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INSERT I. Can Small Countries Compete in the Global Economy? - Insights from Irish Experience.

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This brief paper looks at a country not much bigger than Armenia - Ireland with circa 4 million population.

Ireland as a country and an economy has transformed itself over the last three decades and stands as an example of and a testament to the fact that size does not matter. What mattered, firstly, was quality; quality of vision provided by governments and public institutions; quality of economic and fiscal planning; quality of education at all levels; and, lastly, the quality of business support provided to existing entrepreneurs and new start companies. Secondly, what mattered was setting the right agenda and priorities. In the case of Ireland, with a very small domestic market, few industrial assets, little or no minerals and some offshore gas, this essentially meant focusing on people and skills and more specifically on research, technological development and innovation.

Ireland has continuously exhibited determination and commitment in these areas, in particular, support and cooperation with the private sector driven by quasi-autonomous public sector economic development agencies, encouraging economic development at the national and regional levels, e.g.

- Enterprise Ireland
- Industrial Development Authority (for Foreign Direct Investment)
- Irish Tourist Board, and
- Food Board Ireland.

Need for Private and Public Partnership

As can be shown elsewhere in the more developed, democratic, expanding economies, there is a recognised and vital need for partnership between the private and public sector. In Europe, countries such as the United Kingdom and Ireland, the pivotal mechanisms developed over the last thirty years have included regional economic development initiatives of one kind or another. There is of course no optimal model for such initiatives. Each European country has different cultures, different economic cycles and growth rates and different employment, social and developmental needs and priorities. However, one thing is common to the more successful regional economic development mechanisms in countries like Ireland; that has been a sustainable concordat between the public and private sectors, i.e. amongst cabinet politicians, key line ministries and a wide range of representatives from the business community.

In Ireland senior politicians and businessmen have recognised the need and/or desirability for planned economic development of one kind or another, both at national and regional levels; in particular, to create new mechanisms and to change the status quo in addressing economic crisis. In the 1960's and 1970s, Ireland still remained too dependent on its traditional agrarian economy and suffered dramatic out-migration of its educated youth. Over that same time, it was also witnessing a slow restructuring of its industrial base with the decline of traditional primary and secondary manufacturing, a rapid increase of unemployment, and double-digit inflation that created large-scale social and urban problems. In part, this is what led to the establishment of a new regional economic development mechanism (agencies). These have now evolved into sophisticated, market driven networks of business development organisations at the national, regional and local levels, resulting in measurable positive economic impacts.

This has helped move Ireland from the bottom of the European GDP per capita table in 1970 to the top. Ireland now is ranked second only to Luxembourg, above France, United Kingdom and Germany.

That is not to say that such regional/economic development agencies can take all the credit, far from it, but they did and do assist greatly in creating the development, business and promotional infrastructure required to compete successfully in the global economy. The lessons learnt by Ireland have a resonance for the future development of Armenia. In 2006, arguably, Armenia has similar characteristics to Ireland in 1970:

- Peripheral populations dominated by larger neighbours
- Decades of outward migration (USA, Canada, Australia)
- Best educated population migration (skilled young people)
- Public sector dominated economies
- Small domestic markets
- Unexploited export potential into larger “near” markets
- Low GDP/per capita compared UK & Europe
- Growing disparity between rich elite and growing unemployed and under-employed
- Local businesses “non-competitive” (poor productivity)
- Primary traditional manufacturing sectors in rapid decline
- Underemployed and poorly productive labor force.

Ireland has taken over thirty years to position its economy in such away as to more effectively secure success in the global economy. Ireland, in particular, has proved itself more adaptive than probably any other European country and is seen often as a template for others to follow. But it is only one of many. Each country must not only utilise its own particular strengths but also assess and address as frankly as possible its own weaknesses.

Ireland Today

In 2006 Enterprise Ireland produced an analytical overview of Ireland’s recent economic performance. The key facts, including trade indicators, are impressive and illustrate just how far the country has moved from, in 1960, a once traditional agrarian based, low income, dependent¹ defensive economy to an independent, proactive, independent modern economy in 2007.

- Global Exports: Ireland’s total exports are similar in value to much larger countries such as Brazil, Australia and greater than India
- Strong Export Growth: Ireland has export growth twice the average of the EU and three times the rate of total world trade
- Leading exporter²: Ireland is one of the leading software and bio-pharmaceuticals exporters
- Irish Companies Global leaders: in selected niche sectors, Irish Companies regarded as world leaders including pharmaceuticals biotech, IT software, telecommunications and medical devices.
- Entrepreneurial Culture³: Per capita, Ireland has one of the highest rates of new start companies in the world

As a result, especially in the last decade, the country as a whole has benefited.

- GDP: € 36,000 - second highest in Europe
- GDP Growth: 5.5% per annum compared with EU average 2.2%
- Open Economy: Exports are 86% of GDP and imports 70% of GDP
- Low unemployment: at 4.2% lowest unemployment rate (EU average 8.8%)
- Priority for R&D: Currently committed to spend B€3.5
- Pro business culture⁴: Ireland is ranked 6th in the world as a country in which to do business (UK 7th and USA 8th)

- Quality Education⁵: Ireland ranked 4th from 60 countries worldwide, important having 40% of population under 25 years and rapidly expanding labour force, 2 million at work.

So what caused this transformation of a once peripheral, outward migrating, insular country into one of the most dynamic economies in Europe if not the world, and in a relatively short period?

Ireland Growth between 1994 – 1998	Ireland	EU
GDP	9.2	2.3
Employment	5.8	0.8
Consumption	6.2	2.2
Exports	17.1	7.5
Imports	14.2	7.3

Source: OECD, CSO.

The Government explains the reasons for Ireland exceeding the EU average growth in GDP, employment, consumption, export and imports as follows⁶:

- Ireland's high birth rate in the 1970's leading to large increase in work-age population in 1990's
- Combination of falls in unemployment and increases in population reaching retirement (65 years) leading to positive demographics and a large fall in dependency ratios, i.e. in turn leading (partially) to a rise in per capita incomes
- Substantial investment in all levels of education and hence increased quality of the workforce
- High levels of public investment in physical as well as human capital and with substantial help from EU structural and Cohesion funds, net gain of B€12.5 over twenty years.
- Relatively low interest rates encouraging strong private sector investment
- Decreasing tax burden on employees and companies.

However, there are additional explanations to the rapid success of the Irish Economy⁷, especially in the 1990's.

For thirty years, since 1960, Ireland has had a focused industrial policy on high value-added manufacturing essentially achieved through foreign direct investment and positive fiscal policy offered as an incentive.⁸

Proactive rather than reactive approach to foreign inward investment leading to a more selective and sector specific policy with high returns.⁹

Introduction of free secondary education and more recently emphasis on upper and tertiary education increasing the skill levels of the young workforce very rapidly (to above the UK) on a par with EU average.

High quality of labour relative to it's higher costs thus still ensuring competitiveness despite influx of skilled labour (increasingly from new accession countries).

Advent of the European Single Market in 1992 and increased freedom of movement of goods and services.

The maximisation of EU structural funds and also through the CAP (Common Agricultural Policy), increased external assistance to farm subsidies in agricultural sector.

Improvements to fiscal policies¹⁰, and reduction of public sector expenditures and restructuring of employment in public sector.

Fiscal realignment occurred alongside the increased economic activity worldwide boosting the economic performance of Ireland.

Ireland economy was "catching up" from a much lower base than the average in EU.

In 2007 Ireland is continuing to move forward from considerable strengths and continued weaknesses.

Strengths

- The Continuation of the stability-orientated macroeconomic polices over recent years
- Broadly based consensus on economic and social policy
- Growing, well educated labour force
- Favourable demographic structure
- Attractive location for investment.

But also it continues to recognise transparently its underlying weaknesses:

Weaknesses

- Deficits in transport infrastructure
- Congestion in major urban centres
- Growth imbalance between and within regions
- Housing shortages
- Certain human resource and skill shortages
- Still underdeveloped indigenous industrial sector
- Concentrations of deprivation and lack of opportunities.

The past and current National Development Plan (NDP) is based on the above strengths and weaknesses. The plan from 2000-2006 had six priority areas:

- Economic infrastructure, primarily roads, public transport and environment
- Employment and human resources
- Productive sector
- Rural development
- Social inclusion
- Social capital (housing and health)

	Euro Million	% of Total
Economic and Social Infrastructure	22,361	41
Employment and Human Resources Development	12,000	22
Productive Investment	5,668	10
Rural Development	8,554	15
Regional Development (2 priority regions)	6437	12
Total	55,020	100

Source: National Development Plan 2000-2006

Having focused previously and primarily on key cities such as Dublin, Cork and Limerick and on Foreign Direct Investment, the Irish clearly now recognise the need for regional as well as national economic and social development and for rural as well as urban development. But this is only recently and after the success of national economic and fiscal policies providing the basis for sustained growth, increased employment and, crucially, a sustainable tax base. It is the increased tax base that allows investment in the regions and in rural development. Yet the continued and overarching emphasis for Ireland remains the development of its international export capacity.

Enterprise Ireland

Under the National Development Plan, the Irish Government has established a broad direction for the country's industrial and economic development and continues to invest in the country's economic infrastructure and the education system at all levels; all this within a positive fiscal policy that supports selected inward investment and, now increasingly, export by and internationalisation of its industrial base.

The primary development vehicle for the promotion of employment and human resources development and targeting of productive investments is **Enterprise Ireland**, under the Ministry of Trade and Industry. Enterprise Ireland is the Trade and Technology Agency of the Government of Ireland. It comprises 1000 people in 34 offices throughout the world and has an annual budget of M€250. The key role of the agency is to stimulate growth, develop and internationalise Irish Companies and to assist companies to grow and export.

**Half of the country's economic growth is now based on exports of goods and services.
Per capita exports in Ireland are 7 x USA, 6 x Japan and 4 x UK.**

Enterprise Ireland provides the fundamental building blocks¹¹ for industry in Ireland.

- Financing capital to bridge key stages of the business either directly to companies or indirectly through Irish Venture Capital Funds
- Marketing advice to optimally target and position products
- Operational infrastructure including incubation centres and technology support
- Network of 34 global offices to provide instant access to international market place
- Channel services to stimulate new business opportunities, networking & clustering.

Growth Sector and Territorial Targets

The key for Ireland, given its very small population is successful, sustainable export into growth sectors and growing economies.

The selected **growth sectors** are at the core of business development support including the support to existing and the creation of new sector clusters, i.e. Software and Software Services; Telecommunications; Pharmaceuticals and Biotechnology; Engineering; International Traded Services; E-learning; Medical devices and diagnostics; Aviation Industry; Agriculture machinery; and Giftware and furniture.

The **geographic targets** for the EI business support, originally US and Europe are now also the emerging markets - India, China, Japan and Gulf States. These countries currently represent only 4% of export development for Irish Companies yet now represent nearly 50% of the global GNP. There is a perceived exponential export market in these emerging economies.

Practical Business Support

Enterprise Ireland has developed successful operational activities based on a wide range of support to the private sector, especially abroad via its 34 offices spread throughout the target territories.

- Introducing potential customers and partners to Irish Client Companies (one to one basis)
- Bringing buyers to Ireland to meet Irish client companies
- Organising Trade Fairs as well as arranging individual selling/marketing itineraries
- Implementing market profiles, study tours and inward / outward learning missions
- Promoting Ireland as a source of high quality products and services
- Providing on-the-ground support to companies in order to internationalise businesses
- Assisting the development of company networks and sector clusters
- Facilitating links for client companies with global companies for technology and intellectual property exchange.

The important point is that all of the above support is provided only to small and large companies in the identified growth sectors and those who are seeking to internationalise. Financial, technical and human resources can and is also provided but recipient companies must make a financial contribution.

Enterprise and Human Resources

The current success of the Irish Economy and in particular its export performance is founded on education and skills and the innovation and energy of people (individual risk-takers, entrepreneurs and the employees of growth companies). Similarly, the economic success of the last three decades is based on the commitment of those people providing business advice and support in the target sectors, industry clusters and to individual companies.

Enterprise Ireland draws its 1000 staff from the widest skills and career base in the country. It also cultivates and trains not only its graduate entrants but all staff on annual basis, directly feeding new skills and human resources continuously into its own structure as well as indirectly into individual companies in growth sectors. The culture of the organisation is based on competitiveness, innovation, risk taking and team building. Few are from a traditional civil service background and many are from specialist technical backgrounds¹². The essential capacities are the ability to understand the needs of business, to provide practical assistance and, most important, to provide added value to the companies assisted.

Fundamentally, Ireland's economic success has been through continued, complementary partnership between the public and the private sector. The beneficiaries have been the Irish people. For the first time in 200 years, descendants of those who previously left the country are now returning to live and work; there is now a net in-migration¹³.

The Irish story (so far) provides food for thought for other similar countries seeking to develop long-term sustainable economies in an increasingly competitive market place. It is not that Armenia should copy all that Ireland has done or is doing, for the external and internal circumstances and culture of Armenia are different.

But the example set by Ireland is worth understanding. What has been achieved has taken more than 30 years. Over that period, it has required the dedication of many to understand the country's *real* economic strengths and weaknesses. It has then required common purpose and committed partnerships and the ability to focus and develop practical economic and social programmes with the necessary priority and enough resources. It also has required, as Ireland has clearly shown, the ability to be adaptive to changing circumstances and, despite mistakes, to always learn lessons, thus to remain confident in the ability to succeed.

¹ In the 1960 Ireland was over dependent on the UK; representing 60% of all export trade and the supply low paid migrant unskilled workers. In 2006, UK represented only 17% of Irish export trade.

² IDC, Gartner and Forrester.

³ GEM Report.

⁴ Economist Intelligence Unit.

⁵ IMD World Competitiveness Year Book, 2006.

⁶ National Development Plan 2000-2006.

⁷ BSL (2000) "What can the Irish Teach Us?"

⁸ Tax relief on profits earned in Ireland and allowing repatriation of such profits, employment grants and assistance with machinery and related infrastructure costs.

⁹ The identification of global growth sectors and also the development of sector cluster approach.

¹⁰ Fiscal consolidation and reduction of deficit of -2.5 % to surplus of 3.75% in 1995; lowering of effective personal and corporation taxes the latter from 38% to 24% and increase of personal allowances.

¹¹ See Enterprise Ireland Strategic Development Plan 2008-12.

¹² Marketing, research IT, software, health care, industrial relations, finance, banking, engineering etc.

¹³ The enlargement of the EU has of course encouraged also migration from countries such as Poland, Hungary, and many other eastern European countries. These migrants mostly seek to return home one day. The in migration of those young people of Irish descent, from USA, Australia is the true testament to the economic success of Ireland.

INSERT 2. The Celtic Tiger: Product or Process in Fulfilling Ireland's Competitive Potential?

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As far as Ireland's absolute and relative economic performance is concerned, the period since the early to mid 1990's has been unique and exceptional against almost any economic benchmark one could care to use. An economy described by the *Economist* magazine as "the poorest of the rich" in 1988 was transformed in the words of the same publication to "Europe's shining light" by 1997. Irish living standards (GNP per capita) that fluctuated between 58% and 65% of EU-15 levels over the period 1960 to 1990 climbed steadily over the following decade to surpass 100% by 2000. The extent of the transformation, strictly from an Irish economic history perspective, is evident from Table I, where the strong growth rates of output, living standards (GDP/cap), employment, productivity (GDP/worker) and the employment-population ratio contrast starkly between the pre and post 1993 sub-periods.

Table I: Irish Average Annual Growth Rates of Real GDP, Population, Living Standards, Employment and Productivity: 1926-2005 (%).

Period	GDP	Population	GDP/capita	Employment	GDP/worker	Empl/Pop ratio
1926-47	0.9	0.0	0.9	0.0	0.9	0.0
1947-60	2.3	-0.4	2.7	-1.3	3.6	-0.9
1960-80	4.1	0.9	3.1	0.5	3.5	-0.4
1980-93	3.3	0.4	2.9	0.0	3.3	-0.4
1993-'00	8.3	0.8	7.4	4.7	3.5	3.8
2000-05	5.2 [^]	1.7 [*]	3.4 [^]	3.0 [~]	2.2 [^]	—

Source: Kennedy (2001) Table I for all data to 1993-2000. [^] Data from National Income and Expenditure Accounts Table B Main Aggregates, 2000-2005, CSO. ^{*}Data to 2005 from Irish Central Statistics Office (CSO) see www.cso.ie. [~] Data from Economic Review and Outlook, 2005, Department of the Taoiseach.

An intriguing feature of Ireland's metamorphosis from a surplus-labour economy with a chronic shortage of job opportunities to one of full employment and labour scarcity is the remarkably swiftness of the transformation. The 'jobless growth' problem had finally been solved. The extraordinary change of fortune earned the country the enviable designation of the *Celtic Tiger* reminiscent of the *East Asian Tigers* of Hong Kong, Singapore and South Korea, so called because of their rapid economic growth of the 1980s and 1990s.

A breadth of analysis has focussed on identifying the root causes of the emergence of the Tiger and there are grounds to believe that it may be attributed to catch-up or convergence reasons, restructuring and adjustment, business cycle explanations or development in the Schumpeterian tradition where innovation, entrepreneurship and availability of credit give rise to economic transformation. While there is lack of consensus on the 'cause' of the process that gave birth to the Tiger, a set of factors are considered to be among the explanations or rather preconditions which, when taken together, set the fertile context that explains how, if not precisely why in the sense of timing, the Celtic Tiger came about. These include: ¹

- Enhancement of Ireland's attractiveness as a location for subsidiaries of multinational businesses, particularly from the United States, seeking an export platform into European markets. (The US Bureau of Economic Analysis reports that the percentage rate of return of US subsidiaries in Ireland between 1995 and 2002 was 20.1% (and it was 25% throughout the 1990s), highest among a set of benchmark EU countries).² The main multinational players are found in the electronics, pharmaceutical and financial services sectors.
- Availability of skilled, educated and English-speaking labour at competitive wage rates within an open labour market
- Macroeconomic stabilisation including reduced inflationary pressures, credible commitment to monetary stabilization, replacement of competitiveness through exchange rate devaluations by national wage agreements, lower taxes and a social consensus model of wage determination
- Adoption of a more business friendly culture evident in some initial steps towards acceptance of the need for incentives and rewards for entrepreneurial risk taking and inventiveness.

If one considers more of the potential underlying reasons, factors with longer-term explanatory power include the emphasis on outward orientation of industrial policy outlined in *Economic Development* (known as the Whitaker Report) published in 1958. This was the first unified policy programme which laid out the policies deemed necessary for economic growth i.e. further industrialization that could only be ensured through targeting export markets, which entailed a reorientation of the Irish development strategy away from a highly protectionist import substitution and infant industry policy to an export-oriented trade policy with foreign direct investment (FDI) playing a central role. The establishment of the Industrial Development Authority in 1949 was a key early element in Ireland's FDI promotion phase. The aim of the export-oriented trade policy was to use imported private capital and technology to establish an extensive and sophisticated industrial base, having a high export to sales ratio (to minimize competition for domestic market shares with local firms), which would absorb some of the surplus labour; reduce emigration, utilize natural resources more efficiently, augment capital formation, stimulate economic growth, diversify merchandise exports to provide the impetus for the transformation of the Irish economy from its excessive reliance on the agriculture ... sector to a more vigorous and expanding industrial base (O'Sullivan, 1995: 140).

Particular sectors were targeted for foreign investment particularly electronics, pharmaceuticals and medical devices. Irish industrialization was late relative to other industrialized countries and the reorientation away from primary products towards manufactures became apparent only from the 1960s onwards. Industrial and trade policies were inextricably linked as a result, as the focus successfully supported a switch from traditional exports from the agriculture sector to exports from the industrializing sector.

A decisively outward orientation of industrial policy is evident in the introduction of an Export Profits Tax Relief (EPTR) in 1956 which was extended in 1958 to exempt 100% of profits derived from exports from taxation.³ The 1932 Control of Manufactures Act was repealed in 1964, which removed remaining restrictions on foreign direct investment in Ireland. Capital grants to companies producing for export, whether foreign or indigenous, was another business support facilitating production for external markets. Financial supports were also made available to companies willing to restructure to compete with imports. Although outward policies were consistent, it is fair to say they were introduced slowly and steadily. Entry into the European Community in 1973 is further evidence of Ireland's outward orientation.

In the late 1980s and early 1990s Ireland became one of the main locations preferred for inward direct investment in the European Community, particularly for high-technology electronics firms. Leading international firms were attracted into Ireland including Ericsson, Hewlett Packard, Motorola, Siemens, etc. The success of the IDA in attracting the firms of Intel and Microsoft to invest in Irish plants and the subsequent success of these firms' operations in Ireland generated 'demonstration effects' that essentially proved that Ireland was a competitive international location in these sectors and created a record of performance in which other firms had confidence. Initial successes generated further successes in FDI terms. The establishment of the Irish Financial Services Centre in Dublin in 1987 was one key success story which enhanced Ireland's outward orientation, generated substantial employment and exchequer revenues.

Despite an expansion in the share of foreign operations operating in Ireland, in the manufacturing sector in particular, the 1980s were far from successful as Irish-owned companies experienced significant competitive difficulties. Even into the Celtic Tiger phase of development, a distinct difference in the productivity performance of Irish-owned and foreign-owned plants is evident and generates substantial debate about the extent of linkages between international and domestic businesses and the sustainability of Irish productivity in the future.³

Table 2 presents ratios of Ireland's performance relative to other countries in terms of trade and investment which indicate the importance of openness in Irish economic performance and development.

Table 2: Trade and Investment Openness: % of GDP, 1970-2000

Trade Openness: Ratio of average merchandise exports and imports to GDP							
Country	1970	1980	1990	2000			
Belgium/Luxembourg	45.5	56.9	60.9	66.2 ¹			
France	13.0	18.9	18.9	23.0			
Germany	17.4	23.5	25.1	28.0			
Italy	13.1	19.9	16.1	22.1			
Netherlands	42.8	50.4	45.5	55.7			
Denmark	24.0	26.6	25.3	28.7			
Ireland	33.8	48.7	48.8	67.8			
UK	16.7	21.0	21.0	21.8			
USA	4.2	8.9	8.2	10.3			

Investment Openness: Ratio of average inflows and outflows of FDI in merchandise goods to GDP							
Country	70-74	75-79	80-84	85-89	90-94	95-00	70-00
Belgium/Luxembourg	2.2	2.1	1.5	4.4	7.4	22.8	6.7
France	0.7	0.8	0.9	1.8	3.5	6.3	2.3
Germany	1.2 ²	0.8	0.7	1.3	1.3	5.0	1.7 ³
Italy	0.6	0.4	0.6	0.7	0.9	1.4	0.8
Netherlands	5.2	3.7	4.3	5.6	7.5	18.3	7.4
Denmark	0.9	0.3	0.4	1.3	3.0	10.8	2.8
Ireland ⁴	0.7	2.0	1.1	0.3	2.8	8.1	2.5
UK	3.2	3.4	3.0	6.0	4.1	12.0	5.3
USA	0.7	1.0	0.9	1.6	1.6	3.2	1.5

Source: Ruane and Ugur (2005), Table 7.1 and Table 7.2.

¹ Data refers to 1997 due to data limitations

² Refers to 1971-1974

³ Refers to 1971-2000

⁴ Inflow and outflow data for Ireland from 1998 on were amended to take account of changes in methodology and coverage.

As might be expected, the smaller countries in the table exhibit greater trade openness, but Ireland's performance stands out. Ireland's relatively low ratio in investment openness may appear surprising but until relatively recently – the last decade or so - no outward FDI occurred. Most investment in merchan-

dise goods lead to production for Ireland's export markets and much of the productive inputs must be imported, hence the strong relationship between Ireland's performance in terms of trade and investment openness.

Ireland's success in attracting FDI from the US, in particular, appears to be an important component in the Celtic Tiger development phase. Table 3 indicates that Ireland's share of US FDI (to Europe) is nothing short of exceptional given the small size of the Irish economy. The attractiveness of Ireland for US FDI in electronics is pronounced.

Table 3: Manufacturing FDI to Ireland as a Share of European FDI from the US, 1994-2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	8	3	11	14	12	8	13	6	24	16
Electronics	8	5	18	40	54	13	11	-2 ¹	93	36

Source: Ruane and Ugur (2005) Table 7.7.

¹ This figure is negative as the net flow in electronics FDI was negative.

A further long-term cause of Ireland's recent growth spurt includes the introduction of free universal secondary level education in 1968. So although older Irish workers are not particularly well educated by international and Western European standards, approximately 35% of younger cohorts (25-34) have some third level education which compares well to the EU average of 26%.

A traditionally low level of female labour force participation effectively created a pool of untapped resources which was available to meet expanding demand over the Celtic Tiger period. The female participation rate increased substantially throughout the 1980s and 1990s (from 43% in 1990 to 58% by 2003) but this remains well below OECD average rates. The increased rates are largely due to higher participation of married females in the workforce, in particular those with children.

Hence, rather than there existing any single identifiable ultimate cause of the process that resulted in the Celtic Tiger, there is evidence of what Myrdal described as a process of *cumulative and circular causation* in the sense that each of the above reasons can reasonably provide an element of explanation of positively reinforcing effects that together help us understand how the Celtic Tiger emerged. What we cannot explain is what caused all the elements to generate such a positive outcome at that precise point in time, however.

A key issue for Ireland in today is how to capitalize on the dramatic economic transformation so that the Celtic Tiger phase is not simply catch-up potential that has been exhausted, but is a springboard for ongoing economic development. Recent rankings from *The Global Competitiveness Report* reveal some issues of potential relevance. In the most recent Report, Ireland maintained its 21st position in the main ranking on the Global Competitiveness Index (GCI) and Ireland's scores for the main sub-components in the Index (Basic Requirements, Efficiency Enhancers and Innovation Factors) are presented in Table 4 across the nine 'competitiveness pillars' that underpin the Index.

Despite, or perhaps in spite of, the phenomenal recent achievements in economic growth, the infrastructural deficit evident across all types of national infrastructure has failed to close and years of under-investment still requires substantial additional funding to reach international standards.⁴

Table 4: Global Competitiveness Index and Sub-indices, Ireland: 2006.

GCI (RANK)	21			
BASIC REQUIREMENTS	Institutions (rank)	Infrastructure (rank)	Macroeconomy (rank)	Health/primary education (rank)
23	17	31	20	24
EFFICIENCY ENHANCERS	Higher education and training (rank)	Market efficiency (rank)	Technological readiness (rank)	
18	16	13	24	
INNOVATION FACTORS	Business sophistication (rank)	Innovation (rank)		
19	16	20		

Source: *The Global Competitiveness Report 2006-7*, Palgrave Macmillan.

From a business perspective, Ireland's ranking on the complementary Business Competitiveness Index (BCI) is also of interest as it is a useful relative indicator of competitive strengths and weaknesses of businesses operating in the local environment.

Table 5: Business Competitiveness Index and Sub-indices, Ireland: 2001-2006.

	2006	2005	2004	2003	2002	2001
BCI	22	21	21	22	23	22
QBE*	23	21	21	22	23	22
Soph.^	17	16	21	17	16	18

Source: Table 1 Chapter 1.1 in *The Global Competitiveness Report 2006-7*, Palgrave Macmillan.

*QBE denotes Quality of the Business Environment

^Soph. Denotes the sophistication of company operations and strategy.

In 2006, those competitive disadvantages identified as most severely limiting the performance of business and which must be addressed to improve the rankings were reported as Inadequate supply of infrastructure, Inefficient government bureaucracy, Restrictive labour regulations and Inflation.

In 2006, specific weaknesses identified from analysis of company operations and strategy are presented below, followed with the top 3 performers in each category:

- Control of international distribution and marketing (Ireland rank 50): Japan, France and Switzerland
- Prevalence of foreign technology licensing (Ireland rank 31): India, Singapore and the Netherlands
- Capacity for innovation – the extent to which companies conduct formal research and pioneer their own new products and processes (Ireland rank 21): Germany, Japan and Sweden.

These causes for concern might more usefully be interpreted as directions to be targeted by policymakers (both business and public) and as signals for required changes to increase the likelihood that Ireland's competitive potential might be enhanced and improved. However, there are some signs that the fundamental character of the economy is undergoing some change. For example, while inward Foreign Direct

Investment (FDI) has been acknowledged as a key ingredient in the Irish success story, Irish latest data on outward FDI (from 2004) indicates that overseas investment by Irish companies reached its highest level ever (of € 12.7 bn) and Ireland has become a net contributor for investment flows (when excluding those investments in property and real estate). US Department of Commerce figures also show that the gap between the figures of US company employees in Ireland at 100,000 while still larger than the figure for Irish company employees in the US of 65,000 is closing. While it would be too soon, and perhaps naïve, to think in terms of an international invasion by the Celtic Tiger the increasing internationalization of Irish firms in terms of trade, market penetration, international localization and business development broadly-defined, appears to be more than a blip in the economic landscape. The probability of continuation of these trends, however, and the factors that will determine them are open to debate.

Furthermore, as with any phase of economic development, some regions inevitably grew faster or slower than the national average. Using living standards data, it appears that income dispersion has increased in the period from 1993 to 2002 (the last year for which regional data are available) and the rate of dispersion increased between 1999 and 2002. This has largely been driven by labour productivity differences.⁶¹ Despite the policy interest in dispersing economic activity away from the major growth centre of the Irish capital city of Dublin due to its high land values and growing congestion, evident in the *National Spatial Strategy* announced in 2002, there appears to be no political appetite to implement it. Centralized political governance in Dublin and no real local government power also hinders any significant regional development. A new mindset towards economic development and the role of regional development would be required to bring about a more balanced economic landscape but the signals to indicate any such development are lacking to date, at least.

¹ Fanning, C. and Murphy, C. (2002).

² See Figure 77 in the annual Irish Competitiveness Report, 2006.

³ An interesting survey of international literature by Bellak (2004) on performance differences across domestic and foreign firms indicates that performance gaps disappear between these two categories of firms when firm and industry characteristics are controlled for. Where such differences do persist, multi-nationality rather than foreign ownership appears as an explanatory variable.

⁴ See Gallagher, Doyle and O'Leary (2002).

⁵ O'Leary (2002/3).