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**Bringing Politics Back Into Varieties of Capitalism:
Shaping Ireland's Productive Capacity**

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Introduction

It has become almost too easy to take issue with the analytical framework provided by Hall and Soskice's now classic varieties of capitalism model (Hall and Soskice 2001). On the one hand, most countries fall somewhere between their examples of pure types, Germany as a model of coordinated market economies, the USA of liberal market economies, and indeed a third model, of mixed (or state-led) market economies, has gained in credibility (Molina and Rhodes 2007). On the other hand, their innovative focus on the logic of coordination at firm level has been queried from diverse angles (Hancké et al. 2007). Among the critiques are those arguing that a firm-level focus privileges producer interests excessively, and that it downplays conflicts between employer and employee interests as well as within and across sectors. Such an approach also risks being too static, and omitting the negotiated, discursive, and ideational aspects of the production and reproduction of social interactions (Blyth 2003; Schmidt 2006). Its country-specific focus is relatively indifferent to the international situation of states and the interplay between domestic and international economic and political influences shaping adaptive capacity. And most obviously for political scientists perhaps, the framework is sometimes said to be relatively indifferent to the state, specifically, to the manner in which states create, manage and sustain markets, and the under-determination of policy choice by firms' preferences, in democratic societies in which elected politicians have a wider mandate of electoral accountability.

But the varieties of capitalism approach continues to generate fruitful research questions, not least in probing apparent anomalies or outliers in the categorizations it yields, the better to capture the dynamic aspects of countries' political economy. At the core of the varieties of capitalism approach is a concern with the skills profile of the employed population. The contention is that the institutional arrangements supporting a particular profile of skills training will tend to reinforce the provision of a particular kind of productive activity; and indeed that this in turn will be associated with the reinforcement of a particular kind of commitment to income protection and welfare state policy (Estevez-Ave et al. 2001). Arrangements for skills training provide the basis for the activities of firms; and in turn, employer preferences will tend to continue to select and reinforce the institutional arrangements that underpin skill formation. There is no inbuilt need to view this as consensual or even functional; and the system may be modified and adapted in all kinds of ways through interstitial struggles between unions and employers, or employers and

employees, within an institutional framework that may not be fundamentally challenged by either side (Streeck and Thelen 2005; Thelen 2003; 2007).

The principal contrast we are led to expect from the literature involves preferences for general versus specific skills training (Iversen and Soskice 2001). Employers in coordinated market economies prefer specific skills training, often to a very high level of qualification and certification, and therefore a strong vocational emphasis. In contrast, employers in liberal market economies are expected to have a strong preference for provision of general education attainment, and therefore to want the state and market to provide the training for those whom they wish to recruit. The paradigmatic example of the coordinated market economy bias toward specific skill training is taken to be Germany, with its dual system of academic and vocational-apprenticeship education, but other countries such as Switzerland, Austria, and Japan adopted this model too. Liberal market economies such as Britain and the USA typically have very weak vocational education systems, and education attainment is not closely aligned to producer interests, but serves as an indicator of the attainment of a certain standard of education rather than of specific skill acquisition.

But there are two problems with this account of the diversity of skill profiles and training systems. The first is that it may not actually capture the real education and training profiles of a range of countries that do not fall into either of the two most distinctive camps of liberal or coordinated market economies (Crouch et al. 1999). The second is that it may obscure our understanding of how countries may shift dynamically over time in their education profile. We need to improve our understanding of how the composition of skills and attainment of standards changes. We also need to understand better where the impetus originates from to achieve this. Moreover, the dominant story in the varieties of capitalism literature is about employer preferences. If this is so, we need to know more about how these are transmitted to government or relevant state agencies, and what happens if conflicting employer interests are apparent. But it may not be so: what if the skills upgrading precedes the existence of relevant employment outlets, when there is no relevant employer group to have any kind of preferences to transmit anyway?

This paper is a preliminary and exploratory study of the transformation of Irish productive capacity in the context of both increased economic and financial openness (globalization), and particularly in the context of membership of the EU. The paper notes that Ireland's employment profile changed dramatically over time, and that this was driven by an active

state-led policy stance aimed both at attracting FDI as the engine of export-led growth, and at cultivating an indigenous manufacturing and services sector that would develop in conjunction with the opportunities generated by FDI. The argument of this paper is that the Irish experience requires us to modify our understanding of the relationship between employer preferences and education and skills policies. Investment in a strong tilt toward higher skill attainments within a ‘general’ skill development system took place long before there were jobs to match them. A cluster of state agencies engaged in forward planning, and mediated between prospective MNC investment and mobilization of state resources into education and training. Productive capacity has been transformed, but marked weaknesses remain in the profile of education and training, and in the links between the features of the education system and prospects for future economic development. It is not clear that all the necessary elements for a strong ‘national innovation strategy’ are in place (Mjoset 1992; Ó Riain 2004b). The particular configuration of education and skills training Ireland has put in place has to be understood politically.

The main elements of the story about the transformation of Ireland’s productive capacity are by now relatively well agreed upon (Barry 2006; Ó Gráda 1997). But a number of gaps remain to be explored. In particular, we seek to understand how and why a particular trajectory of education upskilling was adopted. Insofar as employer preferences may be relevant to explaining this, we want to know how potentially conflicting priorities may have been accommodated. We also wish to understand how it came to be that Ireland’s skills profile, in a liberal market economy, seems to align it more strongly with other small coordinated European economies than with the skills profiles apparent in the (large) liberal market economies of the USA and Canada (Culpepper 2007, p.632, n.13).

The following section outlines competing pathways toward developing a productivist capacity among smaller European states. Following this we profile the transformation of the Irish occupational structure and the educational transformations that underpinned this, and raise some questions about how best to understand this. We then explore some puzzles stemming from the varieties of capitalism approach about firms’ preferences and state capacity for action. We then consider some of the wider distributional issues that arise when considering Ireland’s overall education and skills strategy.

Pathways to growth

The European countries that came late to industrial development faced different kinds of difficulties in establishing stable growth strategies. The countries of the European periphery had different starting points in their natural resource base and productive capacities. In 1960, at the moment when Ireland began its outward orientation and became committed to dismantling protection, Ireland, Spain, Greece and Portugal, all with sizeable agricultural sectors, were considerably poorer than other European countries. Ireland and Spain's GDP per head, adjusted for purchasing power, stood at about 60% of the EU15 average, while Greece and Portugal were closer to 40% (Barry 2006). At that point, these national economies were still relatively isolated from one another and from the six original member states of the EEC. But as FitzGerald and Hore have noted, 'Irish labour supply is much more sensitive to labour market conditions abroad through migration, than is the case for (Spain and Portugal). For all three countries the bargaining behaviour of firms was affected by the process of EU integration' (FitzGerald and Hore 2002, p.17).

The Mediterranean countries, all still ruled by autocratic regimes, turned toward tourism, on the one hand, and development of export potential of manufactured goods based on cheap labour in traditional sectors such as textiles, clothing and footwear. Ireland's turn away from protectionism, beginning to take form at this point, was similarly based on a strategy of promoting exported manufactured goods (Barry and Weir 2007; Bradley 2004). However, economists have long noted the exposure of the Irish labour market to Britain and the USA, particularly during the period (until 1979) when the Irish and British currencies were linked at parity. This means that opportunities for low-cost-based competitive advantage were limited. Downward wage adjustments were always likely to produce an outflow of labour faster than job creation (Barry 2008; FitzGerald and Hore 2002). 'Downwardly sticky' wages all too easily resulted in job losses and therefore emigration (Walsh 2004). Availability of significant investment capital and technological capabilities reduced domestic job-creation capacity. The 'challenge of the latecomer' meant that indigenous firms faced steeper growth challenges than in larger and more industrialized economies (O'Malley 1989).

This contrasts with the smaller Nordic states where industrial capabilities oriented toward export markets had been cultivated for longer. The Swedish model, premised on a combination of solidaristic wage bargaining and a systematic promotion of upgrading

industrial investment, and supported by extensive collective consumption and welfare supports, produced world-class industry in a small economy (Blyth 2005; Martin 2000). Innovations in ICT and biotechnology were grounded in the pre-existing strengths of major engineering and electronics firms which, while outsourcing the more labour-intensive facets of production, increased their investments in R&D in their home base. Finland had developed an industrial capacity based on a combination of large-scale paper pulp and timber processing, and manufacture of mid-range white goods, oriented toward the Soviet market. The collapse of the USSR resulted in a severe shock, out of which rapid innovation into a largely new sector, that of telecommunications, was brought about. Nokia was a genuinely new direction of development. Denmark had a strong network of small and medium enterprises, and a long tradition of agribusiness networked through cooperatives. Its industrial innovations during the 1970s and 1980s were heavily based on incremental adjustments, upgrading outgrowths from the food processing sector and moving into biotechnology.

The Irish growth model was different again. Tax-based incentives for manufacturing exports were introduced even prior to the turn toward trade liberalization from the 1960s on, and inward investment from foreign firms was encouraged. However, the value of this approach to generating investment and job creation, and thereby growth, could only be fully realized in the context of access to European markets. Membership of the EEC, as it was then, from 1973 onward, and the impetus to increased US investments in Europe following the Single Market in 1992, provides the context for successful job creation within Ireland's FDI-based growth strategy (Barry 1999). In addition to European companies investing in Ireland, American and Japanese investors found it attractive to invest in a European production base that would provide access to European markets. The principal elements of Ireland's industrial strategy have been in place continuously for several decades: the incentive regime was sustained even the throes of periodic controversy over its merits and consequences (FitzGerald 2000). The complexities of corporation tax were simplified and consolidated at 12.5% in 2003. Following a decade of stagnation during the 1980s (resulting from disastrous macroeconomic policy and a persistent tendency toward pro-cyclical fiscal policy), with very high unemployment and massive population outflows, huge levels of US FDI flowed in during the 1990s. Economic growth in Ireland between 1994 and 2001 took off at unprecedented rates, averaging in excess of 10% per annum in 1999 and 2000, the so-called Celtic Tiger phase, scaling back during the 2000s until the present crisis and recessionary conditions.

Interpretations differ as to what produced the most recent growth phase. One view is that it is the result of convergence on average European living standards, delayed by fiscal mistakes during the 1980s; getting the economic fundamentals right thus resulted in a convergence that would then stabilize (Honohan and Walsh 2002). Most commentators attach greater significance to the surge in available US investment capital during the 1990s, and the expanded market opportunities opening up within the EU (Barry 2005; Barry et al. 1999b). But the fact that Ireland attracted such disproportionate shares of new FDI needs to be explained. This cannot be understood without recognizing the crucial role played by Ireland's industrial development agencies, especially the Industrial Development Authority (IDA). Ireland had developed a sophisticated strategic capacity to target and entice potential investors, and to facilitate their location within Ireland through grants and a range of networking supports (Hardiman 2005; O'Sullivan 2000). Development of indigenous industry was hived off into a separate organization, Enterprise Ireland, in 1993. Also at that time, industrial planning capacities were given a new focus by the consolidation of a number of bodies into a new agency, Forfás, which assumed responsibility for high-level planning. These bodies are at the core of what Ó Riain has termed Ireland's 'flexible developmental state' (Ó Riain 2000; 2004a).

Transformations of the employment and education profiles

The transformation of employment

Ireland underwent a radical transformation of sectoral distribution of employment, arising from major shifts in industrial composition. Table 1 indicates the shifts in sectoral employment.

Table 1. Employment by economic sector, 1981-2008

	1981	1991	1997	2001	2008
Agriculture	17	14	10	7	6
Manufacturing/ other production	23	22	22	18	14
Construction	9	7	7	10	12
Market services	33	38	39	39	41
Non-market services	18	20	22	24	28
Total	100	100	100	100	100
Numbers ('000)	1137	1134	1338	1723	2109

Source: (O'Connell 2000, p.67); CSO for 2001 and 2008
<http://www.cso.ie/statistics/empandunempilo.htm>

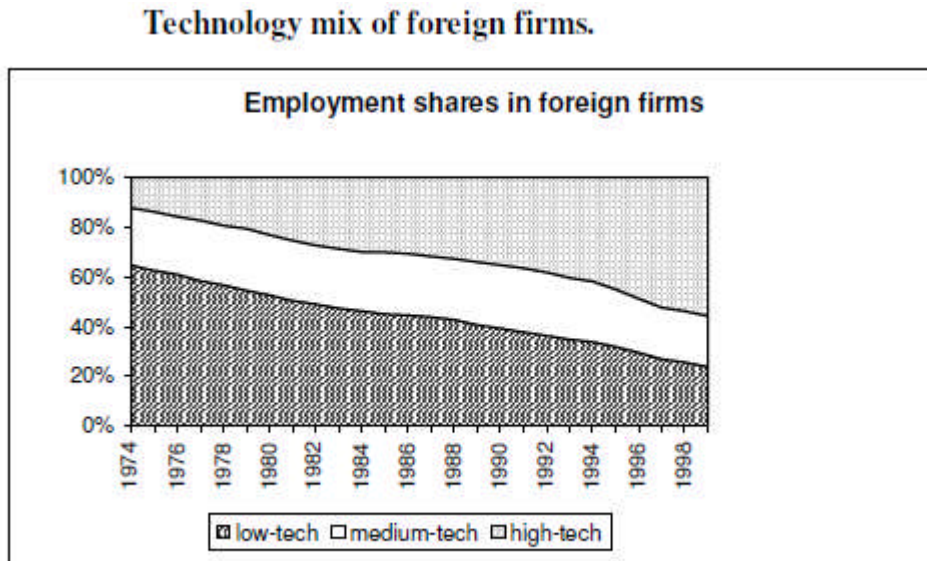
These trends in sectoral distribution of employment reveal the sharp decline in agricultural employment and the growth in both market and non-market services. They seem to suggest extensive deindustrialization, which is not accurate. What is really going on is rapidly rising labour force participation, combined with radical shifts in industrial composition. These data do capture the observation that Ireland has gone from a pre-industrial to a post-industrial economy virtually seamlessly – the rise of the traded services sector has been a particularly striking feature of sectoral change.

What this table also obscures is the profound transformation in the composition of industrial employment in Ireland. The first significant phase of inward investment that followed from Ireland's EEC membership from 1973 on, produced a marked sectoral differentiation in manufacturing. Many of the traditional, labour-intensive manufacturing firms fell victim to the twin pressures of more open market competition and cost increases in the period of stagflation, while the newer FDI-based industries created a more high-tech sector that was markedly more export-oriented. These were largely concentrated in the 'three Cs': cola concentrates, chemicals, and computer hardware. Capital investment was intensified; the processes were more sophisticated than previously. Building on these sectors, the emphasis of the industrial development agencies then turned toward incremental shifts in the quality of investments and in the skill composition this entailed. Upward wage pressures emanating from the more productive modern sector further intensified the adaptive pressures on the traditional sector spilled over into the traditional sector, notwithstanding attempts to coordinate and moderate wage movements through framework national pay deals. The result

was a major shake-out of traditional industry and an increase in unemployment, alongside a significant upgrading of industrial composition in the modern sector. The effects of this transformation stabilized somewhat during the long period depressed of the 1980s, when firms that had survived the first shake-out proved more durable. By the late 1980s output recovery was apparent, though not yet producing any increase in demand for labour – a phase of ‘jobless growth’ (National Economic and Social Council 1991).

A major investment in microprocessor manufacturing was secured from Intel in 1989, before the advent of the Single Market, along with significant investments from the major pharmaceutical firms round this time, enabling further ‘forward marketing’ by the IDA, and resulting in an agglomeration effect during the 1990s whereby all of the top ten global firms in both sectors had a presence in Ireland (MacSharry and White 2000). Following the completion of the European Single Market in 1992, Ireland attracted a disproportionate share of European FDI, especially from US firms. The two sectors already targeted at an earlier stage, information and communications technology (both hardware and software manufacture and processing), and pharmaceuticals, provided the basis for further skill development. The IDA deliberately targeted the top global firms in these two sectors and sought to attract them to invest in Ireland – already it was becoming apparent that Ireland could no longer compete on a cost basis with the skills available in the former communist states of East-Central Europe (Barry 2000; 2003; 2004a; b; Barry and Hannan 2001). Indeed, even computer hardware manufacture, a flagship investment, went into decline during the 1990s (Barry and Van Egeraat 2008; Bradley 2001; Gourevitch et al. 2000). The urgency of constant upgrading became the dominant theme of the development agencies; and increasingly that was going to have to be in high-tech, knowledge-intensive activities. The ongoing emphasis on cultivating high-tech investments is illustrated in Figure 1 below.

Figure 1. Technology mix of foreign firms in Ireland, 1974-1998



Note: This figure employs the standard OECD sectoral classifications.

Source: (Barry 2006, p.8)

Foreign-owned firms therefore became the engine of Ireland's rapid growth during the 1990s. Ireland's GNP per capita relative to the EU still stood at about 60% as late as 1990 – during the 1990s and 2000s it rose suddenly and quite dramatically (FitzGerald 2000, p.53). By 2005 Ireland had almost 120% of EU25 wealth per capita (measured in GNI adjusted for purchasing power parity for Ireland – the GDP measure of 139% captures repatriated profits from FDI firms and is regarded as a less reliable indicator) (Central Statistics Office 2007, Table 1.3, p.18).

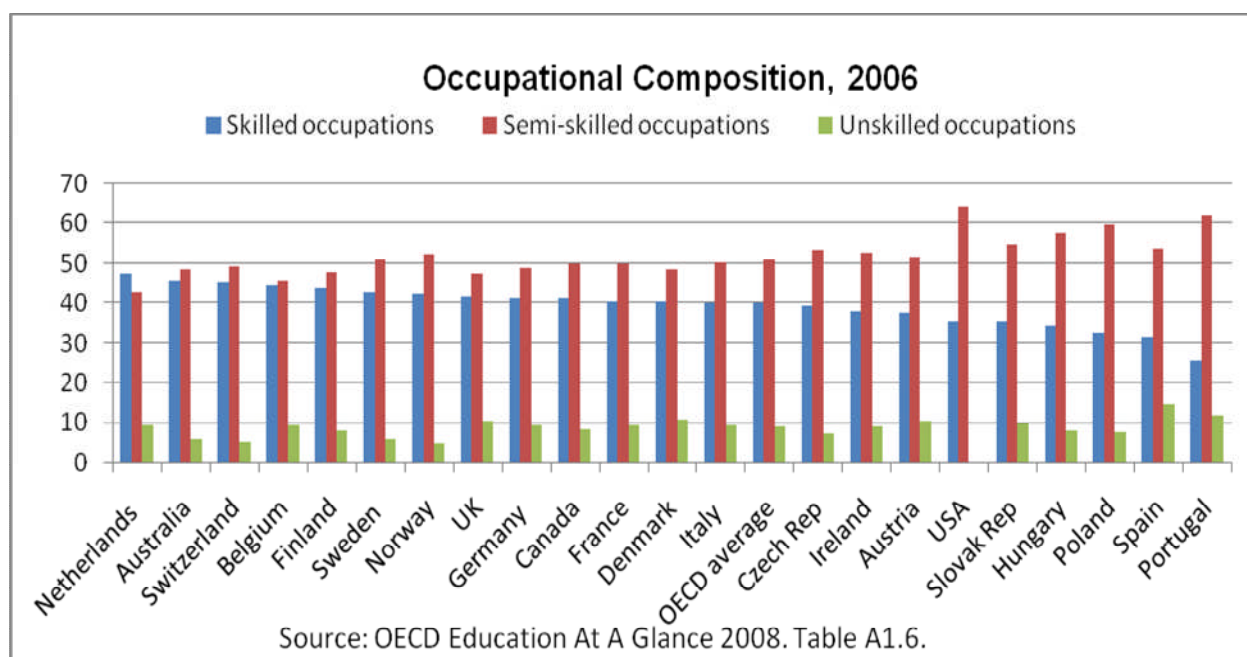
A contrast between indigenous and foreign-owned firms is still discernible on several dimensions. About one-third of the output of Irish-owned manufacturing firms is exported, but over 90% of foreign-owned firms; most of the indigenous firms are in the SME sector, but foreign-owned firms, considerably fewer in number, are much larger and employ about half of all those employed in manufacturing (McGuinness et al. 2008, p.3). Foreign-owned firms are almost all in the 'modern' sector (NACE industrial sectors: 223 Reproduction of recorded media; 24 Chemicals (incl. man-made fibres); 30, 33 Computers and instrument engineering) (Central Statistics Office 2009). The 'traditional' sectors are mainly indigenous. However, it would be misleading to think a two-sector model of the economy persisted along 1970s lines. One of the signal features of the 1990s and 2000s was the expansion of a high-tech export-oriented domestically owned sector, especially in ICT, including computer

software and related tradable services. Many indigenous firms became much more embedded in both upstream and downstream linkages with the FDI sector. And the sustained expansion of an indigenous services sector, at all skill levels, was also apparent for the first time (Barry et al. 1999a; O'Malley 2004; O'Malley and McCarthy 2006).

In addition to the upgrading of the Irish manufacturing sector, policy change in the late 1980s committed Ireland to cultivating an internationally traded services sector in finance. International investments in the International Financial Services Centre (IFSC), set up in 1989, was generated by the same sort of active IDA marketing and networking, supported by a well-integrated network of politically-driven civil service implementation, that underlay expansion in ICT and pharmaceuticals investments. Within a couple of years, most of the major German and other continental European banks had a presence in Ireland, and constituted a large and growing sector of export activity.

This has resulted in a steady upgrading of the occupation profile of the Irish workforce over time (O'Connell 2000). Figure 2 below shows the occupational composition of OECD countries in 2006, showing Ireland with a high-skill profile (legislators, senior officials, managers; professionals; technicians, associate professionals) that is now only slightly below the OECD average. In fact this understates the real position as it profiles the whole labour force, while the transformation of skill composition is particularly marked in the younger sections of the workforce.

Figure 2. Occupational Composition of OECD Labour Force, 2006 (percentage, by ISCO groups)



The transformation of educational attainments and skill levels

An upgrading of the occupational structure implies an upward trend in educational attainments, and this is indeed what we see. In 2006, the proportion of young people aged 20-24 with education attainments of at least upper secondary (i.e. with an education level ISCED 3a, 3b or 3c) in Ireland stood at 85%, compared with a Euro-area average of 74% (Eurostat 2008, Table 2.3, p.167). The rate of participation at third-level increased dramatically over time too: in 1965, about 11% of the relevant age cohort transferred to third-level education; this was 28% in 1985, and 57% in 2000 (European Commission 2003, p.28). In 2006, entry to 'tertiary type A' and 'tertiary type B' combined stood at 61% of the age cohort, compared with an EU19 average of 68% (OECD 2008, Table A2.4). And seven out of every ten who sat the Leaving Certificate school-leaving exam (attempted by some 80% of the age cohort) entered some form of higher education (O'Connell et al. 2006). Of all those of school-leaving age in 2007, 86 per cent had completed the Leaving Certificate, 12 per cent had completed the Junior Certificate examination before leaving school while 2 per cent left without any qualifications (never completing any official second-level examination) (Byrne et al. 2008, p.7). This contrasts with the oldest age category in the Irish workforce, those aged 55-64,

among whom a large proportion have primary-level education only and left school at the then minimum age of 14, and a very small fraction have any third-level qualifications.

Educational investments and skill attainments are clearly linked to industrial composition, employment opportunities, and the skills requirements of employers. The varieties of capitalism literature would suggest that responsiveness to firms' training and skill needs shapes the profile and phasing of educational investments. But two puzzles immediately present themselves. The first has to do with explaining how education policy and industrial policy may be linked. If Ireland is likely to be particularly sensitive to the needs of the multinational sector, how does this link work in practice? The timing of educational investments indicates that these were happening well in advance of any occupational outlets for these skills – and indeed were often controversial, as providing 'education for emigration' (Walsh 1999). In one well-known example, the IDA used a promotional photo for FDI marketing in the late 1980s of a class of Irish university business graduates, the great majority of whom had left the country by the time the ad was in circulation. Educational upgrading long preceded employment expansion. Related to this is a question about potential tensions between the preferences of large and small firms, high-tech and traditional, foreign and domestic sectors.

The second puzzle concerns the actual profile of skills attainments – especially the combination of general and specific skills in evidence. Ireland, although it is clearly a liberal market economy on the Anglo-American model, may not be very like either the USA or Britain in its profile of education and skills training. Related to this is the question concerning the internal distribution of opportunities in Ireland, as we try to understand the pattern of provision of and access to high-skill training opportunities as opposed to other forms of training.

The varieties of capitalism literature focuses primarily on second-level educational differentiation into skills-acquisition versus general education (Estevez-Ave et al. 2001; Iversen and Stephens 2008). The dual model of apprenticeship training and academic tracking strongly in evidence in the German-speaking world strengthens the case for the prevalence of high levels of industry-specific skills acquisition in coordinated market economies. In turn, this creates incentives for governments to create generous welfare protection, since even if employees expect employment of long duration in order for employers to benefit from their expensive skills investments, redundancies will be

compensated for at a rate that makes it worthwhile to have invested in these skills (Estevez-Abe et al. 2001). In contrast, liberal market economies are expected to have a preference for (state-funded) general skills attainments to high levels and a lack of internal streaming. Generic school or college qualifications then funnel young people into employment where they find out in practice how to discharge the specific job responsibilities required; flexible labour markets with relatively high employment turnover dictate a preference for non-specific qualifications, as long as they flag appropriate levels of literacy, numeracy, and general learning potential (appropriate to the skill level of the job in question). Correspondingly, welfare compensation is set at relatively low rates, often supported by tax-based incentives higher-income individuals to buy private insurance to offset labour market hazards.

However, Culpepper has pointed out that a focus on second-level vocational training misses a number of important aspects of modern employers' requirements, and that taking account of tertiary education differentiation may capture better both how education systems are organized and how education systems connect up with labour market opportunities. Other things being equal, 'more tertiary education is a sign of more human capital; it is an indicator of generality (or the inverse of specificity)', because entry to any kind of third-level implies high enough attainments of literacy and numeracy to qualify for entry, and the provision of appropriate pathways and conversion mechanisms to make flexible progression possible (Culpepper 2007, p.620).

Adopting this perspective challenges a number of assumptions central to the varieties of capitalism literature about how countries will cluster, as Table 2 below suggests. Austria clusters with Germany; France and Japan also have strong specific-skills profiles. Among the coordinated market economies, Sweden, the Netherlands and Belgium have quite general skills training at third level (though Australia, the USA and Canada have a much more general profile). Finland, Switzerland, and Norway also have quite marked general profiles. The small coordinated economies mostly seem to have a bias toward more generality. Ireland and New Zealand, both liberal market economies, have rather stronger specific-skill profiles than might have been expected. There seems to be some convergence among smaller states – both coordinated and liberal – in the direction of providing stronger general investment in human capital attainments. Analysing the divergent trajectories of Austria and Switzerland – which has departed from the German model – Culpepper argues that the dominance of large-

firm interests in the Swiss economy pushes for generalist attainments, while the strength of the Austrian SME sector creates incentives not to invest expensively in more public higher education but to maintain a tight firm-level control over training needs.

Table 2. Skill Profiles in Advanced Capitalist Countries Using Tertiary Vocational Training (TVT). Culpepper, 1995 data.

Most Specific		Most General	
TVT 3.9%	TVT 12.3%	TVT 15.7%	TVT 29.9%
Italy	France	Finland	Sweden
Austria	United Kingdom	Switzerland	Netherlands
Denmark	Japan	Ireland	Belgium
Germany		New Zealand	Australia
		Norway	United States
			Canada

Note: TVT refers to the proportion of an age cohort enrolled in postsecondary (3-year and 2-year college level) vocational education. This table groups countries according to their 1995 level of tertiary vocational training. (Culpepper 2007, Table 4, p.621).

However it should be noted that Culpepper's data, above, refer to 1995. In the intervening 14 years Ireland has considerably expanded its commitment to general skills training and displays much higher levels of total educational capital. It remains to be seen whether this distinction between 'most specific' and 'most general' is anything more than a proxy for actual numbers entering third-level education of any sort.

Shaping education and training priorities

If educational expansion is undertaken in anticipation of labour market requirements, and if the varieties of capitalism literature accords primacy to employer preferences in explaining the profile of adjustment, Irish education trends are hard to explain. However, if we reformulate the question and recognize a close affinity between industrial policy objectives and education policy thinking, we can identify the development of an emerging set of relationships that have profoundly shaped human capital investments in Ireland over time, that are neither the product of Department of Education policy on the one hand, nor a direct reflection of employer preferences on the other.

This is a point that not at all confined to Ireland. Indeed, even in the most extreme liberal market economy of them all, the USA, it has been noted that state initiative plays a much

more important role in coordination human capital development than is visible through the varieties of capitalism lens. Not only are there significant tax breaks for industrial innovation, there are also huge federal expenditures on technology parks, cultivating high-skill linkages between industry and education, and not only through military-industrial linkages or the aeronautics industry (Block 2007; 2008).

Ireland was a latecomer to investing in education, for reasons that have been linked to the dominance of the Catholic Church in ownership and control over schooling, reproducing a bias against science education and evincing a marked reluctance to expand second-level provision, especially for boys (Garvin 2004; O'Connor 1986; Ó Buachalla 1988). It was not until the late 1960s that most children could expect free access to second-level education. It took some time further before the binary differentiation at second level, still structurally present, was overcome at the level of curriculum, in an integrated programme of study with internal choices but no irreversible pathways.

Membership of the European Union (or EEC as it was at first) transformed many aspects of education policy and skills training. Education was one of the biggest beneficiaries of Ireland's share of European Social Cohesion funding, reflected especially in the de novo construction of two specialized technology universities during the 1970s, and a whole range of regionally dispersed third-level Institutes of Technology in the latter half of the 1980s (White 2001). This represents a sharp contrast with the Mediterranean cohesion countries. The binary distinction between universities and technical training institutes has been retained, and was integrated into a formal integrated national system of qualifications. The National Qualifications Authority, established in 2003, created an integrated framework to facilitate seamless progression between sectors and from one level of qualification to the next, while retaining the flexibility and adaptability that allows large and growing numbers to progress through the system each year, and that keeps programmes of study open to modification at relatively short notice (Forfás 2008, p.18).

The expansion of second-level education was initiated from within the Department of Education, drawing on OECD expertise, during the 1960s. It was the cluster of institutions and agencies surrounding the Industrial Development Authority (IDA) that provided the lead in education and skills planning during the 1970s and 1980s. It was becoming increasingly apparent to those charged with targeting and courting potential foreign investors that Ireland was becoming less competitive in the semi-skilled process activities that had dominated

investment flows thus far. Forward planning about how best to ‘move up the value chain’ was going on in new bodies such as the National Board for Science and Technology (NBST), the National Economic and Social Council (NESC), and in the IDA itself. During the 1970s, the IDA had come under increasing pressure to disperse new investments around the country, to provide job opportunities as extensively as possible. In the absence of any coherent national spatial strategy, and in the face of pronounced patronage pressures from elected representatives seeking to ensure delivery of promises to local constituents, the IDA was obliged to develop investment criteria for itself.

At that time, IDA staff note that Spain, for example, was frequently a direct competitor with Ireland for FDI in process-based manufacturing. Facing similar infrastructural deficits in many regions, Spanish authorities relied upon grant aid to attract investments. Increasingly, while also using grant aid and subsidies, the IDA also began to use its leverage to engage with wider debates about meeting infrastructural deficits in the shape of schools, roads, telecommunications, water, power supplies, and indeed location of Institutes of Technology to provide the flow of suitably qualified labour. Multinational investors who have located in Ireland cite high levels of education and the ready availability of appropriate skills second only to the attractiveness of Ireland’s corporation tax profile as determinants of their location decision (Gunnigle and McGuire 2001).

As noted above, the indigenous manufacturing sector is mainly concentrated in small and medium-sized enterprises. The industry and employers’ federation, the Irish Business and Employers’ Confederation (IBEC), mainly represents medium-sized and larger enterprises; the small firms have their own representation (mainly through the Small Firms’ Association, SFA). But the biggest employers, US multinationals, tend to make relatively little use of IBEC for industrial relations purposes. From the 1990s on, US firms have increasingly become non-union establishments. They have tended to follow the terms of the national social partnership pay agreements, but they do not participate in IBEC for industrial relations purposes (Geary and Roche 2001; Gunnigle et al. 2005). Rather, these firms tend to use their close networks with the IDA as the principal vehicle for relaying their concerns directly to the heart of government (Ó Riain 2004a). This happens through several channels of direct contact. Typically they need not wait to find opportunities to engage in lobbying. Most MNCs have an annual visit from their parent company; the IDA facilitates them to gain direct meetings with the relevant Minister and with the Taoiseach of the day, at which company

concerns are relayed, and government assurances can be provided. In addition, new potential investors are facilitated by the IDA to consult with existing firms, and direct access to decision-makers regularly features as a strong selling-point. And finally, the Taoiseach and top Ministers make periodic trade visits, with key IDA officials, to the main FDI-originating countries, meeting company leaders, and networking on an intensive basis over several days at a stretch. All of these channels of communication create powerful two-way channels for attuning education and training planning in Ireland not only to the current needs of MNCs but to anticipated future lines of investment.

The capacity to engage in effective forward planning along these lines was given a further institutional impetus with the reorganization of the industrial development agencies in 1993. A report in 1992 expressed grave reservations over the emphasis accorded to FDI as the vehicle for growth, and the risk of overlooking the development needs and potential of the indigenous sector (NESC 1992); subsequently, the functions previously housed within the IDA were differentiated into IDA Ireland (to look after inward FDI), Enterprise Ireland (for indigenous industry), and Forfás, which integrated several agencies with support and marketing functions into a new planning body that provides extensive data analysis and planning functions (O'Sullivan 2000).

A series of reports by the Expert Group on Future Skills Needs, under the aegis of Forfás, provides guidance areas needing investment, and has influence over the resources that need to be secured. The formulation of a series of National Development Plans, supported by EU funding, further formalizes the network of planning around industrial upgrading, skills enhancement, and orientation toward high-tech investment projects. And Science Foundation Ireland, along with the IDA, oversees the closer alignment of university research activities with industry requirements. It has at times been as simple a matter as consultative exercises asking firms 'what would it take to get you to invest more R&D in Ireland?'; these have produced the germ of innovative plans such as the emergent science park involving a consortium of universities with pharmaceutical firms, in the National Institute for Bioprocessing Research and Training (NIBRT).

Notwithstanding the low corporation tax regime, investments in R&D in Ireland are very comparable to other smaller European states, facilitated by an innovative 2004 scheme of tax credits for research investments. But this is almost all undertaken by the foreign sector; indigenous industry is very low in innovation capacity and rarely files new patents. Concerns

rightly persist about the development of a sustainable ‘national innovation strategy’ (Ó Riain 2004b). The latest manifestation of thinking in this area is SFI’s ‘smart economy’ priorities, concentrated on building networks to support human capital development and knowledge transfer in ICT, biotechnology, and sustainable energy production (Science Foundation Ireland 2009).

The distributive politics of skills formation

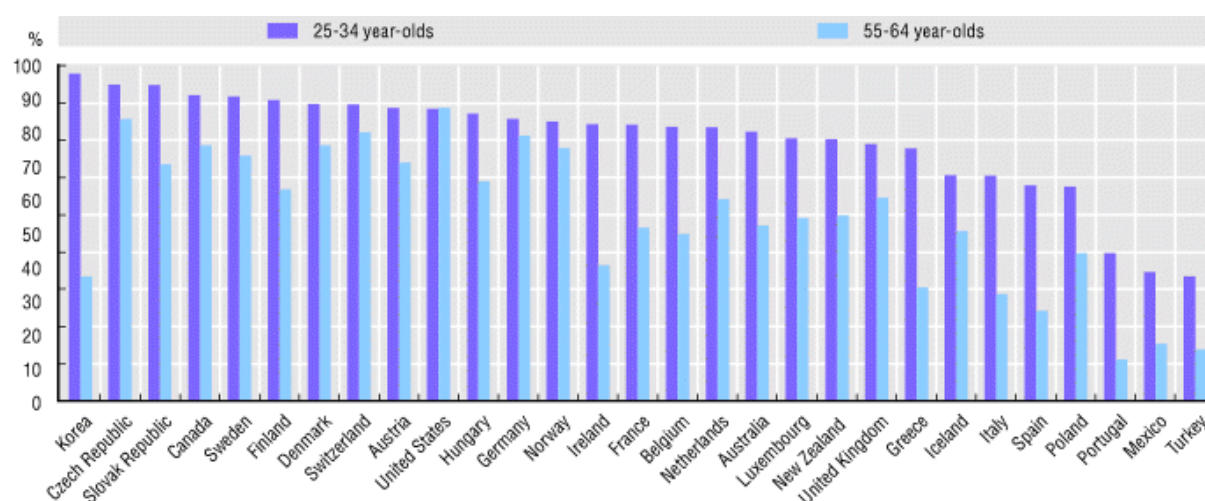
If the prioritization of skills development is strongly shaped by engagement between policy-makers and the high-tech sector, so much of which is foreign-owned, what then of the largely SME-based indigenous sector? Can it be said that this sector – as Culpepper suggests is true of the strong Austrian SME sector – is less keen on high-end educational investments? And even if the leading industrial and service sectors are the powerhouse of growth, what of the range of other training needs at lower levels of the economy, especially those that are still strongly labour-intensive such as tourism, agriculture, construction, distributive trades, and indeed public administration and wider public service employments such as health, education, and welfare?

It would appear that there are no significant sectoral divisions among employers in Ireland, nor any structural conflict based on size of enterprises, that would have a bearing on the stated national priorities of investing in third and fourth-level education, especially in science, technology, and engineering areas, and boosting the number of PhDs, along the lines set out by Science Foundation Ireland and the National Development Plan. Firms in the SME sector, and firms in traded services, may at times somewhat resent the apparently ready access to the ear of government enjoyed by multinationals. But their concerns are likely to centre on issues of cost-based competitiveness, the problems posed by the weakness of sterling, labour market regulation, the level of the minimum wage, tax issues, and access to bank funding, rather than cause divisions based on education and skills.

That said, there is also an organization providing job-related skills training, involving employers, unions, and chambers of commerce. Since 1999 this organization, Skillnets, ‘has facilitated over 18,000 Irish enterprises, in over 200 networks to improve the range, scope and quality of training and allowed over 150,000 employees to upskill and meet their work related training needs’ (<http://www.skillnets.ie/skillnets/about/index.html>). But this network is funded by the National Training Fund, administered by the Department of Enterprise,

Trade and Employment, and is therefore not really analogous to the employer-led and employer-funded on-the-job training characteristic of the German dual vocational training system. And relative to the size of the Irish workforce, this initiative in upskilling and additional training provision is on a very small scale. In fact, lifelong learning is not very well developed in Ireland, notwithstanding the fact that the older age categories are the ones with the poorest standards of education and the least prior investment in training of any sort (Nolan 2002), as Figure 3 below shows.

Figure 3. Population that has attained upper secondary education, 2006

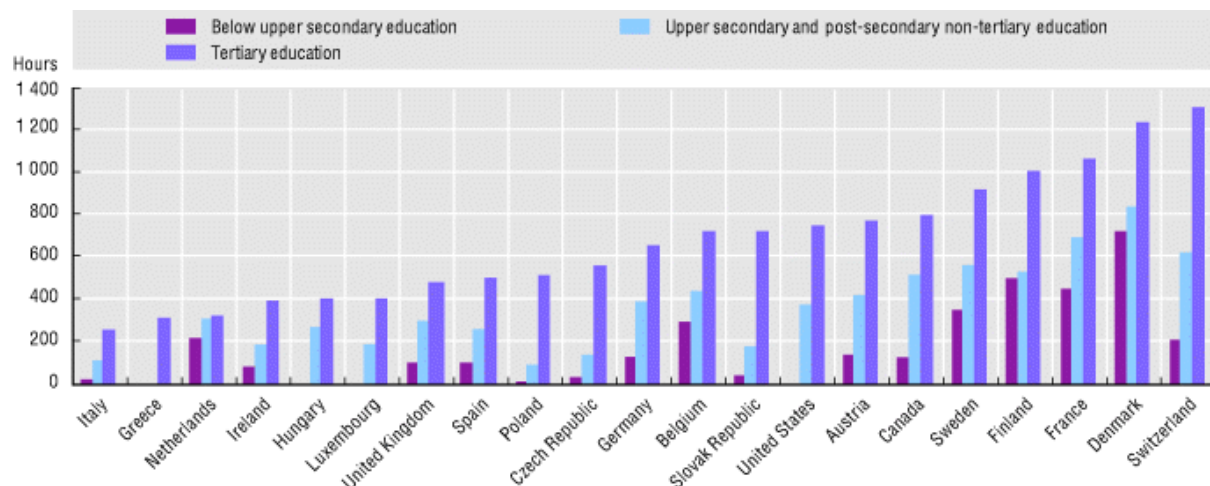


Source: Highlights from Education At A Glance, 2008.
<http://titania.sourceoecd.org/vl=5090814/cl=15/nw=1/rpsv/highlightseducation/01/01/g1-01.htm>

The total level of training that people can expect to get in the course of their career is strongly related to prior levels of education in most countries – the most skilled get the most additional training. Even allowing for this though, Ireland’s level of commitment to lifelong learning opportunities ranks it quite low, as Figure 4 illustrates.

Figure 4. Expected hours of job training for 25-64 year-olds by level of educational attainment, 2003

This figure shows the number of hours of job training that 25-64 year-olds can expect to receive over the course of their career. Consistently, workers with higher levels of education receive more job training.



Source: Highlights from Education At A Glance, 2008. <http://titania.sourceoecd.org/vl=5090814/cl=15/nw=1/rpsv/highlightseducation/01/10/g1-15.htm>

This is in marked contrast with Denmark, with its extensive and flexible system of continuous education, especially for those with lower levels of education. This involves a combinations of in-work and in-training qualification schemes, that seems to reach the least well-educated more successfully than in any other country. Culpepper suggests that this aspect of Danish labour market training means that it is not accurate to situate it among countries committed to the ‘most specific’ skills category in Table 2 above, when it clearly does have high levels of general human capital formation in the workforce as a whole. Commitment to continuing education and training in Ireland, on the other hand, has only recently come into focus in the political domain. The government set up an official Taskforce on Lifelong Learning arising from a working group within the social partnership process; this reported in 2002 (Taskforce on Lifelong Learning 2002). But Ireland remains one of the lowest spenders and poorest providers in this area (Roche 2007, p.64).

Big gains were made in opening up access to higher education over time. While the introduction of free university fees in 1995 increased middle-class access much more rapidly than it increased working-class, steady advances were made compared with the previous situation. In 1980, for example, about 8% of children from working class backgrounds went

into higher education, but in 2004 about half of children of skilled workers were entering third level, as well as about one-third of children from manual working class backgrounds (O'Connell et al. 2006).

The youngest cohorts in Ireland are considerably better educated than older ones. But there continue to be serious deficiencies at lower levels in the education system. If heavy investment in general skills, that is, in all-round educational attainment to the highest level attainable by the individual, is considered to be the key requisite of the 'Smart Economy', then unevenness in access and attainment at pre-tertiary level has to be considered a serious issue. The aggregate performance attainments of Irish second-level school attainments are not bad in comparative perspective: in the OECD's PISA standardized attainments of 15-year olds, Ireland ranks 4th out of 30 OECD countries in reading, and 14th in science and 16th in maths, though these were still slightly above the OECD average score (Forfás 2008, Table 3.6, p.32; National Competitiveness Council 2009). But academic achievement is strongly influenced by social class background. The pressing need for further investment in the education system, even during recession – especially in ICT and maths training – as well as serious investment in pre-school education, is flagged by the well-respected partnership organization, the National Competitiveness Council (National Competitiveness Council 2009). Public spending on primary education is low in comparative perspective, and higher proportions of what is spent go on teacher salaries relative to support services and resources. And early education hardly exists in Ireland compared with elsewhere.

Inequalities in access to education and in educational attainments, and in the relationship between educational attainment and job opportunities, were masked to some degree during the years of economic boom. The huge expansion in jobs meant that social fluidity was greater than previously, and the link between social background and eventual class destination was more open than before (Whelan 1999). However, the quality of training available at lower levels of the workforce does not appear to have kept pace either with the pace of reform at higher levels or with the emergent needs of the relevant sectors. It is true that higher general levels of education were a feature of entry standards into non-tertiary skills-based training, mainly under the aegis of the state's main industrial training agency, FÁS. (Other training agencies also exist for specific sectors: Teagasc for agriculture, Fáilte Ireland for tourism, Bord Iascaigh Mhara for fisheries) (European Commission 2003, pp.21-3).

However, much of the training provided by FÁS seems to have drifted away from direct connection with labour market requirements and opportunities over time. Ireland is among Europe's highest spenders per capita on active labour market (ALM) policy, and quite extraordinarily, it kept this up during a period of full employment during the 1990s. But the efficiency and effectiveness of these schemes is open to some question (quite apart from scandals about financial mismanagement and insider award of training contracts that have recently come to light). O'Connell finds that the training schemes that were the most successful in tracking participants on to employment were those that provided skills that were closely aligned with current labour market conditions. But these are expensive to organize and provide; very many of the FÁS training schemes, especially those of short duration, were of dubious labour market value (O'Connell 2002, p.69).

One of the biggest (and most expensive schemes) run by FÁS is Community Employment schemes, intended to reintegrate long-term unemployed people into the labour force. Most of the participants in FÁS schemes were engaged in these CE schemes. These were introduced during a time of mass unemployment 1980s as an alternative to passive income transfers, providing supports to different kinds of work experience. Their training benefits were never a top consideration, and in many cases they came to constitute a cheap fix to deficits in social economy and welfare services supports. As an alternative to unemployment benefit dependence, CE schemes may well be attractive to those who may not be available for regular employment. During the economic boom, when labour markets were very tight, those at the margins of the labour market were likely to consist disproportionately of those with multiple social disadvantages, or to be experiencing particular combinations of circumstances (such as disability, or lone parenthood) that made engagement with education or entry into employment difficult in some way. FÁS courses have been integrated into a national qualifications certification framework. Even so, the value of the spending on CE schemes has been questioned. But they are politically difficult to row back on. Powerful community-based vested interests have used the localist bias in Irish political life to prevent cutbacks in CE scheme expenditure.

Conclusion

The transformation of Ireland's productive capacity has depended on its membership of the EU, which has enabled it to use the long-existing incentives to attract inward FDI much more effectively than previously. The policy combination included low corporation tax and

provision of grants and subsidies, and traded on Ireland's English-speaking status. But the transformation of productive capacity also went hand in hand with active promotion of investment in education and skills to support an upgrading of the quality of FDI investments. This active FDI-focused industrial policy, aligned with a deliberately flexible approach to meeting new education and training needs, meant that Ireland's developmental trajectory followed a different path from that of most other small European countries, and different too from the evolution of the peripheral late-developing Mediterranean countries. On the other hand, the Irish experience also contrasts with that of New Zealand which, although another liberal market economy with a strong agricultural sector, had no EU access, and relied instead on pouring resources into overcoming its geographical isolation to expand its privileged access to British and Commonwealth markets for agricultural and processed food products.

This paper has suggested that the Irish development path has required considerable political inputs into education and skills training. Consistent with varieties of capitalism expectations, this seems to have pressed strongly in the direction of general skills development, despite Culpepper's queries on this matter. Nor does the Irish experience challenge the expectation that a general skills orientation will be complemented by conditional and targeted welfare state provision (though the example of Sweden shows that this is not a necessary conjuncture). However, we do suggest that we need to question the primacy of firm-level preferences as drivers of state policy commitments in the area of education and skills training. While the objective of policy is to align education and training provision with market needs, the anticipatory adaptation is more solidly grounded within state institutions and political decision-making processes than we might have expected. Moreover, we have also seen a good deal of discretionary political choice in evidence at lower levels of the education system – the education and skills formation policies below tertiary education level are only weakly informed by either the solidly productivist and developmental priorities of, say, Korea, or by the egalitarian and solidaristic approach in evidence in Scandinavian countries, resulting in a still-shaky domestic enterprise culture. Exploration of the reasons for weakly egalitarian politics in Ireland must await further analysis (though see, for example, (Hardiman 2004; Hardiman et al. 2006; Hardiman et al. 2008)); as must further exploration of the domestic capacity for innovation. For now, we conclude by insisting (again?!) that politics matters.

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