Industrial policy in Northern Ireland: past, present and future

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Introduction

The 'institutional turn' within economics since the 1970s has led to a range of previously long standing topics - such as nature of the firm or externalities - getting re-examined through a new institutional 'lens'. Consequently there is now a greater understanding of how formal and informal 'rules of the game', such as property rights or attitudes to religious minorities, explains economic performance (North, 1990). The 'institutional turn' accompanied a recognition that the study of economic history is in large part the study of developments beyond those phenomena explicable only in terms of price theory. The influential work of Acemoglu and Robinson regarding institutions and development exemplifies the continued relevance of this recognition (Acemoglu and Robinson, 2013). It has been concluded, as in Acemoglu and Robinson's work, that it is not inevitable that countries arrive at the most efficient institutional arrangements (North, 1990; Olson, 1996; Acemoglu and Robinson, 2013). Consequently, it is also probable that inefficient institutional arrangements will persist, and consequently "big bills" can remain on the sidewalk (Olson, 1996, p.23).

In principle similar mechanisms that drive convergence in living standards between countries should offer insights into regional economies within individual countries (Olson, 1996; FitzGerald and Morgenroth, 2019). It is the case for instance that insights from cross country competitiveness studies provides insights to those studying regional economies (Birnie et al, 2019). Regional economic differences, all other things remaining equal, should however be less than cross country differences because of the existence of both automatic and discretionary redistributive mechanisms. Fiscal coinsurance, involving the transfer of tax revenues and expenditures, tends to offset regional inequalities within countries (Kaldor, 1970; FitzGerald and Morgenroth, 2019). Fiscal coinsurance is a relatively automatic feature of the public finance system that tends to transfer resources from rich to poorer regions within a country (Kaldor, 1970; FitzGerald and Morgenroth, 2019).

In this paper, however we focus on a more discretionary aspect of economic policy: namely, we are concerned with industrial policy. Industrial policy has been defined in a variety of ways by both its critics and supporters (Bailey, Cowling and Tomlinson, 2015; Shackleton and Zuluaga, 2016). However, for our purposes we eschew any narrow definition, and instead follow Aiginger and Rodrik's recent approach and discuss industrial policy as involving any targeted microeconomic policy aimed at nurturing and developing manufacturing (Aiginger and Rodrik, 2020). Whereas earlier theoretical justifications for industrial policy concerned themselves with the correction of market failures, newer ones suggest that the government can actively shape and create markets (Mazzucato, 2016). Translating such rationales into improved UK economic outcomes has proved a challenge, however (Crafts, 2007; Shackleton and Zuluaga, 2016, p.6). It is particularly noticeable that other countries have had more success with industrial policies in the last three decades than the UK (Bailey, Cowling and Tomlinson, 2015). The poor UK record may then tell us more about the constraints under which industrial policy was designed rather than any innate conceptual weakness in policies aimed at nurturing and developing manufacturing.

Selecting sectors that will benefit from activist policy implies that governments have the information to complete this task. Industrial policy in the UK has suffered from the inability of the government to successfully pick 'winners' (Shackleton and Zuluaga, 2016). Informational problems are not unique to the conduct of industrial policy, however.[1] However, industrial policy has other limitations directly traceable to underlying institutions. There are problems inherent in industrial policy even if ex ante the correct 'winners' appear to have been selected: soft budget issues may arise for example (Robinson and Torvik, 2009). Even supporters of activist industrial policy concede that it suffers from the defect that through lobbying industries may succeed at appropriating returns while socialising risk (Mazzucato, 2016). In other words, institutional design may be crucial in explaining the record of industrial policy.

We discuss the evolution of industrial policy in Northern Ireland (henceforth NI) in this paper and the structure is as follows. We will first outline historical record of policy under devolution 1920-1945 before discussing the record after the introduction of Industries Development (NI) Act in 1945. This Act, with its emphasis on factor endowments, ushered in the focus on capital grants as the favoured approach to industrial policy. Further sections discuss the relationship between the failure of the region's industry to keep pace during the Golden Age and the interconnections between civil unrest and industrial policy. The analysis then turns to the record since 1998 and the future direction of policy. Discussion covers Brexit and it also includes considering the relevance of the recent 'cash-for-ash' scandal in thinking about industrial policy. In the conclusion attention shifts to explaining persistent problems in industrial policy and relates this persistence to insights gained from the contemporary academic literature.

The Historical Record of Industrial Policy

1920-45

Ulster participated in the 'first industrial revolution' (Ó Gráda, 1995; Bielenberg, 2009). Sectors such as shipbuilding, linen, textile machinery, rope-making and tobacco drove Ulster's economy during the nineteenth century. This pattern differed from the more agrarian-based pattern experienced on the rest of island (Best, 2018, p.176). Between the mid-nineteenth century and 1914 shipbuilding was the fastest growing industry. The Belfast shipyards were the largest industrial employer on the island (Bielenberg, 2009, p.128). The roots of industrial decline set in early, however. Birnie and Hitchens observed that as early as 1914, weaknesses were to be found in the ability of Ulster to adapt to structural change (Birnie and Hitchens, 1999, p.4). The sectors that would form the basis of the so-called 'second industrial revolution' of the 1880s and after, such as electrical engineering and chemicals, for the most part were the very industries that bypassed Ulster.

In terms of a tradition of 'industrial policy' within Ulster, though the use of the term 'industrial policy' may be regarded as anachronistic, it was the case that the development of shipbuilding and linen in Belfast was not entirely due to market forces. Indeed it was a 'nudge' from what Ó Gráda terms 'municipal socialism' which may explain the origin of both sectors (Ó Gráda, 1995, pp.295-96). Furthermore, the development of the linen industry as far back as the 1820s was aided by regulations and interventions from the Linen Board aimed at encouraging development of the industry (Brownlow and Geary, 2005). Ulster's commercial and industrial leaders were mostly Protestant during the nineteenth century; this would have political ramifications as there was a strong overlap between the composition of its business elite and its political elite. Opposition to Home Rule was indeed led by this coalition of political and business leaders (Brownlow, 2006). This coalition culminated in the formation of the original Ulster Volunteer Force (UVF) in which business leaders played key organisational and financial roles (Bowman, 2012).

After partition the connections between the business and political elites continued and manifested itself in the allocation of industrial subsidies (Jordan, 2020). The connections extended down the social pyramid. In a situation with limited electoral competition there also was an overlap for leaders between potential voters and potential employees. While the decline in the old staples of shipbuilding and linen goes some of the way to explaining the economic predicament during the interwar period, NI also failed to stimulate new industries sufficiently (Johnson, 1985). Those industries such as automobiles and consumer durables that emerged elsewhere in the UK in the 1930s for instance did not evolve as major industries (Birnie and Hitchens, 1999, p.4).

Recent research indicates that a large part of the problem of the interwar economy derived from the fact that business and the devolved government had an over-intimate relationship that delayed necessary structural changes (Jordan, 2020). This process hindered job creation, contributed to unemployment and was arguably only restrained by a combination of export growth and the modest scale of the fiscal transfers involved (Jordan, 2020). As we will see below, after 1945 as industrial policy became more important, and the scale of transfers increased, this kind of rent-seeking situation intensified.

1945-72

The Industries Development (NI) act in 1945, which was modelled on Britain's Distribution of Industry Act 1945, established the basis for provision of selective assistance for employment creation. The Act focused mainly on new industrial projects. Subsequent legislation in the 1950s allowed grant aid for the purpose of re-equipment and modernisation with no employment test (Harrison, 1986, p.55). Despite these interventions, NI started to deindustrialise prior to either the outbreak of civil unrest or the economic shocks of the 1970s.

Table 1 illustrates the contraction in headline manufacturing employment between 1949 and 1966. However, below this headline figure the picture was more mixed when we consider productivity and sectoral shifts. In four sectors (Food, Drink and Tobacco, Chemicals, Paper and Printing and Mechanical Engineering) there was an increase in employment and a convergence on British productivity levels. The contraction in Shipbuilding and combined Textiles and man-made fibres employment in contrast points to the ongoing problems within the staple industries. It is notable that that the few sectors where productivity levels exceeded Britain's were often those where multinationals entered the NI economy after 1945.

Table 1. Northern Ireland net output per head, 1949-73 (NI/GB, GB = 100)

	Numbers employed in sector in June 1949	**Numbers employed in sector June 1966**	**1949**	**1958**	**1963-73**
Total Manufacturing	207,350	192,590	71	68	84
Food, drink and tobacco	20,890	30,860	80	87	106
Chemicals	1,610	2,880	88	n.a.	121
Metals	1,220	470	n.a.	41	72
Mechanical engineering	14,180	30,080	65	77	89
Instrument engineering	-	-	91	89	76
Electrical engineering	-	-	75	83	79
Shipbuilding	19,560	9,530	n.a.	n.a	59
Aerospace	14,900	4,350	n.a.	n.a	70
Metal goods	1,980	3,080	n.a.	91	89
Textiles	52,250	55,170	67	71	73
Man-made fibres	20,910	-	n.a.	n.a.	138
Clothing & footwear	31,240	27,310	70	71	71
Bricks, pottery, glass & cement	-	4,080	93	91	95
Timber & furniture	-	5,080	73	95	80
Paper & printing	5,900	6,930	73	75	79
Other manufacturing	-	-	n.a.	60	80

Notes: in order to make Census of Production figures consistent with those recorded in the Ulster Yearbooks, a number of calculations were performed. In the Ulster Yearbook 1950 there is only an entry for 'Other Engineering and Electrical Goods' and instead of Aerospace there is 'Vehicles (excluding ships)' in both 1950 and 1966/68 yearbooks; for textiles we include a combination of the Ulster Yearbook's categories of 'Flax processing ad scrutching', 'Flax spinning and thread manufacture' and 'linen' weaving. For man-made fibres we include 'other textiles' and categories for 'Metal manufacture' and 'metal goods not elsewhere defined' in both 1950 and 1966/68 yearbooks. In Ulster Yearbook 1966/68 the relevant entries were restricted to the broad categories of 'Engineering and electrical goods' and 'Textiles'.

Sources: Ulster Yearbooks 1950 and 1966/68, Census of Production (Birnie and Hitchens, 2001, p.5).

Somewhat counterintuitively, the general disruption caused by violence from the late 1960s did not translate into the economic indicators until 1971 (Ministry of Finance Economic Section, 1972). Indeed in 1971 the index of industrial production rose by 6.7% compared with 0.9% for the UK as a whole.[2] The apparent resilience of the region's manufacturing sector during the early years of the Troubles cannot hide the fact that industrial performance was unsatisfactory during the Golden Age (Crafts, 1995).

A further clue to the political economy sources of problems within industrial policy can be found in the rise and fall of Cyril Lord's carpet firm (Ollerenshaw, 2006). Cyril Lord, which was established within NI as a private limited company in 1945, but did not begin production in NI until the 1950s, grew off the back of ever more generous government financial assistance. However, the firm had a range of problems in its business model, not least of which was what Ollerenshaw has described as Lord's 'pathological optimism'. By November 1968 the firm was in receivership, by the time the firm collapsed Lord's debts of £7 million were set out before Belfast High Court (Ollerenshaw, 2006). The Cyril Lord case is just one example of a more general insight: grant-aided firms could rise and stimulate output and employment growth; sustaining such successes was more difficult than initially attracting new industries.

Economists at the time thought that the devolution of industrial policy, with its associated ease of political access, was an advantage (Carter, 1954; Brownlow, 2007a). Unlike in Britain, disbursement of grants was subject to limited oversight. After 1945 the overlap between business and political elites was to prove crucial as it created substantial conflicts of interest that ensured industrial policy did not always benefit the most socially optimal project. In 1963 regulations concerning conflicts of interest were brought into line with Britain. Empirical evidence demonstrates that this institutional change (when combined with increased resources being allocated to industrial policy) offered better economic outcomes (Brownlow, 2007a; 2007b).

So before 1969 there had been a short political-economic 'window of opportunity' in terms of refocusing policy towards a more growth-enhancing direction. Investment inflows evaporated in the wake of civil unrest. The conflict removed any prospect of an inward investment and tourism-based approach (Brownlow, 2013, p.295-96). The obstacle to reform was not simply due to the onset of civil unrest, important as that was; instead violence compounded an already weak underlying economy. As Ó Gráda has noted a number of barriers to successful industrial restructuring predated the Troubles (Ó Gráda, 1997, pp.130-133). While there were industrial policy failures, the complexity of the situation would have tested even the best designed policy.

After 1964, a development programme was established by the devolved government to reverse industrial decline. The unfolding political situation led to the regional government's economic advisors to fear that 'vicious circle of political instability and industrial decline' was emerging (Matthew et al, 1970, p.3). This diagnosis was very quickly communicated; this may in turn have had further negative economic repercussions (Brownlow, 2015; 2016). Any pain or gain associated with a process of creative destruction was never going to be the centre stage of regional industrial policy. The key tool was to continue offering higher subsidies than those available in Britain (the so-called 'inducement gap'). The creation of a new Northern Ireland Development Programme, 1970-75 reflected this approach. However, in response to the introduction of internment without trial, violence spiked upwards in August 1971.

HM Treasury, because of the apparent resilience of manufacturing 1969-71 mentioned earlier, was initially reluctant to accept the linkage between violence and economic downturn (Brownlow, 2015). However, it is notable that it was the Treasury that was instrumental in ensuring the Stormont government appointed Sir Alec Cairncross to write report on how violence and industrial weakness interacted. Cairncross agreed with the cumulative causation argument. He argued that public funds were needed to stimulate investment and thereby aid failing firms. Cairncross suggested that the medicine should take the form of the creation of the Northern Ireland Finance Corporation (NIFC), which endowed with a £50 million fund, was to endow otherwise sound businesses with loans and guarantees to offset closure or contraction due to violence (Brownlow, 2016, p.1503). As violence escalated, Belfast-based officials were increasingly drawn towards more activist approaches to industrial policy. The Treasury, in contrast was most concerned that pursuit of the inducement gap would lead to an excessive growth in public spending. Other parts of Whitehall were far more sympathetic in ensuring NI maintained special treatment.

1972-98

The 1970s represented an extremely challenging period for economic performance. There was a virtually sustained decline in the index of manufacturing production between 1973 and 1981. Manufacturing output contracted by 5 per cent per annum in the period 1973-79 (and a further decline followed with the 1979-82 recession) (Brownlow, 2013, p.297). So in addition to political violence induced uncertainty, global macroeconomic instability conspired to unravel the legacy of previous industrial policy. Rising oil prices, excess capacity in European synthetic fibre production as well new competition all destroyed the synthetic fibre industry (Brownlow, 2013, p.297). The last vestiges of the linen complex had disintegrated and Harland & Wolff remained viable only on the basis of public subsidy.[3] By the end of the 1970s policymakers faced a formidable challenge on at least two fronts: first to promote a degree of political stability in which existing firms could invest with confidence; second, the need to reinvigorate the region's manufacturing sector against the backdrop of violence (Brownlow, 2013, p.297). The combination of deindustrialisation and lack of political progress made policymakers susceptible to risky projects that other industrial development agencies had rejected.

After the introduction of direct rule in 1972 the industrial policy package became more interventionist. For example, the policy architecture changed again in May 1976 with the NIFC being replaced with the Northern Ireland Development Agency (NIDA) and a new tripartite Northern Ireland Economic Council was created to advise the Secretary of State. By 1976, a new report, written under the leadership of George Quigley of Northern Ireland's Department of Commerce, and produced with the assistance of Whitehall's interventionist Central Policy Review Staff (CPRS), shifted policy towards state entrepreneurship (Simpson, 1976). The report, reflecting the political situation, was very much concerned with employment rather than productivity (Gibson, 1977). Moreover, the report argued also in favour of an inducement gap (and it posited that such a gap would act as a risk premium). Such generous subsidies were viewed as attracting 'blue chip' inward investment directly and a second indirect wave of what later economists would call 'flying swan' projects (Brownlow, 2016, p.1504).

The failure of De Lorean Motor Cars Limited (DMCL) did not occur in an institutional vacuum. John De Lorean wanted a favourable combination of high subsidy and weak oversight. Such a combination would allow him to socialise the risk as well as appropriate personal rewards (Brownlow, 2016, p.1502). There were a range of design problems in the initial contract of the agreement bringing DMCL to Dunmurry and these flaws go much of the way in explaining what went wrong (Brownlow, 2016, pp.1506-7). The archival evidence demonstrate that the original contractual design, sunk cost and political considerations goes much of the way in explaining why the Thatcher government continued to fund the project (Brownlow, 2016). Despite De Lorean's contractual breaches, the NIDA or Department of Commerce were reluctant to sue. The possible explanation is that such litigation would result in negative publicity for DMCL specifically as well as the region's industry more generally (Brownlow, 2016, p.1509).

In the wake of the De Lorean debacle, industrial policy was reorganised once more. In September 1982, NIDA and the industrial development organisation part of the Department of Commerce, which had previously been responsible for the provision of financial assistance to industrial development projects, such as DMCL, were merged to form the new Industrial Development Board (IDB). Subsidisation by capital grant continued to be default setting of the IDB even during the 1990s (NIEC, 1997). In terms of performance of the IDB, empirical studies tend to conclude that the financial assistance it offered was insufficiently targeted. Moreover, there was little evidence that 'softer' aspects of improving competitiveness were any better served in the 1990s than in the 1980s (Gorecki, 1997).

Industrial policy continued to diverge from Britain's – in this case the Thatcherite agenda of privatisation and trade union reform – because of the simultaneous pursuit of economic and non-economic objectives (Brownlow, 2013, p.298). British Governments needed trade union support in order to implement the anti-discrimination legislation that culminated in the Fair Employment (Northern Ireland) Act 1989. That capital grants continued to be the preferred model of industrial policy even during the 'Thatcherite' 1980s is not as puzzling as it first appears when the existence of an 'interrelated strategy' is noted: economic restructuring had to be balanced against socio-political and strategic objectives; therefore the pace of supply-side reform could not move as quickly as in Britain (Brownlow, 2012).

Industrial Policy since 1998: Competitiveness, Brexit and Beyond

Activist industrial policy fell out of favour in developed economies during the 1980s; the global imbalances that grew in the 2000s as well as desire for industrial restructuring led to a renewed interest (Cowling and Tomlinson, 2011). British thinking on industrial policy reflected this shift. New Labour's landslide victory led to an industrial policy in Britain that was conspicuously different from that which had existed in the 1970s. By the mid-1990s the focus of a renewed industrial policy was 'competitiveness' (Crafts, 2007; Birnie et al, 2019).

NI's economic performance improved prior to 1997.[4] In the 1990s the formulation of a new direction of regional industrial policy was outlined by the release of *Competing in the 1990s* (DED, 1990) and *Growing Competitively* (DED, 1995) (Gorecki, 1997).[5]

By the late 1990s the limitations of regional industrial policy were more clearly understood. Gorecki posited that the operation of industrial policy had tended to reinforce the low skill-low productivity-low wage nexus within the region. The limitations of the region's management base and skill shortages were important obstacles to efficient restructuring. Yet despite the envisagement in 1990 that resources would shift away from capital grants to management building, innovation and workforce skills, the focus of industrial policy did not switch as quickly in this direction as was hoped.

Gorecki concluded that radical reform was required as by 1997 there had been limited progress in converting the aims and objectives within *Competing in the 1990s* into concrete policy implementation. Gorecki concluded that any improved performance during the 1990s was not the result of conscious industrial policy and indeed that 'a soundly based industrial policy was never fully implemented' (Gorecki, 1997, p.17). Consequently, as early as 1997 there was recognition that consensus existed on the type of policy that needed to be pursued and the way it needed to be formulated: rather, the issue was the continued failure of implementation. This failure was key to the failure of *Strategy 2010* to meet its numerous targets (NIEC, 1999).

Devolution was the springboard for yet another reorganisation of industrial policy with the formation in 2002 of Invest NI which involved an amalgamation of the IDB, LEDU and the Industrial Research and Technology Unit (IRTU). This kind of amalgamation had been posited in *Strategy 2010*. The first corporate plan of Invest NI, echoing the shift in the language that began in the 1990s, highlighted entrepreneurship and innovation. But the *Independent Review of Economic Policy* in 2009 produced a report that argued that Invest NI had still not shifted away from poorly directed subsidy (50% additionality) and that not enough high quality jobs were created.[6] So despite a further reorganisation of industrial policy competitiveness problems persisted.

Table 2 set out's out NI performance according to 11 pillars of competitiveness. From this perspective NI's competitiveness performance, based on a simple average, improved between 2010 and 2015. The pillars are ranked according with those experiencing the largest improvement being placed at the top. Education and skills and employment and labour supply were the only two pillars in which the relative performance of NI declined. In these cases while NI improved in absolute terms, competitor nations advanced more rapidly and so outperformed NI. The overall average for change in decile outlined only a modest improvement (0.1) (Birnie et al, 2019).

Table 2. Changes in the relative competitive performance in the pillars of the competitiveness scorecard during 2010-15

	Five years previously	Current	Change in decile
Business Performance	7.2	5.8	1.4
Physical Infrastructure	6.3	5.9	0.4
Macro & fiscal	7.6	7.2	0.4

Environmental Sustainability	6.5	6.5	0
Quality of Life	5.3	5.3	0
Business Environment	4.8	4.8	0
Innovation, Research and Development	6.4	6.4	0
Productivity	8.0	8.0	0
Education & Skills	5.4	5.9	-0.5
Employment & Labour Supply	6.8	7.3	-0.5
Overall Average	6.2	6.1	0.1

Note: Decile rankings are from 1 to 10, where 1 marks the decile of comparators with the highest competitive position and 10 the decile with the lowest position. A positive figure in the Change in decile column indicates an improvement in Northern Ireland's relative competitiveness.

Source: Johnston and Heery (2016) Presented in Birnie et al (2019), p.1500.

So contra the objectives of *Strategy 2010*, there has not been any step improvement in the region's competitiveness performance. Given that competitiveness is the modern rationale for industrial policy, it suggests a need for a better designed policy. In this light, the attempted redirection of industrial policy towards small firms and R&D may, because innovative capacity rather than size may be crucial in raising regional competitiveness, sustain a mixed rather than improved performance (Mac Flynn, 2015).[7] In early 2017 the NI Executive produced *Economy 2030* a document aimed at improving the performance of specific sectors. However, even this document aims at raising performance through similar measures as before. It is thus understandable why some have suggested that *Economy 2030* provides an outdated analysis (Mac Flynn, 2017a).

The 'cash-for-ash' scandal associated with the flawed Renewable Heat Initiative (RHI) scheme has been examined in detail in both journalistic and official outlets (McBride, 2019; Coglin, O'Brien and Maclean, 2019). While the RHI scheme had environmental rather than industrial development objectives, the scandal had echoes in the earlier 'Seenozip' scandal in the early 1960s.[8] Likewise, the contractual failings and role of lobbying that gave rise to problems in the Cyril Lord and De Lorean cases also contains strong similarities to those witnessed in the RHI case.

McBride's account makes many observations about the causes and consequences of the scandal of interest to an economist interested in institutional failures. McBride identifies two crucial and related governance failings that gave rise to a soft budget situation. First, McBride identifies the incorrect belief among politicians and officials within Stormont that RHI would be paid for via Annually Managed Expenditure (AME), i.e. it would be entirely funded from Whitehall. This erroneous assumption gave rise to the view within Stormont that the RHI budget would be viewed as being extremely soft (McBride, 2019, pp.35-36). Second, and arising from the first erroneous assumption, the decision was made to deviate from the British RHI regulations cost controls were removed. This lifting of cost controls enabled the

RHI budget to swell beyond the ability of the NI Executive to fully fund it. (McBride, 2019, pp.45-46).[9]

An ongoing challenge to formulating industrial policy is Brexit.[10] Accession to the then Common Market helped move the UK economy in the direction of greater innovation, competition and productivity (Crafts, 2019). This line of argument implies that after the UK, including NI, leaves the EU, significant thought may need to be given to formulating an industrial policy that substitutes for the innovation and competition benefits associated with EU membership.[11] Creating an industrial policy after Brexit that offsets the innovation and competition benefits of EU membership faces the additional obstacles related to competitiveness set out in Table 2. Likewise, formulating cooperation in industrial policy between Ireland north and south is easier said than done.

After 1945, with the creation of capital grants and advance factories, NI was earlier than its southern neighbour in pursuing inward investment. Yet it is the case that Ireland's export platform strategy has proven the more successful. Indeed it was FDI manufacturing businesses that stimulated Ireland's export-led economic growth (Best, 2018, p.178). This reliance on FDI was enabled by a favourable corporation tax regime, investment in education and the process of European economic integration (O'Rourke, 2017; FitzGerald and Morgenroth, 2019). Ireland by decreasing its export dependence on Britain likewise allowed it to shift into faster growing export markets (Best, 2018, p.177).

NI, as part of the UK, faced legal and administrative constraints that complicated its ability to devolve corporate taxation even once legislation was passed (Birnie and Brownlow, 2018). In addition the Treasury have generally been lukewarm at best on the prospects for corporate taxation devolution (Varney, 2007; HM Treasury, 2011). Developing human capital in NI is another aspect of the Irish model that also has strong political ramifications because it involves educational reform. Yet the Irish model, as successful as it is, has its own difficulties that might limit the attractiveness of imitation. The spatial and sectoral imbalances within the Irish economy as well as its 'innovation deficit' are persistent features that policymakers at Stormont would be wise to avoid (Best, 2018). In the concluding section which follows we consider lessons that the institutional literature may provide for the future direction of industrial policy.

Conclusions

Once we integrate institutional considerations from the recent literature into our discussion we can better understand why it has proven so difficult to move NI industrial policy to a better equilibrium. That industrial policy did not rapidly become more efficient reminds us of Olson's insights regarding "big bills on the sidewalk": the most efficient institutional designs do not automatically emerge (Olson, 1996). As industrial policy evolves within an institutional context this helps explain the persistence of poorly designed policy. Policy was dominated by capital grants between 1945 and the 1990s. Yet the prudence of subsidising capital in an economy with a range of labour intensive and low skilled sectors was questionable as a mechanism for raising productivity. The fact that capital grants continued to be the cornerstone of regional industrial policy as long as it was reflects a combination of political economy factors and an incorrect diagnosis that inadequate factor endowments and/or 'hard' peripherality explained the region's low level of income per head.

The quality of some of the inward investment attracted into NI since 1945 has been questionable. Given the uneven competitiveness offer within NI it has sometimes been the generosity of the inducement package, rather than competitive advantages, which has proven crucial in securing FDI. Yet basing industrial policy on competing through inducements it not without risks. Moretti's (2012) analysis warns that even if inducement arms races benefit a particular location, such competition can be a zero-sum game. Moretti's warnings about future inducement 'arms races' should ring bells in a region where Cyril Lord and John De Lorean extracted significant rents.

Further insights for the design of future industrial policy, and the possible political ramifications of failing to do so, arise from the discussion of Iverson and Soskice in their recent book *Democracy and Prosperity: Reinventing Capitalism Through a Turbulent Century* (Iverson and Solstice, 2019). Iverson and Soskice argue that advanced industrial development is spatially embedded and skill intensive rather than footloose (Iverson and Soskice, 2019, p.18). Membership of what they term 'Advanced Capitalist Democracies' (ACDs), and the possible role of policy in gaining membership of this 'club', are an important aspect of their wide-ranging argument (Iverson and Soskice, 2019, p.258).

According to Iverson and Soskice, there are political repercussions to spatially embedded skills agglomerations (Iverson and Soskice, 2019, p.259). Clusters of skilled workers within ACDs give rise to aspirational voters concerned with sustaining economic growth for themselves and their children. Voters with such an outlook in turn elect politicians offering manifestos based on delivering competence in the area of economic management. Electoral demand for competent economic management creates its own supply as a critical mass of aspirational voters support growth-enhancing policies, and successful politicians consequently supply such policies (Iverson and Soskice, 2019, p.13; pp.258-60).

Iverson and Soskice do not see economic convergence as an inevitable result of the rise of agglomerations. Furthermore, the failure to achieve convergence in contrast emboldens voters in poorer locations. The demand from such voters in turn leads to populist electoral success in the less prosperous places (Iverson and Soskice, 2019, pp.216-57). Iverson and Soskice thus suggest that political outlooks and economic performance within countries can polarise. Their analysis is not entirely pessimistic in its conclusions however, as they observe that opening educational opportunities boosts economic prospects as well as reducing the electoral appeal of populism (Iverson and Soskice, 2019, p.250).

There have long been important institutional challenges in turning around the NI economy. The only reference to NI made by Iverson and Soskice refers to a description of its Secretary of State post as representing 'a graveyard for politicians' (Iverson and Soskice, 2019, p.170). In this light the recent OECD report on skills in NI, following on from earlier reports, has implications for the design of industrial policy. The report acknowledged that improvements had been made in terms of educational attainment; the authors observed the persistence of skills imbalances and urged policymakers into nurturing a culture of lifelong learning (OECD, 2020).[12]

Overall, then the evidence presented suggests that the success or failure of industrial policy is not simply dependent on whether devolution is in operation or not. Crucially, it is the particular form of devolution (or what has come to be known as 'institutional geography') that provides insights regarding the final economic outcomes. With its precarious model of devolution this finding suggests that political and economic development in NI are inextricably linked. We therefore should be concerned that effective policy formulation and implementation may suffer from ongoing tensions within the NI Executive.[13] The preceding analysis reinforces the idea that greater attention must be paid to institutional design if step improvements in economic performance are to be made. Developing human capital and correcting skills imbalances for instance will require difficult issues surrounding the segregation of education be confronted. In conclusion the more general relationship between political and fiscal decentralisation and regional development, and the role of industrial policy within such a relationship, are topics which deserves more academic attention.

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[1] Informational issues have blighted a wide range of economic systems throughout history. The example of the failure of planned economies along the Soviet model had a strong informational component for instance (Gregory and Harrison, 2005).

[2] It has been suggested that the apparent resilience of manufacturing during the early years of violence was due the fact that capital grants ensured that fixed capital investment accounted for about a third of regional output and that this share was much higher than the equivalent UK figure (21%) (Ministry of Finance, 1972, p.3).

[3] Between 1975 and 1982 Harland & Wolff received some £200 million in special assistance (Brownlow, 2013, p.297). Such a level of support dwarfed even the level of subsidies paid to DMCL between 1978 and 1982. Subsidy on this level, and the associated soft budget constraints, reflected the shipyard's continued symbolic political importance (Brownlow, 2016).

[4] While in 1988 Northern Ireland's GDP per head was 76.8 per cent of that in Britain, but by 1995 it had risen to 83 per cent (Gorecki, 1997, p.2). Moreover, between 1987 and 1996 employment grew by 14 per cent, while for Britain during the same period it was only 3 per cent.

[5] *Competing in the 1990s*, in terms that echo earlier industrial policy documents, identified poor productivity, a lack of enterprise, competitiveness as well as "a failure to meet the challenge of overseas markets and an overdependence on public funds" as key obstacles to raising industrial policy performance (DED, 1990, p.4). The report, in a shift in emphasis from previous documents, suggested that high levels of industrial assistance had masked key signals that would have spurred management into better decision making (DED, 1990, p.12). *Growing Competitively* reaffirmed the arguments in *Competing in the 1990s* and argued for a shift away from reliance on public sector funding towards a greater emphasis be placed on pursuing inward investment.

[6] Additionality is a key concept used within economic appraisal, additionality measures the net impact of a project or intervention. It is the extent to which the outcomes of an intervention would not have occurred in the absence of that intervention.

[7] Likewise, Selective Financial Assistance (SFA), which remains one of Invest NI's favoured tools, has also been shown to have had mixed employment and productivity results. In any case changes to Regional Aid have curtailed Invest NI's ability to pursue SFA in the future (Mac Flynn, 2015).

[8] That scandal was a much smaller scale example of rent –seeking behaviour that arose from failings in conflict of interest regulations underpinning industrial policy (Brownlow, 2007a).

[9] There is plenty of evidence that RHI gave rise to opportunistic behaviour as well as attracting genuine claimants (McBride, 2019, pp.287-305). Furthermore, McBride' account notes that the concentration of benefits and diffusion of costs of RHI encouraged such behaviour (McBride, 2019, p.294). RHI's failings hence arose from the same kind of incentive problems that gave rise to the industrial policy failings found previously. One can only speculate the extent to which these recurrent institutional problems under both Direct Rule and Devolution (e.g. the 'Seenozip', Cyril Lord and De Lorean cases) are traceable back to an ongoing dependency culture and/or the divided nature of the society. The author thanks a reviewer for this insight.

[10] For more detailed analysis of Brexit and the NI economy see discussions in (Brooks et al, 2019; Brownlow and Budd, 2019).

[11] Furthermore, the UK's supply chain dependence on inward investment is far greater than for other G7 economies. Economic analysis indicates that Brexit will tend to reduce such investment (Bailey et al, 2019). NI remains particularly reliant on such inward investment flows.

[12] A 2019 skills barometer report notes that there were significant imbalances in terms of particular skills and subject areas. In contrast, teacher training and academic studies in education remain oversupplied (UUEPC, 2019).

[13] The NI Assembly and Executive was restored only after extensive political talks. The final document produced to ensure restoration (*New Decade New Approach*) set out extra funding for NI as well as improvements in governance (e.g. keeping records – paragraphs 1.1.5 & 1.1.12). Yet in contrast, there was little concrete in place in terms of boosting productivity. As a reviewer noted, the fact that fairly basic measures on

democratic accountability and transparency had to be included into an agreement demonstrates the extent of the institutional challenge.