery, optical equipment, food, beverages and tobacco, and introduces electrical machinery, optical equipment, non metallic minerals, food, beverages and tobacco (Eurostat, Data 1995-2000, pp. 36-37).

In gross domestic expenditure indicators for research and development (% of GDP) and investment in knowledge (% GDP), Ireland is significantly superior to Greece. Although the working hours per year per employee, are more in Greece, the annual percentage increase in GDP per working hour is higher in Ireland than that in Greece. In 1980, per capita GDP, as well as the GDP per capita indicator (OECD = 100), Greece displayed higher indices than the correspon-

ding ones of Ireland in 1990 and even more in 2004, Ireland far surpassed Greece. The percentage change in GDP in Ireland is higher than that of Greece throughout the period 1970 to 2004. The public social expenditure as a percentage of GDP is higher in Greece than that in Ireland in the years 1990, 1997 and 2001. The percentage of the unemployed in the labor force, while lower in Greece than in Ireland until 1997, from 1998 to 2004, the rate of unemployment in Greece is almost double than that in Ireland. The rate of employment in 1990 in Greece is higher than that of Ireland, in 2000 and 2004 the employment rate in Ireland is higher than that of Greece (Table 10).

TABLE 10

Comparative macroeconomic indicators of Greece-Ireland

Indices	Greece			Ireland		
	1981	1991	2003	1981	1991	2003
Gross domestic expenditure for research and development (% GDP)	0.17	0.36	0.62	0.68	0.93	1.19
	1994	1998	2001	1994	1998	2001
Investment in knowledge (% GDP)	1.1	1.8	1.9	2.6	2.5	2.5
	1990	2000	2004	1990	2000	2004
Working hours per year per employee	1,919	1,926	1,925	1,911	1,688	1,642
	1990	1997	2004	1990	1997	2004
GDP per working hour, annual percentage increase	-1.29	5.08	1.86	4.32	7.51	2.06
	1980	1990	2004	1980	1990	2004
GDP (billion $, current prices in PPS)	71.2	115.2	239.8	21.1	45.5	145.2
% GDP change, 1980/1970, 1990/1980, 2004/1990	206.9	61.8	108.1	210.3	115.6	219.1
	1980	1990	2004	1980	1990	2004
GDP per capita ($, current prices in PPS)	7,255	11,142	21,689	6,199	12,972	35,767
	1980	1990	2004	1980	1990	2004
GDP index per capita, OECD=100 (constant prices 2000, in PPS)	80.9	66.1	73.5	67.1	74.6	125.2
	1990	1997	2001	1990	1997	2001
Public social expenditure (% GDP)	20.9	22.09	24.34	18.65	16.82	13.75
	1987	1997	2004	1987	1997	2004
Unemployment (% work force)	6.6	9.6	10.5	16.6	9.9	4.5
	1990	2000	2004	1990	2000	2004
Employees (% work force aged 15-64)	54.8	55.9	59.6	52.1	64.5	65.5

Source: OECD Fact book 2006, Economic, Environmental and Social Statistics, data processing.

By the European Commission forecasts (table 11), evidently, most macroeconomic indicators of Greece and Ireland are to deteriorate during 2008-2010, due to their ongoing financial crisis. In particular, a reduction in the growth rate of GDP of private and public consumption is predicted, with greater intensity in Ireland, decline in exports and imports in both countries, with also of greater intensity in Ireland, rising current account deficit in Greece and bending in Ireland, increase in unemployment in both countries with greater intensity in Ireland, small reduction of the public debt and government deficit in Greece and large increase in Ireland and an inflation increase in both countries in 2008 and then its reduce while maintaining higher prices in Greece. It is suggested that the effects of the ongoing financial crisis are expected to be more pronounced in Ireland, mainly due to the higher degree of openness of the Irish economy, compared with that of the Greek, and greater dependence on strong world economy and particularly of key partners who are the UK, the USA and the EU, which, as also foreseen, will suffer stronger effects of the crisis.

TABLE 11

Predictions of the European Committee about the basic macroeconomic aggregates of Greece and Ireland

Index/Country	2007	2008	2009	2010
	Annual percentage change			
GDP at constant prices				
Greece	4.0	3.1	2.5	2.6
Ireland	6.0	-1.6	-0.9	2.4
Private consumption				
Greece	3.0	2.6	2.2	2.3
Ireland	6.0	-0.3	0.4	2.0
Public consumption				
Greece	7.7	2.9	2.7	2.7
Ireland	6.8	4.7	0.5	0.8
Exports (goods and services)				
Greece	3.1	4.2	3.1	3.3
Ireland	6.8	2.1	1.2	3.1
Imports (goods and services)				
Greece	6.7	2.6	2.5	3.0
Ireland	4.1	-1.7	-2.1	2.8
Current account (% GDP)				
Greece	-14	-14.3	-15	-15.5
Ireland	-5.4	-5.3	-3.3	-2.9

(to be continued)

Unemployment (percentage)				
Greece	8.3	9.0	9.2	9.3
Ireland	4.6	6.1	7.6	7.4
Public Debt (% GDP)				
Greece	94.8	93.4	92.2	91.9
Ireland	24.8	31.6	39.2	46.2
Public deficit (% GDP)				
Ελλάδα	-3.5	-2.5	-2.2	-3.0
Ireland	0.2	-5.5	-6.8	-7.2
Inflation (annual change in consumer price index)				
Greece	3.0	4.4	3.5	3.3
Ireland	2.9	3.3	2.1	1.8

Source: European Commission, Economic Forecast Autumn 2008, 7/2008, pp. 72, 74.

5. The Irish model review

The economic prescriptions applied in Ireland are essential variants of the so-called Anglo-Saxon model of development, which provides less state, low taxes and complete liberalization of markets, including labor market. The most realistic analyses indicate that the developmental nature of the Irish model is limited to the successful integration of the Irish economy in a global economic backdrop, while important is the deficit observed in the fair distribution of the benefits of development in all social strata. Central role in the growth of the Irish played an effort to attract FDI which, as it turned out, the country benefited greatly from the development of the 1990s. However, this element is one of the biggest problems in the Irish economy, in other words, its close dependency on foreign investments, which control the driving forces of development, to the extent that they are hardly encountered in other developed economy. The critical factor for the Irish development is also its low levels of taxation, especially tax capital, including property ownership. This event led to high growth rates, but also caused major problems of social inequality, which was felt in the decline of the welfare state, but also to other critical social sectors, such as housing (Kapsilis A., Koveos A., 2004).

Investments in Ireland mainly concern the sectors of so-called new economy, new technologies, where some of the largest multinational companies in the world had invested. The developmental dynamics of Ireland halts with the crisis faced in early 2000 regarding the operations of the new technology. According to

American analysts, the root cause of the crisis was very quick, rapid improvements, new discoveries in the fields of new technologies, resulting in investments that were made a few months ago and had already been discredited. Forming the *"Irish miracle"*, was instrumental in the labor market which seemed fully deregulated after circumvention core labor rights, underpaid jobs and privilege provision to foreign capital, which effectively turned the country into fiscal and labor paradise for foreign multinationals (Caniaris T., 2003).

Most supporters of the Irish model emphasize a policy for training workers in new technologies, social partnership agreements, which secured wage restrictions and a flexible workforce, important factors for multinationals, stable macroeconomic environment through restrictive fiscal policies, in low corporate tax etc. The *"Celtic Tiger"* is largely dependent on international economic activity, particularly of USA firm exports from Ireland. The result was that the share of USA firms in total fixed investment in Ireland, increased from 33% of the total in the early 1990s to 66% in the late 1990s. The impact of transnational corporations on economic growth was concentrated on the export of three branches of industry, chemicals, computing and electronics, dominated by USA multinationals. The other side of this highly concentrated development, was that the recession could also come quickly in concentrated form. This seems to have started happening since mid-2001, when the new technologies based on USA economy went into recession. This recession affected the Irish economy, with the closure of companies in the fields of new technologies or reduction of their activity. Excessive dependence of Irish economic growth from the expansion of foreign capital activity, created a number of special features that distinguished the Irish economy from the economies of other EU countries. In particular, there was a gap between Gross Domestic Product (GDP) and Gross National Product (GNP). Ireland is the only case in the EU where GDP exceeds GNP because of the amount of profits the multinationals exported from the country. Moreover, the *social partnership* agreements ensured the reduction of real wages and flexible labor relations, by intensifying the exploitation of workers and increasing the generated goodwill for multinationals. It is worth mentioning that while in 1987 the share of wages in total social income was 71% (similar to the share in total EU) in 2000 had declined to 58% (much greater decrease than that observed in the whole EU). There was also a steady conversion of full-time into part-time employment (35% of the new jobs created in the 1990s were part-time). As a result, Ireland suffered social inequality. According to the Eurostat data, in 1997, Ireland had the lowest levels in the EU government revenue and expenditure as a percentage of GDP. It was also the only country in the EU where public expenditures were below 40% of GDP, about 33%, compared with 46% of the EU average in 2000. Ireland has the fourth lowest level of per capita expenditure on

health care in the EU, after Greece, Spain and Portugal. Between 1980 and 1996, Ireland reduced public health expenditure by 20% whose level was found in 70% of the EU average, despite the rapid economic growth (Opsimos V., 2004).

6. Policy Proposals

For Greece, in order to overcome the delay, compared with Ireland and the other developed countries of the EU, it is necessary to adopt and implement policies, such as: restructuring reforms of the product produced to all sectors and departments, with priority given to research and innovation and the products and services of high added value. Public and private expenditure strengthening on research and development. Measures to strengthen and upgrade the quality of human capital. Effective interface between academic and research institutions in the country according to the productivity and the needs of the economy and society. Development and promotion of comparative national and regional - local advantages in the public and private development planning. Creation of national and regional support structures for SMEs, with emphasis on research and innovation funding. Orientation of the Sectoral Operational and the Regional Operational Programmes of the National Strategic Reference Framework (2007 – 2013), both in actions and in terms of the evaluation criteria for the approval of the above priorities. Entrepreneurship encouragement and support through fiscal measures (tax exemption for the first three years of operation of a business), finance (sponsored programs and facilitating access to bank loans) and functional (collective structures receiving new business advisory services). Tackling bureaucracy and especially the administrative procedures related to the establishment, operation and closure of businesses. Financial and business expansion to neighboring countries, the Balkans, the Black Sea region and the Middle East.

7. Conclusions

Greece and Ireland are among the smaller countries of the EU, yet the oldest members of the Union. In the first years after their accession to the EU, they were considered of low level of development, the reason for their being funded for several years with significant resources, thus applying programs of fiscal consolidation and economic stability to join the Eurozone. While Greece and Ireland had a similar starting point as to their macroeconomic features, then Ireland scored a remarkable growth, especially in the 1990s. From a traditionally *"problematic country"* it evolved into a country with the highest economic growth. The main factors that contributed to such a development since the late 1980s, were the co-coordinated fiscal, monetary and income policies, tax relief to foreign in-

vestors, financial transfers from the EU, the fundamental reform in education and training, the large influx of multinational companies etc.

A comparison of macroeconomic figures of both countries shows that Ireland displays superior performance in almost all indicators. Also, in all indicators related to research, development and competitiveness, Greece is in a subordinate position in relation to Ireland. In the economic and business environment, Greece has twice the corporate tax rate than that of Ireland. The income inequality in Greece is higher than that of Ireland. As to spending on social protection, Greece appears greater social characteristics than Ireland, providing higher percentage of GDP.

The review focuses on the Irish model, which despite its high growth rates, it created problems of social inequality due to the unequal distribution of the benefits of development and the limitation of the welfare state.

The main reasons of the delayed development of Greece against Ireland, are its geographical location and the small size of the Greek market, the weak industrial base of the country, the low degree of internationalization of business and the overall economy, delay in research and technology etc.

From the above mentioned causes which explain the delay in Greece compared with that of Ireland, it is found that while Greece no longer has the advantages of developing countries (low labor cost), at the same time it lags behind the structural characteristics of developed countries. So, a solution to overcome the deficit and strengthen the growth potential in Greece, is not a return to the past and its low labor cost and the model of a developing country, but the exodus towards the future adopting the standards of developed countries with emphasis on knowledge, research and technology, the qualitative improvement of human resources, the modernization of infrastructure and public services, the extroversion of enterprises, the systematic exploitation of the country's comparative advantages to the direction of balanced sustainable development and economic, social, cultural and environmental dimensions.

Notes

1. Global Competitiveness Index WEF (Global Competitiveness Report, World Economic Forum 2004-2005): It is a composition of two indicators, the Growth Competitiveness Index, which focuses on elements of the macroeconomic environment and on institutions, infrastructure, technology, human capital, etc. and the Business Competitiveness Index, which assesses how advanced the strategies and practices of the companies are as well as the quality of the microeconomic environment in which they operate.

2. European Innovation Scoreboard (EIS), (2004): The Index EIS arises from the combination of four major categories: human resources, knowledge creation, transmission and application of knowledge, innovation finance, output and markets.

3. Indicators of the Global Entrepreneurship Centre for Entrepreneurship (Global Entrepreneurship Monitor - GEM) (2003): The ratio of total business measures the proportion of people

from 18 to 64 years actively involved in the process of starting or managing a business with a lifetime of less than 42 months. The indicator corporate business for established businesses that have paid wages or have gained for more than 42 months. Competitive is regarded the business which is in the process of market introduction or has recently introduced a new product or service.

4. Index of Perceived Corruption (Corruption Perception Index - CPI) (2004): Measures the overall extent of corruption, frequency or quantity, the public sector and politics.

5. Opacity Index (OI) (2004): It is based on 65 variables measuring the extent of corruption, legal and judicial opacity, economic and political opacity, opacity accounting practices and opaque regulatory structures.

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