



Preview
Chapter

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by David Jacobson and Eoin O'Malley

Upsetting the Apple Cart

Tax-based industrial policy
in Ireland and Europe

EDITED BY

David Jacobson

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Abstract

Could Irish industry have been less dependent on MNCs? This question is addressed in a type of counterfactual examination of the turn of Irish economic development policy to Export Led Industrialization (ELI) from the Import Substituting Industrialization (ISI) of the 1930s to the 1950s. In a combination of critical examination of some of the policy failures and selection of cases of successful firm and sectoral growth, this paper argues that there have at the very least been missed opportunities.

Introduction

Irish industrial policies have been specific to particular periods in the economic history of the country's main trading partners. The policies were based primarily on free trade in the 1920s immediately after independence from Britain (when British policy was also relatively free trading), on protecting local manufacturers against imports from the 1930s (when protectionism was the mainstay in British, American and other countries' policies), and on export-encouraging from the late 1950s (when the Common Market and Britain's European Free Trade Area were being established).

It may be that the context reduced the degree of freedom facing Irish governments in relation to their choice of policy. When nearly all of a country's trading partners have raised tariffs and other impediments to its exports, for example, it is politically – if not economically – difficult for that country to adopt free trade. Perhaps the most important policy change in Ireland is that from protectionist ISI to more export-encouraging ELI in the late 1950s. There were also powerful contextual factors in this change and, as argued elsewhere (Jacobson, 1989), many countries on the European and American peripheries made similar changes to their policies at around the same time as Ireland. Even if the change to ELI rests to some extent on context, a number of questions remain. Given that the policies of ISI were failing already in the early 1950s, why was the change not introduced earlier? Why did the Irish policies favour foreign direct investment, so much so that industrial policy came to depend heavily on the corporate tax regime? Have policy makers underestimated the potential of indigenous industrialisation? This chapter addresses these and related issues.

Import Substitution

Policy evolution, especially in small, peripheral economies like Ireland, is strongly influenced by external trends. In the 1920s, the decade after Irish independence, the policy was highly open, free-trading with Britain, which continued to be the main source of industrial imports, and the main market for agricultural exports. The period was one in which Britain had relatively low tariffs on trade, and international trade in general was relatively high. The Irish government aimed at exporting primary products to Britain. The Irish firms and households benefitting from this trade would, through their demand, lead to growth in Irish manufacturing and service sector output and investment. There were two main problems with this policy. First, the size of the primary sector in Ireland was too small for its growth to impact on the rest of the economy to the extent necessary for indigenous industrialisation. Second, given that there was free trade between Britain and Ireland, that Britain's industry was relatively more advanced, and that Ireland had a comparative advantage in agriculture, the main impact of Irish agricultural growth on industrialisation would be in Britain rather than Ireland. In a sense, despite independence, in a free trade context the Irish economy's interaction with that of Britain was similar to that of other regions within the UK.

It is not a coincidence that as barriers to trade were raised all over the world during the Great Depression, Ireland too introduced protectionism. Explanations for the Irish shift to protectionism based on the policy choices of Fianna Fáil when it came to power in 1932 ignore the huge pressure that would have been on any government at that moment in history to adopt this policy. If the change to a protectionist policy in Ireland is the dependent variable, then the coming to power of Fianna Fáil, the party that promised protectionism, is at best an intermediate factor. It is a better

explanation that the Great Depression led to the protectionism introduced by many other countries, including Britain, and that this in turn led to the success in the 1932 elections of Fianna Fáil, which then also implemented this policy. As argued by O'Rourke (2016, p.8), "it would be a mistake to view the switch to protection as having had causes that were fundamentally idiosyncratic and Irish. *Everybody* switched towards protection following the onset of the Great Depression in 1929".

There is a complex interplay of social, political and economic factors that lead to this type of internal response to shifts in the external environment. In 1932, for example, it can be assumed that the number of local business people interested in producing goods for the local market increased. The possibility of raising prices behind tariff and other barriers would increase the incentive to invest in production facilities. Hopes of jobs in such facilities would lead to support from workers. Some food producers, too – particularly those operating at a small, local scale – would also support a political shift towards protectionism in the hope that some processed foods would come from local producers rather than from abroad. More generally, the rise in nationalism which might otherwise have been expected in the immediate aftermath of independence was arguably suppressed by the openness of the trade environment, by the continuing economic dependence on Britain and by the conservative policy approach of the first governments of Ireland in the 1920s. If so, it was merely postponed to emerge in a groundswell of support for Fianna Fáil, and intensified by the "economic war" with Britain, in the 1930s.

This is not to say that ISI was inevitable but merely that there was a range of factors that made this the most likely set of trade and industrial development policies in the period during and immediately after the Great Depression. Within an ISI policy regime there is still space for choices about how intensively the state intervenes, either to impede imports and/or to encourage local development. O'Rourke (2016) has shown that Ireland was not unusually protectionist. Comparing Ireland's tariffs, quotas and restrictions on foreign ownership of production with those of other European countries, it comes out as near the average. This reflects the point that the extent to which the state, even under Fianna Fáil, was willing to intervene in the economy was limited.

This limit to intervention, based largely on a relatively conservative belief in the efficacy of markets, has run through virtually all governments of Ireland since independence. This constituted a factor ultimately of failure for ISI. For some of the protectionist period the policy generated a great deal of investment and industrial employment. Industrial employment grew from 109,000 in 1929 to 167,000 in 1938 and to 227,000 by 1951, more than doubling over the period 1929-51 (O'Malley, 1989). However, productivity in the protected industries was generally weak and their substantial growth did not result in particularly strong growth of the economy. As O'Rourke observed, "between 1926 and 1938, Ireland grew at *exactly* the rate that it should have done, given its initial starting point" (2016, p.11). That is, its GDP per capita growth over this period was just on the average of a large group of European countries and the USA.

It was in the latter part of the protectionist period and subsequently that the failure of the way in which ISI was implemented in Ireland became apparent. Industrial employment stopped growing and then declined in the 1950s, dropping from 227,000 in 1951 to 210,000 by 1958 (O'Malley, 1989). The key failure was the failure to develop many industries that were capable of exporting. Indiscriminate protection alone, especially when applied to a very small domestic market, did not foster many substantial industries with the capacity to compete internationally. The Irish

government should have adopted either a more interventionist policy, more active and selective in its choice of industries to support, or a less interventionist policy leaving to the market more of the determination of what industries should be set up.

The less interventionist but still protectionist version of ISI adopted in Ireland – indiscriminate protection – led to the raising of barriers to imports of almost anything that anyone in Ireland suggested could be produced in Ireland. Industries in which barriers to entry were relatively low were immediate candidates. Next, if the gap between average cost at low levels of output and average cost at the minimum efficient scale (minimum average cost) was not higher than the barrier to imports, then there were profits available for investors. In such circumstances, irrespective of the constraints of small local market, and the low likelihood of the industry being able to compete in international markets, capital was found and production initiated. In the short term – while protection remained – workers and investors shared the profits at the expense of the consumers.

There are many examples of industries that were set up during the 1930s and subsequently disappeared in the more open trading environment of later decades. An extremely clear example of what was logically a ‘hopeless case’ was the car assembly industry (Jacobson, 1981; 1989). High tariffs having failed to generate investment in local assembly, the industry was forced into existence in the mid-1930s by quantitative restrictions on imports. By the 1950s many different models were being assembled in Ireland. The minimum efficient scale of production for any one model exceeded 200,000. The total new car market was around 60,000. The arrangements with the car companies were such that sufficient components were provided to the assemblers for the local market only; exports were not permitted. The reason for this was that if the assembler exported the finished product it would add to the competition the car companies faced in their home and export markets. The result for the assemblers was that it prevented them from ever reaching minimum efficient scale. A more interventionist policy could at least have improved matters by restricting home assembly to one model and insisting on some local content. A less interventionist policy would have resulted in no car assembly in Ireland at all. Following a ten-year concession by the European Economic Community after Ireland joined in 1973, car assembly ceased to exist in Ireland.

It is clear that Ireland’s ISI policy was not a complete failure; some sectors that grew during this period continued to grow subsequently, in particular food and drink¹. However, there were many other sectors where firms went out of business, for different reasons, in the period after ISI when outward looking policies were adopted. In sectors like textiles, and clothing and footwear, where there were relatively low barriers to entry, firms that did not succeed in breaking into export markets, that were out-competed by low-labour-cost competition from less developed countries, declined or closed down. In chemicals, indigenous firms closed down for different reasons; they faced significant barriers to entry in developed markets where large firms, with significant economies of scale in R&D, marketing and production, were already dominant. The argument of O’Malley (1989) is that the key problem facing Irish firms, in the process of attempting to compete in world markets under outward looking policies, is that Ireland was a “latecomer” in industrialisation. ISI could have played a role in ameliorating this problem but by itself in the way that it was implemented by Irish governments, it was inadequate.

¹ This, and the rest of this paragraph, draws on O’Malley (1989, Ch.6).

Elements of a more interventionist policy, selecting sectors or sub-sectors that were more likely to have a competitive advantage in both local and international markets, could have been delineated. Such a set of criteria for support would have included, then and now: relatively low logistic costs; relatively high local content of material or human inputs, including skills, knowledge or enterprise; the existence of, or potential for, differentiation from competing products or services; and some linkage with other local enterprise so that there is a degree of embeddedness of the production in the local economy (Jacobson, 2010). These and related criteria for support of local industries are closely related to “dynamic comparative advantage”. There are many valid criticisms of the theory – called theory of comparative advantage – that “proves” that free trade is best, among them that the assumptions of the theory never hold in practice. Such assumptions as perfect mobility of labour within countries and no mobility between countries, zero costs in the shift from one industry to another, and no economies of scale in industrial production, are completely unrealistic. Dynamic comparative advantage takes into consideration that even though in the short run a country’s relative costs of production may be greater than those of its trading partners, in the longer run a combination of education and training, some economies of scale within existing technologies of production, and innovation and improvement in the development of new products, services and technologies of production, will result in the ability to compete in export markets. In a sense the criteria for support of indigenous industries can be reduced to the accuracy of the prediction that support in the present will lead to ability to compete successfully in export markets in the future.

The greater the extent to which firms are rooted, or “embedded”, in the local economy, through dependence on local skills, materials, suppliers, partner companies, research etc., the more “sticky” they are likely to be in that place. The less the extent to which they are embedded, the more “slippery” they are likely to be in a free-movement, globalised world (Markusen, 1996). Industrial policy could and should be influenced by analysis of these types of criteria.

We will return to these criteria below but in the context of the ISI period, 1932 through to the 1950s, the commitment to development was constrained by what came to be identified by Kennedy (1992) as endemic problems in all Irish policy. He described the three weaknesses evident in Irish development policies over the years as: “failure to grasp the implications of small size of country, absence of long term perspective, and neglect of the human resource dimension” (Kennedy, 1992, p.21). An important addition to the first of these would render it as follows: “failure to grasp the implications of the small size and peripheral location of the country”². The first weakness is reflected in the support for such inappropriate industries as car assembly, where the information on economies of scale was well known and should have provided an obvious message to policy makers that the Irish market was too small for this industry. The second weakness follows, in that even if ultimately the industry was doomed to failure, a short term perspective was adopted in which if the industry could provide immediate employment it was supported. And the third is reflected in the nature of that employment. It was at best semi-skilled and the need to generate competitiveness through the development of high skill, high knowledge, and what came to be called high-tech products and services was not considered.

² Kennedy (1992) discusses peripheral location, suggesting that it may be advantageous during booms when the forces of economic development are centrifugal and disadvantageous during recessions, when these forces are centripetal. However, whatever the state of the business cycle, peripheral location is always disadvantageous for products with low value-to-logistic-cost ratios.

A variety of factors explain these weaknesses. Policy decisions, in a still newly independent state, may have been driven to a much greater extent by politics than economics.³ The susceptibility of decision makers to the pressures of interest groups is well argued by Murphy (1996; 2010), and enhanced by both the relatively small population and the nature of the election system. This latter also helps explain the short-termism: if a politician wants to be re-elected, s/he must show results over the period between elections (maximum, five years).

Export Led Industrialisation

Given the failures of ISI, reflected in particular in the increase in unemployment and emigration in the 1950s, why were the industrial development policies not changed more significantly earlier? Just as external factors were important in the introduction of ISI, so too were they a key factor in the change towards ELI.

The policy of ELI consisted of three main elements: a new emphasis on promotion of export development; encouragement of FDI as a means of developing exports; and removal of protection against imports. This policy evolved over the period from the 1950s to the 1970s. Some of the main policy measures to promote exports and to encourage FDI for that purpose were introduced during the 1950s, including the establishment of the Industrial Development Authority (IDA). Its main function was to encourage new industries and propose ways of attracting foreign firms to set up in Ireland to produce for export markets. The potential for attracting such foreign investment was a newly emerging opportunity at that time since export-oriented FDI in industry was only starting to become a significant phenomenon in the international economy in the 1950s.⁴ Other relevant changes during the 1950s were the setting up of an export board, tax breaks on profits arising from exports, and the provision of grants to assist firms to prepare to enter export markets. Thus the main elements of the policy package to promote exports and to encourage FDI for that purpose were in place by the end of the 1950s although further additions and refinements to the same general approach were made over the next few decades.

Ireland's shift to free trade with the removal of protection came a little later, beginning in the 1960s. A similar shift had been taking place for some time in many parts of the world (the General Agreement on Tariffs and Trade – GATT – came into effect in 1948) and particularly in Europe. The timing of this change in Ireland was heavily influenced by the international context. As argued by Breen and Dorgan (2013): "The exact timing of the transition was dictated by events at the European level, namely the process of intra-European trade liberalisation and the internalisation of this in Irish policy-making. In the absence of these unfolding processes, Irish governments would not have come under such pressure to put an end to protectionist policies".

According to Donnelly (2012), the elements of the outward looking policies of ELI that were introduced in the 1950s were mainly incremental adjustments to ISI, which continued in a path dependence reinforced by the mutual co-dependence of industrialists hoping for returns on their investments and politicians hoping for political gains from the policies they had introduced. He argues that the IDA for example continued to support protectionism as a factor in the support for

³ See, for example, Girvin (1989).

⁴ FDI in primary sectors such as mining, oil or plantation agriculture, or in industrial production for *local* (often protected) markets, was quite a common feature of the international economy much earlier.

indigenous firms to build up towards export competitiveness. However, he shows how in a combination of external context – with the world moving towards free trade – and internal pressures arising from the failures of ISI and the election of Fine Gael-led governments, there was a “dissolution” of the protectionist path and its replacement with outward looking policies. This included the emerging conviction among decision makers in the IDA that free trade and the encouraging of foreign direct investment (FDI) were essential for the future of Irish industrialisation.

Politically the most important adjustment was that for Fianna Fáil, which was most closely identified with protectionism. At the same time, the huge investment of political capital in the transformation of Fianna Fáil from ISI to ELI, along with the institutional apparatus underlying the change, laid the foundation for a new path, with similar or perhaps even more intense dependencies. The essential elements of the outward looking policies that emerged during the period 1950s-1970s have remained in place ever since. These include low taxes on corporate profits and other elements of a fiscal regime aimed at encouraging enterprise growth including FDI; other than that (and also considered as facilitating FDI) a relatively non-interventionist approach to the operations of enterprises; and free trade ultimately expressed – as emphasised by Breen and Dorgan (2013) – in Irish membership of the European Union in 1973.

In the early years of the ELI approach it seems to have been expected that the growth of exports would come primarily from a substantial reorientation of Irish-based firms from selling almost exclusively at home to selling increasingly in export markets⁵, while new export-oriented FDI would provide some additional impetus to export development. As the years passed, however, it emerged that new FDI, rather than Irish firms, was actually the major source of export growth.

In fact new investment by highly export-oriented foreign-owned companies was largely responsible for the improved growth of industrial employment and output as well as exports, while indigenous industry did not fare so well. Most of indigenous industry was apparently not able to take much advantage of the new incentives and opportunities to export, while at the same time it was quite rapidly losing market share to competing imports in the home market as the protectionist measures were dismantled after the mid-1960s.⁶ Consequently, indigenous industry was a significant net loser of market share during the transition to free trade. Competing imports continued to take a rapidly rising share of the domestic market in 1980-88 (Department of Employment and Enterprise, 1993, Appendix 3), while there was little or no increase in the export-orientation of Irish indigenous industry until about 1986 (O’Malley, 1998).

Employment in indigenous industry also declined, particularly in the 1980s when domestic demand weakened considerably. By 1986 foreign-owned companies accounted for 41 per cent of manufacturing employment, 50 per cent of manufacturing gross output and 76 per cent of manufactured exports (Census of Industrial Production, 1986).

The weakness of indigenous industry and the degree of reliance on foreign MNEs were causing some concern by the 1980s. The Telesis (1982) report to the National Economic and Social Council (NESC) criticised the practice of relying so heavily on foreign investment, and this point was largely taken on

⁵ After all, the aims of the IDA, when first established, were to support indigenous firms and prepare them for international competitiveness.

⁶ See O’Malley (1989, Ch.6) for more detail on these developments.

board by the NESC (1982) in its own conclusions. Trends in industry in the 1980s tended to give weight to their view since heavy reliance on foreign industry was no longer producing adequate results.

Beginning in the mid-1980s, some significant changes were made in industrial policy. The White Paper on *Industrial Policy* (1984) and subsequent official policy statements put an increased emphasis on the aim of developing Irish indigenous industry. This did not by any means imply an end of encouragement of MNEs, but it did reflect some acceptance that there were limits to the benefits that could be expected from FDI and that the relatively poor long-term performance of indigenous industry called for a greater focus on addressing that problem.

More specifically, policy towards indigenous industry became somewhat more selective, aiming to develop larger and stronger firms by building on those with a reasonable track record, rather than assisting a great many start-ups and very small firms indiscriminately. Policy also became more selective in the sense of concentrating state supports and incentives more on correcting specific areas of disadvantage or weakness which were common in indigenous firms such as technological capability, export marketing, and management skills. Expenditures on industrial policy were shifted to some extent from supporting capital investment towards improving technology, export marketing and management. Also, a shift began towards the use of repayable forms of financial support such as equity financing rather than capital grants.

In addition, administrative responsibility for promoting indigenous industry was separated from the task of encouraging FDI. The aim was to ensure that there would be a body of state agency staff giving their full attention to the indigenous sector.⁷

The introduction of policy changes along these lines was in some respects rather hesitant and gradual, and indeed there was some questioning about the real strength of commitment to the objectives. However, quite a number of relevant policy changes – of an incremental rather than a radical nature - were introduced over a period of some years.⁸

Some of these changes were significant moves in the right direction. Irish indigenous industry often faced barriers or obstacles to its development, arising from the established advantages of competitors in advanced countries, such as superior scale, technological capabilities, marketing, etc. Consequently, there was justification for measures to build larger and stronger firms and to focus assistance more on improving specific capabilities such as technological and marketing capabilities rather than just providing general support for investment.

However, the overall scale of this effort was clearly more limited than the Telesis (1982) report had envisaged. Telesis recommended that “the level of funds devoted to Irish industrial development should be as high as the Irish people can bear”, and they recommended that the proportion of total industrial policy expenditure going to indigenous exporting and skilled sub-supply companies should be raised to 75 per cent by 1990. In practice the total level of industrial policy expenditure declined

⁷ This was done first in 1988 by means of an internal reorganisation within the Industrial Development Authority (IDA) which involved the establishment of separate divisions for the promotion of indigenous and overseas industry. Since 1993 there have been separate agencies for these two functions.

⁸ Further details on relevant policy changes can be found in official documents such as *Industrial Policy* (1984) and Department of Industry and Commerce (1987 and 1990), and in O'Malley et al (1992).

a little in current values in 1985-1991, and the proportion going to indigenous firms was only just over 50 per cent by 1990.

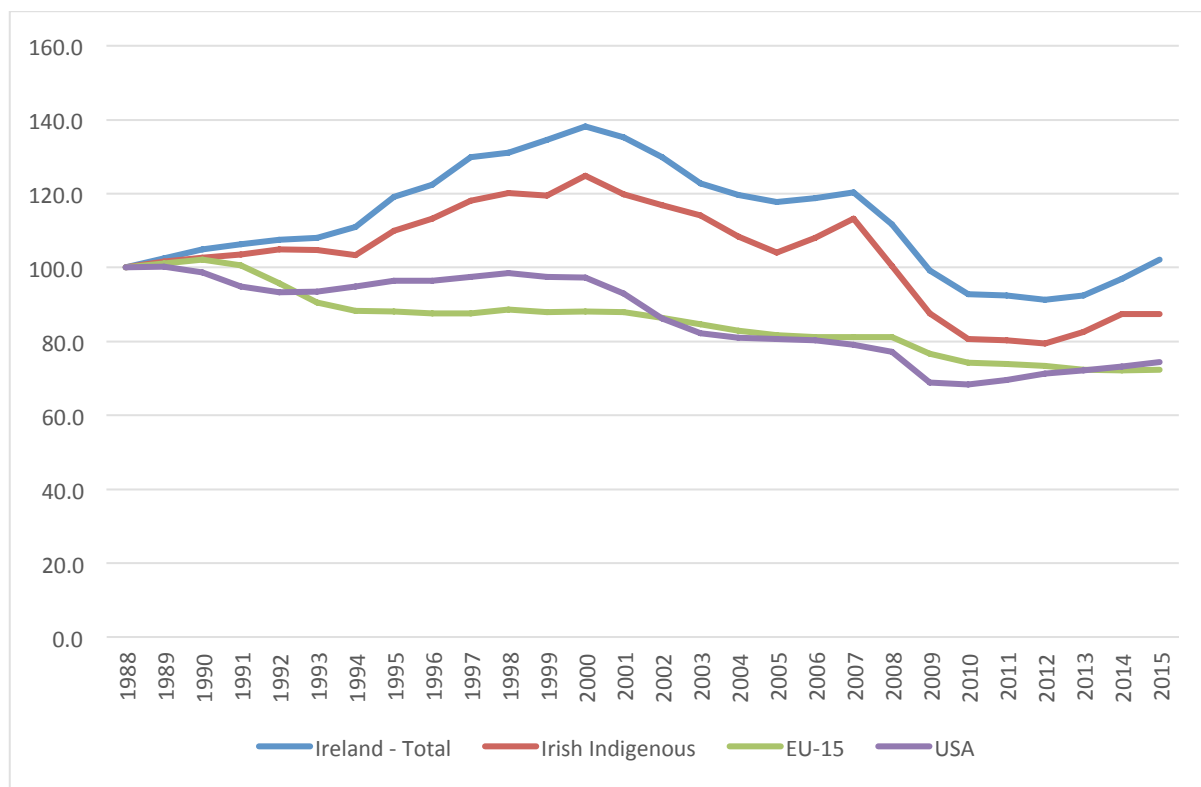
After the late 1980s there was very strong growth in Ireland for about two decades, and the growth in foreign-owned industry was mostly much stronger than in Irish indigenous industry. However, the growth of indigenous industry was significantly improved compared to earlier years and its record looked quite respectable by international standards although its performance was obviously overshadowed by the foreign-owned MNEs in Ireland.

Figure 1 shows the trends in manufacturing employment after 1988. It can be seen that the growth of indigenous manufacturing employment in 1988-2000 was in contrast to the declining trend in the EU and USA although it was clearly growing more slowly than employment in foreign-owned industry in Ireland. After 2000 there was often a declining trend in indigenous manufacturing employment, especially during the major recession of 2007-2010 which hit Ireland particularly hard. However, Figure 1 shows that over the whole period 1988-2015 the record of indigenous manufacturing employment was actually quite good compared to international experience.

By 2007 foreign-owned companies accounted for 52 per cent of manufacturing employment, 77 per cent of manufacturing sales and 89 per cent of manufactured exports.⁹ Ireland's ELI policy – supported by the initiatives of the IDA – has obviously been very successful in attracting MNEs to Ireland. The pinnacle of this success was the Celtic Tiger, with record levels of FDI, of employment and of exports (Sweeney, 1999).

⁹ Data from Department of Jobs, Enterprise and Innovation, *Annual Business Survey of Economic Impact*.

Figure 1: Manufacturing Employment Index (1988 = 100), Ireland Total, Irish Indigenous, EU-15 and USA, 1988-2015.



Source: *Census of Industrial Production* for Irish data, with a few minor adjustments to take account of changes in data definitions during the period. EU-15 data from EUKLEMS database (euklems.net). USA data from OECD’s STAN database.

The annual reports of the IDA are among the best places to find evidence of these successes. Many of the top companies in the world, in pharmaceuticals, in ICT and in medical devices, have their European centres in Ireland. The foreign controlled enterprises in Ireland account for 15.5 per cent of total employment. However, they also account for only 2 per cent of the total number of enterprises in Ireland; most of the large employers in Ireland are MNEs. In manufacturing, total employment in “agency assisted enterprises” (AAEs) is around 186,000, of which around half is in foreign-owned enterprises. Table 1 shows the size difference between foreign-owned and Irish enterprises.

Table 1: Total and Average Employment in Manufacturing Plants in Ireland, by Ownership, 2012

		Foreign-owned	Irish-owned
Total employment in manufacturing: AAEs, 2012	186,000	91,140	94,860
Average employment per manufacturing plant	46	173	27

Source: Forfás (2013)

The relative concentration of MNEs, both in particular sectors and from a particular country, the USA, is also important¹⁰. The dominance of the USA is evident in the fact that American companies (531) account for over half of all MNEs in Ireland (1,033); more importantly, employment in American companies accounts for 73 per cent of all employment in foreign companies in Ireland. Foreign concentration in particular sectors is shown in Table 2.

Table 2: All Employment in Foreign-Owned Enterprises in Ireland, Selected Sectors, 2016

Sector	2016	
	Number	% of Total Empl. in the Sector
Manufacturing		
Chemicals and Pharmaceuticals	20,099	88
Computer, Electronic and Optical Equipment	13,485	80
Medical/Dental Instruments & Supplies	25,070	96
Services		
Computer Consultancy	15,149	58
Computer Facilities Management	9,206	99
Computer Programming	27,191	96
Financial Services	11,171	77

Sources: Department of Jobs, Enterprise and Innovation, *Annual Business Survey of Economic Impact*.

What Table 2 indicates is that the most advanced technology sectors, like pharmaceuticals, ICT and electronics, are dominated by subsidiaries of MNEs. In some sectors, like chemicals and pharmaceuticals, this may be because companies generally need to be large to be competitive so that large established MNEs can thrive while relatively small and/or new indigenous enterprises would often face great difficulties. Other possibilities include that the technology is not available to local enterprise, that the entrepreneurship is not available, and that the IDA is more successful at encouraging inward investment than Enterprise Ireland is at encouraging indigenous investment. Whatever the causes, the result, the table shows, is that in chemicals and pharmaceuticals, for example, 86 per cent of employment is in MNE subsidiaries.

¹⁰ The following two paragraphs draw on Jacobson (2015).

The fact that foreign-owned MNEs account for a very large share of exports makes them particularly influential in the Irish economy because sectors that export and have positive foreign earnings make an essential contribution that helps to sustain the rest of the economy. The importance of exports in a small and very open economy derives from the fact that a large part of the economy's expenditure is used to purchase imports. Whenever the economy grows there usually tends to be increasing demand for imports, including imports of materials, equipment and fuel required as inputs for growing production sectors and also imports of consumer goods to meet growing demand from consumers. When Ireland had its own national currency before 1999 it was quite clear that export growth was needed to pay for the increasing imports. If exports did not grow sufficiently, a balance of payments deficit tended to open up and hence the value of the Irish currency tended to decline. A declining currency tended to result in inflation as prices of imports rose and at the same time it reduced the country's purchasing power when it came to paying for the imports of inputs required for production, which became an obstacle to economic growth.

From 1999 onwards Ireland had the euro as its currency. It was sometimes argued that Ireland's international trade performance and balance of international payments no longer mattered much. However, although the mechanism became somewhat different, a good performance in international trade continued to be essential for the health of the economy.

At any given time, a certain proportion of expenditure in Ireland is used to purchase products and services that can be traded internationally and the rest is used to purchase "non-traded" products and services that generally have to be produced locally to meet domestic demand. If Ireland has a competitive and successful performance in international trade its internationally traded sectors can grow, employment in those sectors can grow, and this increases demand for the products of the non-traded sectors which allows them to grow too and to increase their employment. Thus in these circumstances total employment can grow. On the other hand if Ireland imports a growing proportion of the internationally traded products and services that it requires, and if it fails to increase exports to the same extent, production and employment in the internationally traded sectors are reduced. As the internationally traded sectors decline, that in turn reduces demand for the output of the non-traded sectors which forces them into decline too, with adverse consequences for total employment.

Consequently, the fact that foreign MNEs account for close to 90 per cent of exports from Ireland makes them very important. At the same time, however, it should be recognised they are not really quite as important as that figure suggests. This is because they import an unusually high proportion of the inputs that go into their products, and they also make very large profits which are mostly withdrawn from the country. Consequently, their contribution to the country's net foreign earnings is actually much less than the value of their exports. If we take account of their high import-content and large profit withdrawals, as well as the lower import-content in exports from indigenous companies, it can be estimated that foreign MNEs account for about 70 per cent of net foreign earnings while indigenous companies account for about 30 per cent. Whereas foreign MNEs outweigh indigenous companies by about 9:1 in terms of exports, it is not much more than 2:1 in terms of net foreign earnings.

It is clear that in the past serious consideration has been given to the view that it was unsatisfactory and unwise to be relying so heavily on foreign-owned MNEs for growth while indigenous companies

lagged behind. Significant – though inadequate – efforts were made to do more to develop indigenous industries. More recently, however, it seems that Irish governments and the mainstream of political opinion in general have been happy to depend heavily on foreign MNEs and have been highly committed to maintaining and defending the tax measures that are seen as essential for attracting FDI.

Even the strains of the financial collapse in 2008, leading to the ignominy of bailout by the Troika in 2010, only seemed to reinforce the Irish commitment to the policy of encouraging FDI through fiscal measures. According to Donnelly (2012), the outward looking policies *per se* were not to blame for Ireland's dependence on the bailout. However, the light regulatory hand that has always been part of the Irish commitment to FDI, particularly as applied in banking and finance, was clearly an element in the collapse of the Irish banks that were the trigger for the bailout. This light regulation had and continues to have a negative impact on Ireland's reputation (Griffin *et al*, 2017)¹¹.

Among the demands placed on Ireland in the context of the bailout, were those (mostly successfully resisted so far) related to the corporate profits tax regime. Before¹², during¹³ and since¹⁴ the bailout, there has been significant European and American¹⁵ pressure on Ireland to increase its rate of tax on corporate profits, and to adjust its fiscal regime in other ways to reduce the extent to which the regime facilitates profit switching by MNEs.

The resistance to change reveals a combination of the path dependency of the ELI range of policies, and a related extraordinary commitment on the part of most political strands in Ireland, to the view that a low corporate tax regime, with certainty in its continuation, is essential for the continued attraction of FDI into Ireland.

As argued above, a light regulatory hand was part of the Irish commitment to FDI and regulation was shown to be inadequate in relation to banking and finance. This resulted in over-lending and over-investment in construction, reflected in construction's share of total employment, which reached over 13 per cent in 2006, the highest share in the OECD (Whelan, 2011). The banking collapse was therefore a property development collapse and a construction employment collapse all in one.

All this supports the argument that an underlying weakness of the Irish version of outward looking policies has been the regulatory deficit that has consistently been part of this approach. Inadequate regulation contributed to Ireland's crisis being among the worst in the context of the Great

¹¹ Griffin *et al* (2017), in their Bloomberg article, describe the case of an Azerbaijan bank that set up a Special Purpose Vehicle (SPV) under Irish regulations to raise funds. The authors quote Shaen Corbet, Assistant Professor in Finance at DCU: "The lack of oversight within this [Irish] system is generating an environment where questionable, immoral, unethical and downright illegal funding channels can flow undetected."

¹² "German MEPs stepped up the pressure on Ireland over its corporation tax rate insisting that it would have to double if the country needed a bailout" (Cahill, 2010).

¹³ "Ireland should not be allowed to access the EU/IMF bailout fund while maintaining a low corporation tax, French President Nicolas Sarkozy warned yesterday" (O'Hara and Collins, 2011).

¹⁴ "Just when good news was starting to flow again out of Ireland, along comes the European Commission to spoil the celebrations... [Ireland's] cherished corporate tax regime, which has attracted billions of dollars of foreign direct investment over four decades, is now under intense international scrutiny" (Boland, 2014).

¹⁵ Headline in *Irish Times*: "Hillary Clinton criticises Irish corporate tax 'perversion'" (Carswell, 2016).

Recession after 2008¹⁶. The institutional structure of Ireland’s “liberal political economy” was the context for the “economic failures that led to Ireland’s crisis” (O’Riain, 2014: 215 and 287).

The crisis has not brought about the end of ELI; nor should it. After all, the remarkable Irish recovery has been to a large extent export-driven. The fault is in the Irish version of this policy. The argument here is not that Ireland should not have introduced the policies of ELI but rather that – in a sense similar to the ways in which the governments of the time implemented ISI – they should have been more interventionist. Instead industrial policy has relied too heavily on one tool, that of tax measures aimed particularly at attracting FDI.

Success and Failure in Industrial Development

The importance of foreign-owned MNEs in the Irish economy could be seen as leading to either of two very different conclusions. First, it could be taken as an indication of the necessity for the Irish government to do whatever it can to ensure that the economy remains attractive to foreign companies. Or second, it could be seen as a danger signal; slight changes in regulation, particularly fiscal and corporate regulation and enforcement in the USA or the EU (and Apple is a case in point), could result in a mass exit of MNEs from Ireland, and the more real this possibility, the more intensely should the Irish government be seeking alternative, indigenous means of generating employment.

Of the two possibilities, the Irish government’s policy preference tends towards the former. The continuing emphasis on a low corporate tax regime – even in the face of the intense pressure outlined above – is evidence of this preference. The support for, and importance of IDA Ireland, is further evidence. The IDA clearly reflects policy, including policy to develop particular sectors. The sectors targeted by the IDA have included: Business Services; Consumer Products; Clean Technology; Entertainment and Media; Industrial Products and Services; Information and Communications Technologies; ICT Cloud Computing; International Financial Services; Medical Technologies; Pharmaceuticals; Emerging Business¹⁷. There is no doubt that, with the attractions of the low corporate profit tax regime, the liberal regulatory regime, the English language, education and skills of the workforce, among other factors, this relatively broad targeting policy has been successful. However, it remains to be seen whether, if and when regulations outside Ireland change, this success can be maintained.

What if the Irish government were to favour the alternative approach, committing to intensive efforts to develop the indigenous sector as a major means of generating employment? What sort of measures would be required? In fact, many of the necessary types of measures are already in place but they have never been given sufficient resources to make a decisive breakthrough and they have often been subject to restrictions or limitations which curtail their effectiveness.

It is already well recognised by government that the relatively small scale of Irish enterprises creates an inter-related set of problems that have to be overcome by policy measures. Consequently, Enterprise Ireland has a considerable range of schemes to facilitate the growth of indigenous enterprises including funding. These are described in some detail in Forfás’s 2013 report, *Making it*

¹⁶ O’Riain (2014: 240) references Laeven and Valencia’s (2012) research showing that “Ireland’s banking crisis was among the most severe in world economic history”.

¹⁷ See also IDA Ireland (no date) *Winning: Foreign Direct Investment 2015-2019*.

in Ireland: Manufacturing 2020. However, there are three problems. The first is that in identifying firms that should be supported, EI focuses on those with significant exports. Arguably those that sell to MNEs in Ireland are competing in a global market and should therefore at least be considered for support. Second, EI does not take more than a 10 per cent share in any of the companies it assists. A greater share could provide more of the capital needed to develop the scale or skills required to compete abroad. The third and related problem is that EI, with such a low equity share, has no way of preventing foreign takeovers of successful indigenous firms. Takeovers can and often do mean a closing down or restriction of the Irish operation and/or the shift of the skill base to the headquarters of the new owner, thereby undermining the potential of some of the most promising Irish companies to contribute to the Irish economy. Therefore EI should be provided with far greater resources and should be given the power to deal effectively with these three problems.

Even if the most appropriate policy measures were applied, successful, sustainable development of indigenous industry would still not be easy. This task would call for a consistent long-term policy commitment but there is no reason to believe that it would be impossible. In fact there have already been some notable successes in indigenous development. These provide indications that significant strengths do exist and they give grounds for believing that more far-reaching success is possible.

For one thing, the employment trend in indigenous manufacturing may often have been relatively weak when compared with foreign-owned industry in Ireland, but that is actually a very demanding standard of comparison since foreign-owned industry in Ireland can be continually boosted by further inflows of new investment and new companies coming in from outside the country. If we make a more appropriate comparison between Irish indigenous industry and industry in the EU or USA, the Irish indigenous employment trend looks relatively strong, as outlined above.

Is there evidence of potential for export success on the part of indigenous industry? The trend in export growth has looked considerably weaker in indigenous than in foreign-owned industry for much of the time since the 1950s, but there have been significant periods when that was not the case. For much of the 1980s Ireland experienced a prolonged recession, until two decades of a sustained export-led boom began in the late 1980s. A feature of the early years of that boom was that the value of indigenous manufacturing exports grew by 12.2 per cent per year in 1986-90 while the value of exports from foreign-owned manufacturing grew a little more slowly at 11.9 per cent per year.¹⁸ More recently, the value of indigenous exports has generally grown about as fast as, or faster than, the value of exports from foreign-owned companies in the years after 2000. In 2000-2016, the value of indigenous exports increased by 5.2 per cent per year compared with 5.7 per cent per year for foreign-owned exports. Starting from the low point of the great recession, the value of indigenous exports increased by 10.8 per cent per year in 2009-2016 compared with 7.8 per cent per year for foreign-owned exports.¹⁹

Compared to many European countries, Irish indigenous industry was relatively highly concentrated in the more mature traditional sectors; it lagged behind in development of the more high-tech or

¹⁸ Measured in current Irish pounds, *Census of Industrial Production* (various years).

¹⁹ Data from Department of Jobs, Enterprise and Innovation, *Annual Business Survey of Economic Impact*. These data refer to exports from manufacturing plus the internationally traded services which are covered by the enterprise development agencies. See also O'Malley, 2013.

medium-high-tech sectors until the 1980s. However, it then made considerable progress in developing higher tech activities during the 1990s. Perhaps the clearest example of this was the software industry. During the 1990s, when major US software MNEs were expanding rapidly in Ireland and the software industry in Ireland was growing much faster than in most advanced economies, indigenous software companies increased their employment at a slightly faster pace than the foreign-owned MNEs so that they consistently accounted for about half of the sector's employment in 1991-97. The indigenous companies also had faster growth of sales and exports than the foreign MNEs and they had a rapidly growing market share in international markets.²⁰

There are no comparable data for recent years on the software industry as such, partly because the range of software businesses cuts across the major categories "manufacturing" and "services" in standard official statistics. However, most of the indigenous software companies that engage in exporting would be included among the "internationally traded services" which are covered by the enterprise development agencies, along with other activities such as certain business services, financial services, etc. In that group of internationally traded services, employment in indigenous companies grew by 4.7 per cent per year in 2000-2016, which was faster than the rate of 3.4 per cent per year in foreign-owned companies. In the same group of services the value of indigenous exports grew by 8.8 per cent per year in 2000-2016 compared with 8.9 per cent per year for foreign-owned exports.²¹

Apart from the case of the software sector, among the indigenous manufacturing sectors there was also clear evidence in the 1990s of particularly rapid growth of the higher technology sectors as opposed to the more mature traditional sectors. In 1991-2000, total indigenous manufacturing employment growth was quite rapid at 2.1 per cent per year. At the sectoral level, nearly all of the sectors that are classified by Eurostat as "high technology" sectors grew exceptionally fast – communication equipment & technical instruments (14.2 per cent per annum), pharmaceutical products (8.3 per cent p.a.) and office machinery & computers (7.6 per cent p.a.). Similarly nearly all of the sectors that are classified as "medium-high-technology" grew at well above average rates – electrical machinery & apparatus (9.8 per cent p.a.), machinery & equipment (4.5 per cent p.a.) and other chemicals (4.4 per cent p.a.).²² Thus the composition of indigenous manufacturing employment was shifting substantially towards the higher technology sectors.

A similar shift was occurring in the EU as a whole but the shift in Irish indigenous industry was considerably stronger. Thus, in all of the high-technology and medium-high-technology sectors combined, indigenous industry more than doubled its share of EU employment from 0.14 per cent in 1991 to 0.33 per cent by 2000. The Irish indigenous share of EU employment in the low-technology and medium-low-technology sectors also increased in the same period but the rate of increase was slower, from 0.39 per cent in 1991 to 0.49 per cent in 2000.²³

In the years after 2000, however, we can see how these trends were undermined by the impact of takeovers of promising Irish companies by foreign companies. In 2000-2006, according to *Census of Industrial Production (CIP)* data, indigenous manufacturing employment declined and there was a

²⁰ National Software Directorate data, quoted in O'Malley and O'Gorman (2001).

²¹ Data from Department of Business, Enterprise and Innovation, *Annual Business Survey of Economic Impact*.

²² Data from the *Census of Industrial Production* (various years).

²³ *Census of Industrial Production* for Irish indigenous data. EU-15 data from EUKLEMS database (euklems.net).

reversal of the earlier sectoral trends since the decline tended to be particularly severe among the high-technology and medium-high-technology sectors. However, it is important to note here that in the *Census of Industrial Production*, companies' nationality of ownership is defined according to their nationality in each individual year. Consequently, if some companies are Irish-owned at the start of a period and then are acquired by new foreign owners during that period, their employment would be included in the indigenous category in the initial year but not in the final year. This could cause indigenous employment to decline even if there were no real weakness in the sense of job losses or declining companies.

There is evidence that this type of effect was very influential among the indigenous high-technology and medium-high-technology sectors in 2000-2006. In the Forfás *Annual Employment Survey* companies' nationality of ownership was defined according to their latest nationality when responding to the survey and then the presentation of data on past trends in the survey report applied the latest nationality of each company to all past years, so that changes of nationality of ownership did not affect the trends over time. Using this approach, the data from the Forfás *Annual Employment Survey 2008* (Appendix Table 5) indicated that employment in the indigenous high-technology and medium-high-technology sectors declined by just 0.5 per cent p.a. in 2000-2006, which was far less than the decline by 5.8 per cent p.a. in the CIP data. Meanwhile, in the low-technology and medium-low-technology sectors the rate of decline was similar in both data sets, at 1.6 per cent p.a. in the CIP and 1.3 per cent p.a. in the Forfás survey.²⁴

The combination of the two data sets tells us that there were significant net transfers of ownership from Irish to foreign during 2000-2006, with these transfers being very largely concentrated among the high-technology and medium-high-technology sectors. In the absence of such net transfers of ownership, the employment trend in the indigenous high-technology and medium-high-technology sectors would have looked much stronger, so that the overall trend in indigenous manufacturing employment would also have looked stronger.

As regards the years after 2006, there was a discontinuity in the CIP data series in 2006-2008 because of expanded coverage in 2007 followed a change in the classification system used. In 2008-2014 the comparison between the CIP and the *Annual Employment Survey* shows no very significant net transfers of ownership from Irish to foreign-owned. Since that period was dominated by the "great recession" in Ireland and elsewhere perhaps many companies had to focus primarily on surviving in very difficult conditions rather than expanding by means of acquisitions.²⁵ In the absence of significant net transfers of ownership, the trend of particularly rapid growth among the higher technology sectors resumed within Irish indigenous manufacturing. According to the CIP, employment grew by 1.6 per cent p.a. in the indigenous high-technology and medium-high-technology sectors in 2008-2014 despite the recession, while it declined by 2.9 per cent p.a. in the low-technology and medium-low-technology sectors.²⁶

²⁴ Note that the international context in that period was a general decline in manufacturing employment in developed economies. In the EU, manufacturing employment declined by 1.3 per cent per year in 2000-2006.

²⁵ If so, then a pattern of takeovers of Irish firms by foreign-owned firms might be expected to recur under more benign conditions.

²⁶ CIP data for 2015 do not have sufficient sectoral detail to include 2015 here while 2016 results are not yet published.

A different type of success story in Irish indigenous development concerns the growth of Irish MNEs. Relative to the size of the Irish home base a large number of indigenous companies have developed into MNEs operating successfully in overseas markets.²⁷ The obvious ones include CRH, Smurfit Kappa, Primark, Ryanair, Kerry Group, but there are also hundreds of other Irish MNEs. The CSO reports that 774,000 people were employed in Irish-owned foreign affiliates in 2015, meaning in the overseas subsidiaries of Irish-owned MNEs.²⁸ The CSO also notes that foreign enterprises which had redomiciled their controlling operations to Ireland would have a bearing on this figure as they would then be defined as Irish enterprises. Unfortunately, it is not clear how great is the effect of this redomiciling on the employment number mentioned above. However, even if we look at just 11 of the largest and best-known Irish MNEs for which employment numbers are readily available, their total employment amounts to about 294,000.²⁹ Probably more than 90 per cent of these jobs are outside Ireland. Clearly the number employed abroad in all of the hundreds of Irish MNEs must be a great deal larger than this.

The development of Irish MNEs may have made a relatively limited contribution to employment and the economy in Ireland, relative to the size of these companies, but the main point here is that it does show that the entrepreneurship and skills required to build large and internationally successful companies have not been lacking in Ireland.

Less well known examples of indigenous success would include Oceanpath, a fish processing company that was only set up at the beginning of the 1980s and is now one of the most significant players in its sub-sector, having grown through a monopoly-monopsony relationship with Superquinn in the 1980s and 1990s (McGrath and Jacobson, 2010; Li *et al*, 2018). This type of tight relationship, sometimes vertical as in Oceanpath and Superquinn, and sometimes horizontal as in industrial districts and clusters, is often evident in indigenous success.

Two cases of indigenous industries will now be described where initial success arising from such cooperation ultimately faded and the promise of continuing growth was not realised, at least partly as a result of policy failures. The first is the case of the software supply sector and the second is the case of the furniture industry in Co. Monaghan.

In the software supply sector the story began with IDA success in attracting to Ireland the main software companies in the world in the 1980s. Irish printing firms became first, software manual printers (SMP) and ultimately disk duplicators and suppliers. Many were, like Oceanpath, very closely related to – even dependent on – the software producers like Microsoft. So, when technology changed and first CD-ROM came out, then Windows, then online downloading of software, the SMP industry, with most of the Irish firms, went out of business (Andreosso and Jacobson, 2005, pp.431-439). Two interventions might have made a huge difference. The first is in the relationship among the SMP firms. They were required, for “preferred supplier” status with their software company customers, to use optical character reading (OCR) machines to ensure zero

²⁷ The rate of growth of outward direct investment (ODI) from Ireland in the Celtic Tiger years was substantially greater even than foreign direct investment into Ireland. “ODI stock grew 416 per cent between 2000 and 2007, compared to a growth of only 47 per cent in FDI stock during the same period” (King and Jacobson, 2010, p.51).

²⁸ Central Statistics Office, “Outward Foreign Affiliates Statistics - 2015”.

²⁹ The 11 MNEs concerned are CRH, Primark, Smurfit Kappa, Kerry Group, Greencore, Ryanair, Kingspan, Grafton, Glen Dimplex, Glanbia and Total Produce.

defects. These were expensive pieces of equipment and the capacity of the OCRs was beyond what any one of the firms needed. It was clearly in their interest to set up some kind of joint venture to own the OCRs and provide the quality control services that the machines provided to all of them. Asked in interview why they had not done this, they replied that the main reason was that there was a strong tendency for them to 'keep their cards close to their chests'. In other words the norms of Irish business behaviour seemed to preclude trust and cooperation, even where this was in the firms' collective interest. We can call these 'institutional barriers to local development', but clearly they were barriers that could have been overcome by appropriate EI intervention.

The second intervention could have come at a later stage in the evolution of this sub-sector. CD-ROMs were being produced by a number of subsidiaries of MNCs from Japan, America and Canada attracted to Ireland by the IDA. This essentially kept employment in the software supply sector in Ireland. However, software by the end of the 1990s was beginning to be supplied through downloading from servers. At this point the Irish government privatised the national telecom supplier, Telecom Eireann. The net result of this from the point of view of the internet access technology for public and private users in Ireland was disastrous. It removed the potential for a public provision of fibre-based infrastructure and both household and enterprise access to the internet, the web and wifi were delayed by many years. The possibility of Ireland continuing to be the main location from which people and firms in Europe – and elsewhere – would obtain their software was not pursued. It could not be pursued because the technology was not good enough. As soon as the internet replaced CD-ROM as the means of distributing software, the CD-ROM producers left and a potential for technology development and employment in Ireland – arising from the location here of the global software supply sub-sector – was not realised.

A key part of the furniture industry in Ireland in the 1990s was the industrial district in Co. Monaghan. Although the roots of the industry in Monaghan went back centuries, the main impetus for its growth in this period was the rapid growth of the economy in general and in particular of construction. There were many firms, all both cooperating in various ways and competing in the production and sale of furniture of all kinds, mainly (but not exclusively) for the Irish market. The origins and development of the furniture industrial district are described in some detail in Jacobson and Mottiar (1999) and Heanue and Jacobson (2001-2). Two interventions by the state both failed to develop the sub-sector. First, the furniture design and technology centre was set up as part of the Galway-Mayo Institute of Technology, in Letterfrack. It would have made much more sense for this to have been located in the middle of the industrial district in Monaghan, rather than in Letterfrack where there was no furniture production at all. Second, at a crucial juncture, when the construction boom had peaked and the Monaghan furniture district needed a significant fillip, Enterprise Ireland provided a €3 million grant to one company, John E. Coyle, for redevelopment. What this was aimed at by the company was to change its own production system so that it could produce and supply furniture by itself, using modern modular techniques. The consequences for the development and improvement of the collaborative interactions of the past were extremely negative and in any case the investment failed to save furniture production in Monaghan. Even John E. Coyle itself, employing 140 production workers at its peak, soon after ceased production and became a furniture importer and retailer.

As with FDI into Ireland, so with indigenous firms, there are examples both of success and failure. Overall, the foreign sector in Ireland can be considered, on the basis of the employment data, to be

far more successful than the indigenous sector. The cases discussed above suggest that at least part of the explanation lies in failures of policy. Either interventions – that is policies that were actually implemented – were defective, or interventions that could have had positive impacts were not available because of an absence of policy or lack of ability to identify the necessary intervention.

Conclusion

There can be little doubt, therefore, that better policies, better implemented could, over the decades since the introduction of ELI in Ireland, have led to more indigenous start-ups, growing firms, skill development, employment and exports. The underlying principles of tax based industrial policy and the relatively light or liberal regulation favoured by the IDA and its MNE clients have in general been successfully proffered among the means of attracting FDI into Ireland by an agency aggressively pursuing new projects. They have been less effective in the indigenous sector. Better training for those involved in the development and implementation of policy towards indigenous firms is essential. More resources would also help. More cohesion in the many inter-related policies – in education, training, R&D, taxation, etc. – would also facilitate a more focused industrial policy. One way of pursuing this objective would be to ask, about all policies that have an impact on indigenous enterprises, whether they contribute to those firms being or becoming “sticky places in slippery space” (Markusen, 1996). These are firms or groups of firms in a location where for a variety of reasons – natural resources, unusual skill base, other supplier or buyer firms – they are embedded with activities that are sustainable. “Slippery space” refers to globalization and the ease with which economic activities can be relocated. And we have now returned full circle to the criteria for support of firms, the accuracy of the prediction that support in the present will lead to ability to compete successfully in export markets in the future. Continually considering whether a particular intervention will improve the stickiness of the target activity in the slippery space of globalization will increase the accuracy of the prediction of future success in international competition.

References

- Andreosso, B. and Jacobson, D. (2005) *Industrial Economics and Organization: A European Perspective*, McGraw-Hill, Maidenhead, England.
- Boland, V. (2014) "Ireland under pressure over low corporate tax rates", *Financial Times*, 30th September.
- Breen, M. and Dorgan, J. (2013) "The Death of Irish Trade Protectionism: A Political Economy Analysis", *Irish Studies in International Affairs*, Vol. 24, pp.275-289.
- Cahill, A. (2010) "Bailout 'should cost Ireland double corporation tax'", *Irish Examiner*, 28th September.
- Carswell, S. (2016) "Hillary Clinton criticises Irish corporate tax 'perversion'", *Irish Times*, 1st February.
- Central Statistics Office (CSO) (various years) *Census of Industrial Production*, Stationery Office, Dublin.
- Department of Enterprise and Employment (1993) *Employment through Enterprise*, Stationery Office, Dublin.
- Department of Industry and Commerce (1987) *Review of Industrial Performance 1986*, Stationery Office, Dublin.
- Department of Industry and Commerce (1990) *Review of Industrial Performance 1990*, Stationery Office, Dublin.
- Department of Jobs, Enterprise and Innovation (various years), *Annual Business Survey of Economic Impact*, Stationery Office, Dublin.
- Donnelly, P. (2012) "Tracing the Path to 'Tiger Hood': Ireland's Move from Protectionism to Outwardlooking Economic Development", *Organization Management Journal*, Vol. 9, No. 2, pp.90–103.
- Donnelly, P. and Hogan, J. (2010) "The Move from Protectionism to Outward-looking Industrial Development: a Critical Juncture in Irish Industrial Policy?", *Administration*, Vol. 58, pp.107-129.
- Forfás (2013) *Making it in Ireland: Manufacturing 2020*, Forfás, Dublin.
- Girvin, B. (1989) *Between Two Worlds: Politics and Economy in Independent Ireland*, Gill and Macmillan, Dublin.
- Griffin, D., Rudnitsky, J. and Gizitdinov, N. (2017) "Azerbaijan Bank Took \$900 Million Irish Detour on Way to Default", *Bloomberg*, 18th June (available at: <https://www.bloomberg.com/news/articles/2017-06-18/azerbaijan-bank-took-900-million-irish-detour-on-way-to-default>).

Heanue, K. and Jacobson, D. (2001-2) "Organizational Proximity and Institutional Learning: The Evolution of a Spatially Dispersed Network in the Irish Furniture Industry", *International Studies of Management & Organization* Special Issue on *Clustering, Capabilities and Coordination*, Vol. 31, No. 4, pp.56-72.

IDA Ireland (no date) IDA Ireland (no date) *Winning: Foreign Direct Investment 2015-2019*, available at: https://www.idaireland.com/docs/publications/ida_strategy_final, accessed 20/02/2018.

Jacobson, D. (1981) *A Political Economy of the Motor Industry in Ireland*, Unpublished PhD thesis, University of Dublin.

Jacobson, D. (1989) "Theorizing Irish Industrialization: The Case of the Motor Industry", *Science & Society*, Vol. 53, No. 2, pp.165-191.

Jacobson, D. (2010) "Globalisation: Must the Irish Government choose between Irish firms and MNEs?" in D. Ó Broin and D. Jacobson (eds.) *Local Dublin/Global Dublin: Public Policy in an Evolving City Region*, Glasnevin Publishing, Dublin.

Jacobson, D. (2015) "Irish Industrial Policy: Over-reliance on Foreign Direct Investment?" in F. Gerlach, M. Schitinger and A. Ziegler (eds.) *A Strong Europe – But Only With a Strong Manufacturing Sector: Policy concepts and instruments in ten EU member states*, Hans Böckler Stiftung, Germany, pp.116-145.

Jacobson, D. and Mottiar, Z. (1999) "Globalization and Modes of Interaction in Two Sub-Sectors in Ireland", *European Planning Studies*, Vol. 7, No. 4, pp.429-444.

Kennedy, K.A. (1992) "The Context of Economic Development", *Proceedings of the British Academy*, Vol. 75, pp.5-29.

King, P. and Jacobson, D. (2010) "Dublin Decisions on the Destination of Ireland's Outward Direct Investment" in D. Ó Broin and D. Jacobson (eds.) *Local Dublin, Global Dublin: Public Policy in an Evolving City Region*, Glasnevin Publishing, Dublin.

Laeven, L. and Valencia, F. (2012) "Systemic Banking Crises Database: An Update", IMF Working Paper WP/12/163.

Li, K., Liu, X-Y. and Jacobson, D. (2018) "Information and Profit Sharing Between a Buyer and a Supplier: Theory and Practice", *Managerial & Decision Economics*, Vol. 39, No.1, pp.79-90.

Markusen, A. (1996) "Sticky Places in Slippery Space: A Typology of Industrial Districts", *Economic Geography*, Vol. 72, No. 3, pp.229-313.

McGrath, H. and Jacobson, D. (2010) "The large leader firm: good or bad? A case study of a leader firm-supplier relationship", in B. Andreosso-O'Callaghan, H. Lenihan and M. Hart (eds.) *SMEs in a Globalised World: Survival and Growth Strategies on Europe's Geographical Periphery*, Edward Elgar, Aldershot, UK, pp.181-201.

Murphy, G. (1996) *The Politics of Economic Realignment: Ireland, 1948-1964*, PhD Thesis, Dublin City University (available at: http://doras.dcu.ie/19113/1/Gary_Murphy_20130620133916.pdf, accessed 15/02/2018).

Murphy, G. (2010) "Political Decision-Making: Interest Groups and Elections in Independent Ireland", *Irish Political Studies*, Vol. 25, No.4, pp.563-580.

National Economic and Social Council (1982) *Review of Industrial Policy: Summary of a Report Prepared by the Telesis Consultancy Group*, NESC, Dublin.

National Economic and Social Council (1982) *Policies for Industrial Development: Conclusions and Recommendations*, Report no. 66, NESC, Dublin.

O'Hara, A. and Collins, S. (2011) "Sarkozy attacks Ireland's company tax rate", *Irish Independent*, 14th January.

O'Malley, E. (1989) *Industry and Economic Development: The Challenge of the Latecomer*, Gill and Macmillan, Dublin.

O'Malley, E. (1998) "The Revival of Irish Indigenous Industry 1987-1997", in T.J. Baker, David Duffy and Fergal Shortall (eds.), *Quarterly Economic Commentary*, April, Economic and Social Research Institute, Dublin.

O'Malley, E. (2013) "Ireland's Competitive Performance", in D. Jacobson (ed.) *The Nuts and Bolts of Innovation: New Perspectives on Irish Industrial Policy*, Glasnevin Publishing, Dublin, Ch.5.

O'Malley, E., Kennedy, K.A. and O'Donnell, R. (1992) *The Impact of the Industrial Development Agencies*, Report to the Industrial Policy Review Group, Stationery Office, Dublin.

O'Malley, E. and O'Gorman, C. (2001) "Competitive Advantage in the Irish Indigenous Software Industry and the Role of Inward Foreign Direct Investment", *European Planning Studies*, Vol. 9, No. 3, pp. 303-321.

O'Riain, S. (2014) *The Rise and Fall of Ireland's Celtic Tiger: Liberalism, Boom and Bust*, Cambridge University Press, Cambridge.

O'Rourke, K. (2016) "Independent Ireland in Comparative Perspective", UCD Centre for Economic Research: Working Paper Series WP16/20.

Telesis Consultancy Group (1982) *A Review of Industrial Policy*, National Economic and Social Council Report no. 64, NESC, Dublin.

Whelan, K. (2011) "Ireland's Sovereign Debt Crisis", UCD Centre for Economic Research: Working Paper Series WP11/09.