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The Shifting Politics of Innovation and State Developmentalism in Ireland

1. Introduction

The search for economic growth and development increasingly involves the search for «innovation» in the economy. If innovation itself is an elusive concept, the search for a formula through which it can be fostered and nurtured is even more frustrating. Ireland has been an interesting case in this debate. Not long ago a predominantly agricultural economy, having missed a number of industrial revolutions, Ireland has recently had significant success in boosting high tech exports – primarily, although not only, by attracting foreign companies. Most famously, the «Celtic Tiger» of the 1990s seemed to have brought Ireland from the periphery of Europe to the core – finally joining the ranks of the successful small open economies within the trading region of the European Union.

Furthermore, the period appeared to be the culmination of a project that began in the chase for foreign investment from the 1950s (or indeed the 1940s by some accounts). Foreign investment was central to the boom of the 1990s and was led by some of the biggest global names in technology and innovation. Ireland's «economic miracle» was based, apparently, on both technological innovation and the development (or at least importing) of new models of business organisation. The Irish model appeared to be an example of a successful strategy of growth through innovation and openness.

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This success has come with a turbulent economic history – deep economic crises in the 1950s, 1980s and late 2000s have been followed by periods of growth. Or to put it another way, each period of growth has been followed by a crisis. This casts the innovation successes of the Celtic Tiger in a different light. Rather than a solution to a historic dilemma of economic peripheralisation, the 1990s boom appears as just one more interlude in the cycle of boom and bust. The 2000s saw the re-emergence of a historically strong coalition between real estate developers and the state, only now with access to serious money from domestic and international finance. The boom that followed drove the bust of 2008. While there is much talk today of export-led recovery, that too is only a partial truth as construction, tourism and agriculture provide many of the jobs that are being added in the Irish economy.

This paper explores this history of boom and bust through an exploration of the trajectories of the project of state developmentalism across the periods of Ireland's modern economic history. In the process, it examines the character of the shifting developmental state structures and strategies, of the ebb and flow of state developmentalism within the national political economy as a whole, and of the dilemmas of the macro-economy that continue to be posed by the incomplete, uncertain project of state developmentalism in Ireland. The paper argues that the question of innovation, productivity and enterprise policies (and the developmental statism that generally is seen to underpin them) is deeply intertwined with the broader politics of the political economy. It argues that the Irish story shows that enterprise and innovation policies have an irreducible social and public component that renders them economically powerful and politically risky, that the developmentalist project is critical to the marginalisation of speculative financial activity (financialisation) but is also vulnerable to being overwhelmed by it, and that the terms of major intractable macroeconomic and distributional debates can be re-cast by a successful developmentalist project that constitutes an effective system of innovation, particularly if it is egalitarian.

2. State developmentalism in Ireland's turbulent economic history

In his book *The European Experience*, Dieter Senghaas (1985) seeks to make sense of the history of Europe's political economy in terms of uneven capitalist development, social structural change and national political economic institutions. He argues that the history of capitalism is a history not of the inevitable progress of poorer countries towards the core of capitalism but of a general process of peripheralisation, excluding most national economies from the core but punctuated by a significant number of cases where new economies join the core. He defines development as the ability to build an «autocentric» national economy which can draw in resources from the global economy and use them as a building block for the circulation and building up of resources within the national society.

Perhaps the most significant of these successful cases is the European economy itself, involving both a wide range of countries and the formation of a distinctive form of political economy organised primarily around Christian democracy and social democracy. Mjoset (1992), in a study that compared Ireland's economic performance to that of other small open economies in Europe, develops these points in more detail. He argued that these comparison economies all shared certain common features of their patterns of growth and development. Two particular features prove crucial: a national system of innovation that can anchor a country's economic efficiency and export performance so that it makes the most of its linkages to the global economy, and a system of social welfare that generalizes these gains from the global economy throughout the national economy and forms a system of mass consumption. These economic features of autocentric development are also anchored by a political coalition and in Europe this has taken a distinctive and generally more egalitarian form than in other advanced capitalist countries.

This coalition does not have to take the form of a centralised state project. However, in Ireland this has largely proven to be the case. It is worth briefly noting the extent to which conditions for any form of innovation-based development were particularly weak in Ireland. Compared to the small open «late developer» Nordic economies (Fagerberg 2016) Ireland was a *very* late developer in Europe. It completely missed the second industrial revolution based around electronics and was dominated by agricultural trade until well into the 1960s. A weak domestic industrial base was reflected in exceptionally low private investment, particularly in R&D and other innovation practices. As Honohan and Walsh (2002) point out, Ireland's remarkable transformation from the 1960s was based on the layering of an almost completely new «modern» economy on top of the existing agricultural smallholder structure.

Nor were the institutional conditions favourable – no political party attached itself to the project of technological progress (unlike the Nordic social democrats), domestic enterprise showed almost no inclination towards significant industrial upgrading and industrial relations were largely in the UK «pluralist» model where changes in productivity were occasions of repeated negotiations rather than taken for granted improvements within an overall context of corporatist bargaining. With few favourable conditions in business or politics, much was to depend on the success of state-led projects of development.

This paper explores the trajectory of state enterprise and innovation policies in Ireland in this broader context of the place of the innovation system in building autocentric national development. Over the past fifty years Ireland has shifted, in the words of Joe Ruane (2010), from a «simple periphery» of the United Kingdom to a 'multiple interface periphery' located between the UK, United States and Europe. Ruane argues that this new peripheral position has been adopted strategically by the Irish State and has allowed Ireland greater opportunities to manoeuvre and re-position itself within a more diverse set of international connections – even if each of these connections are in themselves unequal. Underneath these developmental shifts at the macro level are a series of changes at the level of the development policy regime. These can be summarised in four broad historical periods, each building – unevenly – on the last (see Tab. 1). Each too extends across a number of interlocking realms – the organisation of financing of private investment and business activity, the constitution of the labour force through education and training policies, the innovation system and policy regime and the character of enterprise supports. The rest of this section briefly reviews these four different periods.

Industrialisation by invitation

Ireland began its pursuit of «industrialisation by invitation» in the late 1950s, although the politics of this shift are located well before in the 1940s (O'Hearn 2001; Ó Riain 2004). The economic, employment and emigration crisis of the

TAB. 1. *Ireland's layered developmental regimes*

Period (approximate)	Overall	Capital	Labour	Innovation	Enterprise
1971-1994	*Industrialisation by Invitation*	Foreign	Founding of Technical Education	Minimal Science Policy	Foreign Investment dominated indigenous industry
1994-2001	*Developmental Network State*	State agencies – direct aid and stimulation of private finance	Expansion of: Active Labour Market Policy and Postgraduate Education	Network of Technology Centres University Science Funding	Indigenous industry development
2001-2008	*Market Managerialism*	Speculative capital	Clientelist capture of labour market policy	Centralisation of innovation system	Focus on link of big science to large firms
2008-2013	*Austerity and Pragmatic Developmentalism*	State policy to attract private international real estate capital Vs State Development Bank	Outsourcing and under-resourcing of labour market supports	Network of Innovation centres focused on large Firms, especially foreign high tech firms	Pragmatic approach of the «Action Plan for Jobs» Local enterprise and (limited) labour market supports

1950s meant that the political space was there to develop this new approach to industrial development. However, the first decade of foreign investment policy proper in the 1960s was dominated by the link to the UK with UK firms accounting for the bulk of foreign investment in Ireland and in practice significantly crowding out domestic firms as these firms sought access to the Irish market, rather than using Ireland as an export platform (Barry *et al.* 2005). Over time, however, the Irish development project became increasingly Americanized. The first significant US investment came in 1971 when Digital Equipment Corporation set up a factory in Galway. Ireland secured an estimated 40% of the United States' foreign direct investment (FDI) in electronics in Europe from 1980 to 2000. Firms were attracted by Ireland's corporate tax rates that varied between zero and 12.5%, its supply of young (and increasingly skilled) labor, a supportive state and, increasingly, improved technological and innovation capacities (Gunnigle and McGuire 2001; Ó Riain 2004). In the process, Ireland came to have one of the highest proportions of foreign capital stock in the Organization for Economic Cooperation and Development (OECD) and to be among the most open trading economies in the world.

The policy of attracting FDI is a state project as much as it is a response to free market conditions. A large corporation's decision to locate in a given country is less dependent on free market conditions than on the conditions put in place by hierarchical state agencies. It is best seen as a system of competitive bargaining between corporations and states than a market transaction in the conventional sense. In Ireland, the government's Industrial Development Authority (IDA) took on the role of «hunter and gatherer» of FDI and became unusually powerful within the national state system. Working closely with its foreign «client companies», it provided a «one stop shop» for meeting their tax and regulation needs within the country, often promoting new policy measures based on their conversations with managing directors of foreign firms (an increasing proportion of whom were Irish-born). Thus the IDA combined planned targeting of key technology sectors with ongoing briefings from local managers of foreign firms. This contributed to reasonably strong economic growth in the 1960s and even the 1970s. By the early 1980s however, Ireland was in crisis once again.

For the 1977 election Fianna Fáil provided a plan for economic growth based on rapid fiscal expansion, providing a belated and sudden dose of apparently Keynesian policy. This was brokerage on a grand scale with the provision of selective benefits to a very large number of people in the society. Unfortunately it combined with significant structural economic underdevelopment so that most of the benefits of this expansion flowed straight out of the country through the purchase of imports. The foreign investment led development strategy had all the well known weaknesses of the disarticulated dualist economy built around these newly arrived multinational castles in the desert of the indigenous economy. However, continuing weaknesses in links between foreign and domestic firms, the low level of technical sophistication at many transnational corporation (TNC) operations, and the existing innovation system's lack of ability to capitalize on TNC resources hampered efforts to create a stronger industrial base. Using the foreign investment strategy Ireland wasn't entirely able to escape the limitations of its weak national system of innovation (Mjøset 1992; Ó Riain 2004).

In addition the expansion coincided with the emerging international debt crisis in the late 1970s and early 1980s. Just as Mexico and other countries were finding themselves in the midst of a dramatic debt crisis in 1982, Ireland ended up saddled with massive public debt and deficits in the same period. The liberal political economy and the politics of brokerage had interacted disastrously. After a period of political instability from 1981, a new Fine Gael-Labour coalition sought from 1983 to 1987 to rein in the public debt, with only limited success. By the mid-1980s Ireland's unemployment and emigration had soared and the Irish economy and indeed Irish society faced an exceptionally severe crisis.

The emergence of the developmental network state

Stabilised by a series of policy changes from 1987 onwards, supported by a series of «social partnership» agreements, the Irish economy began to take off in the 1990s. At the core of this economic and employment performance was a boom in exports, once more driven largely by American foreign investments in high-tech sectors. Ireland's wages and overall costs were highly competitive within Europe at the time but an explanation focused entirely on wage competitiveness misses key elements, including the significant expansion in production capabilities within the economy during this period. Although foreign firms in Ireland engaged extensively in «transfer pricing» and other forms of creative accounting, there was also a boom within the bubble. Employment in multi-national companies in Ireland became more professionalised and expenditure on R&D per employee increased quite significantly in a number of sectors, including in the growing domestically owned software industry.

Beneath the veneer of a flowering of Irish entrepreneurialism was a great deal of state coordination. Agencies played a crucial role in supporting and promoting this upgrading, especially in the Irish owned sectors through grant aid, soft supports, promoting associations and networking and providing and incentivising financing of businesses – working through a network of agencies to form a «developmental network state» (Ó Riain 2004). This stopped short of being a transformation of the national system of innovation, such as Senghaas and Mjoset had argued was central to development. However, it did represent a significant upgrading of industrial capabilities, public supports and export potential.

This upgrading was linked to two changes in the Irish political economy in the 1990s. First, a strengthened set of institutions emerged supporting the growth of Irish owned exporting firms, forming a crucial part of a Developmental Network State (Ó Riain 2004). Second, a system of neo-corporatist social partnership was established, based around a series of formal agreements from 1987 to 2009. While the Irish institutional model is often seen as an example of «competitive corporatism», this combination of new institutional networks in the innovation system and political economy came closer in the 1990s to a «creative corporatism», sharing key elements with the Nordic economies of the time, which themselves were transforming their systems (Ornston 2012; Ó Riain 2014). Each of these two institutional and political projects emerged in spaces created by the crisis of the 1980s – social partnership in the face of mass unemployment and social crisis in the mid-1980s and the Developmental Network State in the spaces that the crisis generated for projects other than foreign investment (Ó Riain 2004; 2014). Nonetheless, each depended on enabling conditions and forces – funds and support from the EU, favourable party politics and new coalitions between business, state and (in the case of social partnership) trade unions and civil society.

Ornston (2012) has recently compared Irish corporatism unfavourably with corporatism in Finland and Denmark. He argues that corporatism in Denmark and Finland was of a «creative» character while corporatism in Ireland was «competitive». In keeping with other analyses of Nordic economies in the 1990s and 2000s, Ornston argues that corporatism was reinvented in Denmark and Finland in order to support industrial transition, redesign welfare state supports and adapt systems of social protection and wage bargaining and industrial policy supports to an era of globalisation and structural change. Ornston argues that in Ireland, while significant advances were made, corporatism remained at the level of «competitive corporatism». Rather than emphasising upgrading and dynamic adjustment, this form of corporatism emphasised labour market flexibility, wage restraint and the cost competitiveness of Ireland as a location for foreign investment and of indigenous companies. However, many of the elements that Ornston recognises in Denmark and Finland are also, as he himself notes, present in Ireland. The state did play a role in supporting dynamic adjustment among firms, supporting venture capital, research and development and other elements of the innovation system. In addition, especially in the 1990s, there were significant attempts to deepen the reach and scope of social partnership. These included the development of local area partnerships, policy committees addressing a variety of social issues, and significant expansion of public sector employment. It is perhaps best to understand Irish corporatism, at least in the 1990s, as the product of competing tendencies towards competitive and creative corporatism (Ó Riain 2014).

In keeping with this, significant changes occurred in the system of innovation itself. A government agency called Enterprise Ireland was founded in 1994 (initially called Forbairt, but re-named in 1998) to support Irish firms and meet the development challenges of growing an indigenous industrial capability. It had been preceded by many similar agencies. Their efforts are best explored through a brief account of Ireland's software industry, the star of indigenous development in the late 1990s. The software industry's success was heavily influenced by the country's industrial and innovation policy system and the impact of that system on relatively marginalized elements of high tech industry. In the 1980s and particularly in the 1990s, a series of entrepreneurs emerged and started small software companies. Some came from the multinationals, some from the universities, and many had international experience. These entrepreneurs formed a technical community somewhat separate from the foreign owned high tech sector and often were involved in lines of business that were quite different from the computer services companies of the 1970s and 1980s. Where many of the earlier companies had designed systems for large local firms, the new generation of companies were developing products for global technology markets.

Although some of these firms received financing from private sources, their link to the state agencies was crucial, with statistical analysis revealing a positive net effect of grant aid on employment, exports and ability to produce software products that promised increased revenue streams (Ó Riain 2004). The evidence we have suggests that state grants have had positive effects on exports and employment (O'Malley *et al.* 1992; Ó Riain 2004; Girma *et al.* 2008). More important than the funds involved is the form these supports took (see Breznitz 2007 for a similar argument regarding Israeli and Taiwanese state programs). Grant aid was small but was a way for firms to access a network of supports that included R&D networking, management development, training, mentoring networks, and more. In fact, as the IDA and Enterprise Ireland and similar government agencies learned from their «client» companies what the technology industry needed, they often responded by expanding their network of supports or by promoting new sources of labour, capital and technology within the industry. It was the state that drove the new supply of technical labor in the late 1970s and early 1980s, in response to foreign firms and not demand from students. Although the improvement in venture capital financing in the 1990s was partly driven by private «business angel» investors (Breznitz 2007) the state played a leading role in enticing new funds and investors into this market, especially at crucial moments such as before the Celtic Tiger boom had made Ireland an attractive market and right after the dot.com bubble burst in 2001.

State agencies sponsored the activities of industry associations and technology centers. The state played a critical role in the creation of a network of industry and trade associations, universities, innovation and technology centers and other fora and groups which provide an associational infrastructure for information-sharing, cooperation and innovation. While bodies such as the Software Manufacturers' Association, Software Localisation Interest Group and the Programmes in Advanced Technologies (PATs) (which created centers of small-scale applied research within the higher education system) were outside the state or semi-autonomous from it, in most cases they had been founded through state initiatives and underwritten by state guarantees and funding.

A variety of state agencies were engaged in promoting industrial development and in mobilizing social resources in pursuit of that goal. In addition to this developmentalism, these agencies operated as a network state – in their multiple connections to different firms, their attempts to influence firms through shaping their strategic activities and environments (rather than bargaining over key corporate decisions), the organization of the agencies themselves across a range of bodies and departments and the distributed accountabilities of different agencies and programmes. This «developmental network state» operated quite differently than the «developmental bureaucratic states» of East Asia, but has nonetheless had a significant effect on industrial development in an era of market liberalization (Ó Riain 2004).

At the end of the Celtic Tiger boom of the late 1990s Irish society had resources available to it that were hitherto unimaginable, including economic, institutional and cultural resources. However, it also faced significant challenges and contradictions in its model of development as a number of years of rapid growth had also created significant pressures. The boom of the 1990s lost its momentum between 2001 and 2003 during this period as growth rates declined, inflation increased and unemployment stabilised at around 4%. The industrial and export growth of the late 1990s also came to a dramatic halt between 2001 and 2003 when the dotcom bubble burst in the United States. This severely affected the high tech sector where computing manufacturing employment never recovered from the losses of this period, while growth in software did not resume until 2003. Nonetheless, in the macro-economy there were significant signs of over-heating, with increases in inflation for the first time in 10 years or more and significant wage pressure building in the economy. Industrial upgrading and innovation became all the more important in the face of this cost pressure. However, the trade-offs within the wage agreements created a squeeze on public investment and services, which were straining under the twin pressures of accumulated under-investment and increased population and economic activity.

Furthermore, certain social groups still experienced persistently high rates of unemployment linked to structural inequalities. The growing population, the increased economic activity and the shift of those outside employment from the unemployed to single parents and those on disabilities or otherwise and outside the labour force, posed significant challenges. Serious deficiencies in infrastructure in education, transport and health, among other areas, were significant issues in the 2002 election, during this period the politics of Ireland's economy seemed caught between a desire to continue with the growth model that had provided such dramatic improvements in employment and migration, or to face up to its limitations in terms of weak social investment and the problems of sustainability of infrastructure and social reproduction in the medium term. A significant debate seemed certain to ensue, possibly shaping the future direction of Irish development.

Market managerialism

However, this debate barely took place as the difficulties of 2001-2003 were shoved off the agenda by a new surge in economic activity, this time linked to domestic demand and especially a growing real estate bubble, driven by financial speculation. In fact, the 2000s saw the emergent DNS sidelined in two significant ways – through the centralisation and growing control of public and private managers over innovation policy and support, and through the emergence of a massive, speculative nexus of real estate and finance. While the first narrowed the basis of innovation policy, even as the resources available grew, the second brought Ireland to the brink of disaster in the crisis of 2008.

In the late 1990s, Ireland's enterprise and innovation policy shifted from focusing on enterprise development and small increases in R&D support to placing science, technology and research firmly at the centre of industrial policy. The major initiative of the late nineties was the establishment in 1999 of Science Foundation Ireland (SFI), with historically unprecedented funding for research. SFI's goal was to promote research in information and communications technology (ICT) and biotech, typically by attracting international scientists into the university system. The existing networks of researchers, businesses and state agencies developed in the 1990s to promote smaller scale innovations were generally closed (e.g. the Programmes in Advanced Technologies, the National Software Directorate) or marginalised as the SFI came to dominate the world of science and research.

In the initial years of these new institutions and funding initiatives, these funds came with relatively few strings attached. PRTLI funding was awarded to institutes that were seen to serve the purposes of national development but also that filled important needs within the academic landscape and across the range of disciplines. The institutes had a great deal of discretion in how the funds were used within the funding period, subject to general consistency with the mission of the institutes, reporting requirements and satisfactory outputs in terms of research activity and publications. In many respects, these new institutes became the focus of the associational life of research and innovation, as many of the earlier generation of innovation centres became less important and programs like the PATs were discontinued.

However, the new funding was tied up with an organizational model that ultimately undermined some of its goals. Market-inspired demands for self-sustaining research centres were combined with an increasingly managerial emphasis on schemes and programmes that demanded that researchers and universities respond directly to centrally defined policy goals and targets. Markets and managerialism combined to weaken the networked system of supports that had developed in the 1990s.

This question of «sustainability» of funding and commercialization of research became even more central to policy in the 2000s. PRTLI schemes increasingly demanded that institutions include in their applications plans to become self-funding. Sources of external funding and internal matching funds were to be specified. Meanwhile, SFI programs came under increasing pressure to generate commercial spin-offs and were increasingly subject to external criticism for the low number of such start up firms.

In tandem with these pressures towards the marketization of research, the innovation system also became more closely controlled by central organizations. When the new streams of funding started to emerge again in late 2005, the terms of the funding applications had shifted significantly. New funding mechanisms were introduced that linked increases in funding directly to universities competing with each other to serve government goals. For example, a portion of the university «block grant» was cut and moved to a «Strategic Innovation Fund» (SIF) where universities competed for funding based on proposals to change the structure of their programs to push them to undertake reforms to increase access for disadvantaged students, develop innovative teaching techniques, improve oversight, and other goals. The scheme was designed not to fund ongoing programmes but to push universities to undertake new activities out of existing funding.

Furthermore, the spaces where researchers and innovators could interact and share ideas – the crucial public spaces where conversations could take place (Lester and Piore 2004) – were weakened. The spaces where science and industry could interact that had developed by the end of the 1990s were eroded as the institutions that supported them – such as the PATs – were closed or marginalized. New spaces that emerged through SFI schemes heavily favoured the foreign firms that already had the research capacity to absorb the kinds of research being done through SFI.

Even more dramatically, financial markets began to dominate the landscape. In the new government's budget of 1998, capital gains tax was reduced from 40% to 20% with a view to releasing pent up capital into the economy. As we have seen, this goal was rapidly achieved – in the decade after the reduction of capital gains tax to 20% in 1998, bank lending in the economy grew 466%. However, that capital flowed primarily and rapidly into property investment. In the decade after the reduction of capital gains tax to 20% in 1998, these resources expanded as bank lending in the economy grew 466%. However, the vast bulk of these monies went into the property sector with construction, real estate development and housing finance accounting for the vast bulk of the increase and of the total lending by 2007. Despite rapid increases from a very low base in lending for R&D, lending to computer services firms remained a tiny proportion of lending and lending to hardware firms declined, as did the industry. Construction and real estate lending increased from 7% to 28% of total lending over the period, In. contrast, the high profile high tech sectors attracted less than 2.5% of credit (Ó Riain 2014).

This was reflected in the impact on the real economy. White (2010) has documented private sector failure to turn liquidity into investment at the national level. He finds that from 2000 to 2008 investment in housing stock increased by 156%. Productive capital investment increased by 66%, or € 70 bn. However, of this 70bn road building made up 13.5 billion, another 20bn was invested in retail infrastructure (building shops etc), public buildings took up 9bn and investment by semi-state companies and energy/ utilities companies took up a further 10 bn. It is no surprise that employment in private export-oriented sectors flatlined during this period. Ultimately, in an era when bank lending increased by three to four times, inflation adjusted productive capital stock spend by private enterprise increased by 26% between 2000 and 2008. Productive investment in Ireland continued to be largely been driven by foreign private capital and domestic and EU-funded public funding and supports.

By the eve of the financial crisis of 2008, the developmental network state had not disappeared but was under internal attack from a new centralism and market orientation and was competing forlornly for resources with a speculative juggernaut of finance and property. In such circumstances, the temptation was always that the cash nexus would become the focus of political exchange. In the 2000s, partisan politics and in particular the politics of the electoral cycle came to dominate the political landscape once more. As the bargains struck through social partnership and through partisan politics expanded in their scale through the 2000s, they relied most heavily on the return of after tax income to citizens across the income distribution. While inequality persisted and significant weaknesses in labour market participation continued, households saw significant real increases in wages and as the decade went on social benefits. However, the fiscal and political foundations of a broader «creative corporatist» social contract were increasingly hollowed out (Ó Riain 2014).

In 2008 these forces were central to a new crisis, even more fundamental than those that preceded it. The crisis was five-fold (NESC 2009). The core was a *financial* crisis – an unholy combination of property speculation by developers, reckless lending by bankers and lack of governmental oversight and regulation created a property and banking bubble that brought the Irish economy to its knees when the international financial system ran into trouble in 2008. The liabilities of these banks were guaranteed by the state in 2008 and developer loans and assets have been taken under state management. A *fiscal* crisis mushroomed as the public finances were burdened with the cost of bailing out failing banks but also with a growing deficit as tax revenues associated with the asset bubble disappeared. This was reinforced by an *economic* crisis. Thought of by many as a problem of competitiveness, more important was weak and collapsing productive investment and domestic demand. These three dimensions drove a major *social* crisis based on negative equity and mortgage arrears, cutbacks in public services and disastrous rises in unemployment. Finally, Ireland faced a *reputational* crisis, particularly evident in the reluctance of international lenders to finance the government debt – culminating in an EU-IMF bailout in November 2010. Ultimately these crises hastened and were reinforced by a sixth, broader crisis of *political* capacity, solidarity and action (Kirby and Murphy 2011).

Austerity and contested development

One of the largest austerity policies in recent world economic history was undertaken in response to the crisis (Whelan 2010). Wage competitiveness improved and domestic demand stagnated. Public finances improved as public services were weakened. The government promised significant tax cuts even as the foundations of public finances remain shaky. Nonetheless, more than six years after its crash, Ireland's economy is now showing signs of a significant recovery. In particular, employment is growing and tax revenues are increasing, while budget deficits are narrowing.

However, Ireland's ability to move forward is threatened by the same trends that contributed to its crash. While banks are not lending as recklessly as they once did, they have provided little credit to productive businesses, and the government has only just created a long-promised state investment bank (which now seems to be stimulating new levels of activity in private bank business lending). Both finance and property are once again being boosted as growth sectors, and rising rents and prices are putting pressure on households and small businesses. Indeed, there are increasing initiatives around investment in property – for example, establishing Real Estate Investment Trusts to attract small investors (with few similar opportunities for such investors to participate in similar mechanisms of investment in different sectors) and the very widespread activities of NAMA (Ireland's «bad bank») to reconstitute Ireland's commercial property market through international investment.

Nonetheless, alongside this emerging re-financialization, there are some interesting new developments in financing, enterprise and innovation policy. In financing, not only were banks a huge burden on the Irish citizenry after the crisis but there was little evidence that banking organisations have the relevant skills and orientation to promote productive investment. Oversight by the private sector (bank shareholders, stock market, credit rating agencies) and by the public sector (Financial Regulator, Central Bank, ECB) failed significantly to tackle these organisational failures (Ó Riain 2014).

The business lending expertise that exists among private institutions is at least as developed in the public agencies. Indeed, quite early in the course of the economic crisis, officials from Enterprise Ireland were sent to advise staff in the banking organisations on business lending (NESC 2012). The engagement between state industrial development agencies and export oriented businesses over a period of some decades has resulted in significant organisational learning (Ó Riain 2004).

The historical evidence in Ireland suggests no reason to expect that private lending and investment will lead recovery, even once conditions reach some degree of stability. Venture capital funding between 1997 and 1999 was lead by public sources with private investors following only when growth was already underway – despite an environment which has been clearly stabilised and where the early signs of growth were well underway (Ó Riain 2004; 2009). Similarly, it was public agencies that lead the recovery of venture funding after the dot.com bubble burst in 2001 (Ó Riain 2010).

After the crisis, a wide range of public schemes provided financing for enterprise – some longstanding and some newly developed (Department of Finance 2013) These included increasing efforts to create investment funds for different classes of firms in Ireland (including small start-ups, larger firms and distressed firms). The broad thrust of the approach has been to sidestep the difficulties of the banks and to seek out non-bank sources of financing for enterprise. Alongside this, and sometimes entangled with it, has been a policy programme (in the Programme for Government) for developing a State Investment Fund, which became the basis in 2014 of a new (and hotly contested) state investment bank – the Strategic Banking Corporation. At present, these tendencies co-exist within the financing area. The future of Ireland's financial world remains a contested field – but one that is deeply shaped by state policy and practice.

Similarly ambiguous signs emerge in the realms of enterprise and innovation policies. Some of these trends focus on market mechanisms – including state stimulated private financing and the outsourcing of labour market activation systems. Others rely more on centralised state governance, whether largely disciplinary (in relation to the universities) or accommodating (SFI and IDA work with foreign firms). There are also efforts to create institutions that can tackle major gaps in the network of enterprise supports – including Enterprise Ireland's extension of its mandate to additional firms, the integration of Enterprise Ireland and the Local Enterprise Offices to engage with smaller domestic firms, and the reform of vocational education committees to enhance the link between regional enterprise and education policy regimes. The «footprint» of Enterprise Ireland has extended in important and interesting ways but the required supports in financing and innovation may not be present and the local capacity to develop this system is still in question.

Even the agencies that operate these policies do so under the cloak of other justifications of their activities. Sometimes they appeal to the spirit of enterprise among their client companies, even as their everyday practices show that such a spirit of enterprise still requires a significant network of financial, organisational and social supports. At other times, they appeal to the spirit of planning in reports that identify key targets and measurable outcomes, even as everyday practices are, at their best, based on flexibility and iterative social learning. The Action Plan for Jobs (DJEI 2016) sits between these with an extensive list of policy measures that are only loosely connected (at least explicitly within the Plan itself). The plan is presented as the ultimate in pragmatism – a series of sensible actions to be put into place by set deadlines. However, there is more going on underneath as the Plan could be implemented in one or two ways. It might drive policy makers to focus narrowly on the delivery of discrete policy measures, operating (understandably) within policy silos. Or policy makers may seek each other out to connect across areas as the success of one measure is likely to depend heavily on the success of others. The impact of the Action Plan is likely to depend as much on these organisational questions as on the content of the plan's measures. This is a politics of enterprise that takes place far from the newspaper headlines but is crucial to developmentalism nonetheless.

Finally, in innovation policy itself some interesting developments are emerging. The overwhelming centrality of economic impact to innovation policy remains and exercises such as the Research Prioritisation Exercise, identifying fourteen priority areas for research funding based on importance to industry, reinforce this. However, there are other more complex trends. Within the innovation policy world itself, the re-design of SFI policy has placed increased emphasis on new Innovation centres which network together leading research centres within universities with the largest firms in the sectors in Ireland – mainly (but not exclusively) foreign. Under the cloak of «industry relevance», the organisational model has shifted from the commercialisation of research outputs through an intellectual property framework to an organisational structure that will place greater emphasis on ongoing dialogue in a semi-public sphere, as Lester and Piore (2004) suggest. In this context, new questions arise about access to this sphere and the kinds of return – internal and external – to this state sponsored construction of new spaces of innovation through communication. More generally, a new strategy for science and innovation is to be published in early 2016 and the political negotiations over this, within the innovation and economic policy worlds, have revealed a surprisingly wide ranging and successful coalition for a broader concept of innovation and greater focus on breadth of research and education. Within the subordination of innovation to economic impact, there appears to be a more complex politics emerging.

In a time of significant austerity and apparent re-floating of some financial bubbles, the politics of finance, enterprise and innovation appears more open than might be expected.

3. Rethinking states, innovation and development

In this last section of the paper we now briefly examine a series of questions that arise relating to the role of state developmentalism in the Irish economy, with reference to the account of the shifting policy regimes outlined above.

The «constitutive» role of developmental states

For Ireland, where almost all indigenous companies are SMEs, external supports are crucial to the set of capabilities that firms are able to access within their environment. Government policy can develop those supports, can encourage others to provide those supports and government agencies already play a crucial role in ensuring these supports exist and can get to the companies that need them. Therefore, enterprise policy goes far beyond setting and reproducing the correct «conditions» for firms to involve a much deeper and wide ranging role for policy than the conventional view suggests.

The close engagement of state agencies with firms does not necessarily involve «picking winners» but can involve «making winners» through three main mechanisms – the production of new industry capabilities; the creation of spaces where different actors can network their capabilities together and create new projects; and the promotion of employer rationalities that are favourable to industrial development, shifting firms' abilities and preferences. The state constitutes the worlds within which the firms of an industry are embedded, and through which they are sustained and develop.

What is being constituted through this activity? Most clearly, new resources and capabilities are being constructed. These include labour forces (e.g. Ireland's construction of a technical labour force, including new technical education institutions, from the 1970s onwards) and investors (e.g. the stimulation of a domestic venture capital industry). These resources do not arrive as neutral stocks of assets, however – they have particular characteristics, embodied for example in whether engineering labour is guided towards production engineering or R&D, or whether investing is patient or short term-ist. In part constituted from the developmental strategy, they quickly become actors and coalitions within that project.

The organisations of the economy are constructed in this process also. Firms are moulded through their interactions with state funders (and their development advisers), private funders (often stimulated by state programmes – emphasising venture capital over banks in the 1990s and perhaps now banks now taking the lead), mentors (organised through state networking programme), and so on. The form of Irish high tech firms has been profoundly influenced by the US focus of the «industrialisation by invitation» strategy. Furthermore, this is more actively promoted by the developmental state institutions. For example, new professional organizations have emerged, including the crucial discipline of project management which sits at the centre of the engineering model of work and employment. The links between the transnational technical community and the institutional field have been strengthened through state sponsored action. Both the IDA and Enterprise Ireland have long-established offices in San Jose in the heart of Silicon Valley. A network of sympathetic technology entrepreneurs and industry leaders was formed as the Irish Technology Leadership Group in 2007 in Silicon Valley. Furthermore, state agencies sponsored the activities of industry associations and technology centres.

Ultimately the constitutive role of the development state extends to the construction of the social relations and public spaces that are central to the social world of production and innovation. This is an ongoing role – even if it is often hidden from view (see Block 2010) – as firms are «always embedded» in these social worlds that make it possible for them to operate.

«Driving out the Bad with the Good»: The crucial «regulatory role» of innovation coalitions

We now address a number of key consequences that follow from this constitutive role of developmental states. Crucially, the construction of a «developmental coalition» can crowd out alternative projects in the political economy. Most obviously in Ireland, the debate has been between the emphasis placed on attracting foreign firms and the promotion of indigenous industrial development. This is a complex question that deserves longer treatment – with opportunities for various kinds of linkages between foreign and domestic firms co-existing with competitive pressures from the more powerful foreign firms. However, the Irish state has had some success with a strategy that has developed largely through a set of agencies that were increasingly separated over time from those that promoted foreign investment. The politics of creating new industries was intertwined with the organisation of state structure itself – creating space for the development of new capabilities of promotion of domestic industry required the protection of an autonomous organisational space.

Perhaps more significantly, developmental statism supported the emergence of firms, and a social world of production, that emphasised international orientation and technological innovation over the localism of many domestic firms. This agenda could well be significantly widened beyond the current «footprint» of Enterprise Ireland to take in more domestic firms – and efforts appear to be underway in that regard (e.g. through Local Enterprise Offices).

However, it is in relation to the financialisation of the 2000s that the potentially crucial role of a strengthened developmentalism and more powerful national system of innovation becomes clear. Carruthers and Stinchcombe (1999) emphasise that standardization and homogenization of differentiated underlying assets is crucial to the generation of shared expectations about future value and tradeablility. However, the analysis in this chapter suggests that this standardization may develop within relatively specific contexts – such that we need to pay attention to how liquidity may also depend on specificity and differentiation (e.g. the valuing of housing assets over others, and the specific institutional contexts that enable this). In addition, this draws our attention to the «translation points» where particular structures of liquidity interact with others, and the institutional practices and knowledge work that goes on at the boundaries between these structures.

The interlocking connections between different actors and institutional contexts – developers, bankers, rating agencies, regulators – proved crucial in generating the financial crisis in Ireland. This social world of finance marginalised the social world of technological innovation in the 2000s – in the world of labour where students flocked to finance and construction engineering rather to science; in finance where banks lent to property at rates that dwarved venture capital investments in tech firms, and in the real economy, where rising costs favoured property owners over new ventures. A more strongly institutionalised system of innovation would have weathered this storm of bubble growth more strongly and potentially proved a counterweight to the project of financialisation (albeit only if mobilised as part of a broader coalition). Given the difficulties of a strictly regulatory approach to governance in tracking the constant emergence of new instruments and practices of speculative finance, an alternative social world of innovation can be a vital ally of regulation – not just regulating bad practice, but driving out the «bad» with the «good».

Developmental states and the politics of the macro-economy

More broadly, this points to a significant role for developmental statism in the macro-economy. Often, the success of macro-economic measures depends on a suitable vehicle in the «real economy». We have just seen how a broader innovation policy might have tempered the financial bubble of the 2000s. Further back, in the late 1970s when the Minister for Industry and Commerce implemented a Keynesian pump priming of the Irish economy, the rewards flooded out of the national economy through spending on imports. The same Minister had sought to combine this monetary and fiscal policy with a developmentalist enterprise policy to capture these rewards but this policy arrived too late, and with little immediate effect. In retrospect, some of its effects were felt only in the boom of the 1990s. The employment and emigration crisis of the 1950s was rooted not simply in the protectionism that usually is blamed for the weak development of the economy but in the failure to develop a European-style industrial development project behind the protectionist shield.

Similarly, some of Ireland's most intractable contemporary economic and political dilemmas are linked to the weakness of the developmental project and the limitations of the national system of innovation. First, while Ireland brings in significant monies from the international economy, its ability to turn this to productive investment is weak, weakening the current account balance over time – this is largely due to the relative weakness of domestic enterprise. Second, economic debates are caught in a bind between the need to increase a wide band of relatively mediocre wages while improving competitiveness – emphasising the need for the «high road» of productive investment and greater innovation that an effective developmentalism can promote. Third, distributional politics are caught between a persistent inequality in market incomes and an effective but controversial redistribution using cash transfers – a politics that could be significantly softened by an enhanced bloc of productive domestic firms providing a new middle to the income distribution. Fourth, Ireland's public finances rest on a narrow base with employer contributions exceptionally low while an unusually high percentage of workers are outside the tax net. A developmental block of more productive firms could enhance both the employer and employee range of the tax base. Without further progress on the developmental project, these dilemmas promise to remain intractable. In the process, they also undermine the prospects for more social democratic policies as support for a more egalitarian economy and society currently depends heavily on active redistribution across a society based on high rates of market inequality. Developmental statism can enlarge the possibilities for new forms of social contract.

4. Conclusion

Developmental statism has been a persistent thread in Ireland's economic history. As a project, it remains crucial but fragile within a broadly liberal political economy (see Ó Riain 2014 for a fuller discussion of the meaning of liberalism in this context). We have seen however that state developmentalism can be easily derailed. This can happen in a variety of ways – through the evolution of the developmental and innovation institutions themselves (e.g. growing centralism in innovation policy in the 2000s) and through competition from other projects in the political economy (e.g. financialisation in the same period). Finance for development was undermined by the speculative property investment complex of the 2000s (Ó Riain 2014) – falling victim to the market.

More generally, developmental statism extends far beyond the narrow roles of promoting exports or enhancing innovation that are often attached to it. In practice, such roles take state agencies far beyond the boundaries of effective exporting into areas that overlap with social investment and welfare politics. Some of these connections are direct – for example through labour market policies. More broadly, in all these areas discussed, everyday development supports are part of a political process with the character of labour forces, firms, industrial priorities, forms of research activity, organisational structures and strategies, financial systems, and so on, all shaped by the development policy trajectory – and coming to shape it over time. In the process the politics of state developmentalism, and of innovation as part of that, comes to shape the political economy as a whole through its interaction with other economic projects and with macro-economic trends.

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The Shifting Politics of Innovation and State Developmentalism in Ireland

Summary: This paper examines the search for an innovative economy and economic development in Ireland, a country that has both undergone a rapid period of growth and change and experienced extreme economic volatility. This paper explores this history of boom and bust through an exploration of the trajectories of the project of state developmentalism across the periods of Ireland's modern economic history. In the process, it examines the character of the shifting developmental state structures and strategies, of the ebb and flow of state developmentalism within the national political economy as a whole, and of the dilemmas of the macro-economy that continue to be posed by the incomplete, uncertain project of state developmentalism in Ireland.

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