



Corporate Tax and Industrial Policy in Ireland:

Selections from Upsetting the Applecart

Edited by David Jacobson



Corporate Tax and Industrial Policy in Ireland: Selections from Upsetting the Applecart

Edited by David Jacobson

Published by:

FEPS

Foundation for European Progressive Studies

Rue Montoyer 40, Fourth floor

1000 – Brussels

Belgium

T: +32 2 234 69 00

Email: info@feps-europe.eu

Website: www.feps-europe.eu/en/

Twitter @FEPS_Europe

TASC

101 Baggot Street Lower

Dublin 2

Do2 TY29

Ireland

Tel: +353 1 616 9050

E-mail: contact@tasc.ie

Website: www.tasc.ie

Twitter: @TASCblog

© FEPS, TASC 2018

The present report does not represent the collective views of FEPS and TASC, but only of the respective authors. The responsibility of FEPS and TASC is limited to approving its publication as worthy of consideration of the global progressive movement.

With the financial support of the European Parliament.

Disclaimer

The present report does not represent the European Parliament's views but only of the respective authors.

Table of Contents

Preface	3
Multinational Enterprises in Ireland	5
Introduction	6
Why Ireland?	7
Employment	8
MNE Linkages	11
Conclusion	12
Indigenous Industrialization	15
Introduction	16
Import Substitution	16
Export-Led Industrialization	20
Success and Failure in Industrial Development	27
Conclusion	32
The Apple Tax Case and Implications for Ireland	37
Introduction	38
FDI and Irish Economic Growth and Recovery	39
What Explains Ireland's Recent Economic Success?	40
a) Reasons for the Recovery	40
b) What about Employment?	41
State Aid Cases	44
Key Features of Apple	45
Effective Tax Rates and Apple	47
The Commission Apple Decision	50
a) The Role of the Branch Structure and Profit Split	50
b) Why should ASI and AOI be regarded "as non-resident companies"?	50
c) The Postal Address of ASI and AOE	51
d) Would Ireland Become a Tax Collector for the Rest of the World?	52
e) Tax Certainty and the Arguments against Commission State Aid Rulings	53
Apple Tax Strategy: From Stateless Income to Jersey	54
Conclusion: Are Irish Corporate Tax Policies a Model for Sustainable Growth?	56

List of Figures

Figure 1.1: Employment in Foreign-Owned Firms, by Sector, 1956-1986	10
Figure 1.2: MNE Employment, Total and Manufacturing, 1972-2003	11
Figure 1.3: MNE Employment 2007-2017	13
Figure 2.1: Manufacturing Employment Index (1988 = 100)	25
Figure 3.1: GDP Change 2006-2016	41
Figure 3.2: Unemployment 2006-2015	41

List of Tables

Table 2.1: Total and Average Employment in Manufacturing Plants in Ireland	26
Table 2.2: All Employment in Foreign-Owned Enterprises in Ireland	26
Table 3.1: Net Income of US MNEs in Various Countries (\$ billions)	43
Table 3.2: Employment by US firms in Ireland	44
Table 3.3: Employment by Sector ('ooo)	45
Table 3.4: Apple Balance Sheet values (\$ billion)	47
Table 3.5: Profits and Taxes Paid (\$ billions) for Apple Sales International (ASI) 2004-2014	50
Table 3.6: Tax Payments and Effective Tax Rates for Apple (\$ million) 2006-2016	51

Preface

Preface

This selection of three of the chapters on Ireland from the forthcoming book, *Upsetting the Apple Cart: Tax-based Industrial Policy in Ireland and Europe*, is provided as a "teaser" to the complete book. The six chapters in the book cover a detailed time-line of tax changes in Ireland and, for broader context, discussion and analysis of the global and especially the European fiscal and industrial policy environments.

The book was prepared with the financial support of FEPS, the Foundation for European Progressive Studies. In addition to the authors, many others contributed in myriad ways and thanks is due to them. James Wickham provided early inspiration; Louis Brennan and Robert Sweeney read and commented helpfully on early drafts of the chapters; Shana Cohen provided helpful advice; Tyler West contributed many hours to copy-editing text and ensuring that the papers submitted looked like book chapters; and Bryan McDonald turned the chapters into a book.

The three chapters presented here are, respectively, on MNEs in Ireland, on what we have termed "indigenous industrialization", and on the Apple case. The first was written by the editor and is a logical first chapter, both for the book and this selection, in that it introduces some of the key historical instances of policy encouraging foreign direct investment (FDI) into Ireland and examines the employment consequences of these policies. The second chapter, by the editor with the help of Eoin O'Malley, begins as an attempt to posit a counter-factual question: what might have happened in manufacturing and services in Ireland if more of the finite agency and general government resources had been devoted to Irish-owned and less on foreign-owned firms? The answer is of course a matter of opinion, but the opinion presented here is supported with explanations of its deliberation. The third chapter, by Jim Stewart, is a detailed analysis of the fiscal regime in Ireland, and in particular of how elements of this regime have been exploited by – among others – Apple, to reduce their global tax payments. The chapter also explains the state-aid case of the EU Commission against Apple and provides a critical analysis of the arguments offered by both Apple and Ireland in defence of their actions and policies.

It is our intention that these chapters – and the book that follows – contribute to what we hope will emerge as a broad debate on Ireland's fiscal regime. The topic addressed is not simply a question of a nominal corporate tax rate. The resistance of various governments of Ireland to even consider a change in the 12.5 per cent rate is almost doctrinaire. Counter-arguments seem to be ignored. At the same time, there is a great deal of evidence – as Stewart's work shows clearly – that the major MNEs, including Apple, pay tax on profits at an effective rate that is substantially less than 12.5 per cent. We wish to emphasise this contradiction between insistence on maintaining a particular tax rate while facilitating, with a variety of regulations, tax rates way below this. Increasing awareness of this contradiction should lead to discussion and ultimately implementation of an industrial policy less focused on the minimization of tax liabilities of MNEs based in Ireland. This new industrial policy could also contribute to a more balanced economy in which there is less dependence on FDI and MNEs. Ways of encouraging indigenous enterprise are discussed in the chapter on indigenous industrialization.

If pressures from the OECD, the EU, the US, and many NGOs, suggest the approach of a tipping point in the fiscal treatment of MNEs, Ireland would be well-advised to be prepared for change. The broad debate suggested here would contribute to that preparation.

Multinational Enterprises in Ireland

Multinational Enterprises in Ireland

David Jacobson

Emeritus Professor of Economics at Dublin City University

Introduction

This chapter provides a brief description of the history of Ireland's association with multinational enterprises (MNEs) from the first establishment of a subsidiary in Cork by the Ford motor company in 1917. The main focus is on employment, on the impact of MNEs on the local economy and how this has changed over time.

A prior question to be addressed in the context of MNEs in Ireland is why it is advantageous for them to establish subsidiaries in Ireland in the first place. At first sight Ireland could be argued not to be particularly attractive as a location for MNEs. It is a small, peripheral location as a consequence of which logistic costs are greater than they would be if the subsidiary was in a more central location, closer to large markets. Logistics are only one among many costs that have to be taken into consideration in the location decision. Nevertheless, over the years since that first subsidiary was established by Ford in Cork, various factors and policies were required to offset the natural disadvantage of Ireland's small size and peripheral location.¹

As is clear from many of the other chapters in this book, the attraction of MNEs by a variety of means is central to Irish industrial policy. It has been since the change in policy from the protectionist, local economy focused, import substituting industrialization (ISI) to a more outward looking policy of export led growth (ELG) in the late 1950s and early 1960s. This change was in a sense a shift from the view that the development and growth of the Irish economy could be led by Irish capitalists, investing in industries the products of which could compete – with some government assistance for example with tariffs – with imports from abroad. This view was undermined by the poor performance of the Irish economy in the 1950s, despite nearly 30 years of protectionism². It was replaced by the conviction that economic development in Ireland would have to be led by foreign direct investment (FDI). A key policy emerging from this conviction was Export Profit Tax Relief, on the basis of which the profits that MNEs derived from exports would be tax free. Given that the vast majority of MNE output was exported, the effect of this policy was to make Ireland a tax-free area for MNEs. A detailed explanation for the causes of the shift from ISI to ELG is provided in the chapter on indigenous industrialization. Also, an analysis and timeline of all the key tax changes in Ireland are provided in Sweeney's chapter in this book. Here we concentrate on the consequences.

¹ When Henry Ford tried to set up a plant in Cork in 1912, Percival Perry, Managing Director of Ford England, dissuaded him on the grounds that Cork was too "remote" (Jacobson, 1977, p.40).

² or because – as we suggest in the chapter on indigenous industrialization – of misdirection in the way protectionism was implemented (Jacobson and O'Malley, this volume).

Why Ireland?

There is still a great deal of explanatory power in Dunning's (1981; 1988) 'eclectic' model of MNE internationalisation. He drew on three main factors: ownership advantage, location advantages and internalisation. Ownership or 'firm-specific' advantages include technology, information, management, organisation or marketing competencies not held by other companies. Location or 'country-specific' advantages include any factors – tangible or intangible – that enable the company to produce or distribute its product better or cheaper in that country than elsewhere. Internalisation refers to the allocation of resources by the firm itself, rather than through arms-length market operations with other firms. Firm-specific advantages and internalisation together explain why a firm might become a MNE, setting up a subsidiary abroad rather than using exporting or licensing strategies. Country-specific advantages explain the choice of location of the new subsidiary.

When Ford set up a subsidiary in Ireland, its firm-specific advantage was its car (and tractor) production capability. It would not or could not share this with firms abroad so, to provide products for its foreign markets, it had to establish facilities itself to manufacture and/or assemble its products abroad (internalise). Ireland was considered first because of Henry Ford's family connections, but this was followed by more concrete (country-specific) factors like cheap land, the availability and relatively low wages of labour (Jacobson, 1977). Given that the proximity of the British market was another key factor, in the context of Brexit it is interesting to note that the head of Ford in Ireland sought and got the reassurance of the then (1922) head of the Irish government, famously protectionist Arthur Griffith, that there would continue to be free trade in motor vehicles and components between England and Ireland (Jacobson, 1977).

Very few MNEs followed Ford into Ireland – indeed, there were very few MNEs – until the 1950s and 1960s. Even Ford ceased to manufacture in Ireland after tariffs were introduced in 1932³, having situated its European manufacturing centre in Dagenham.

How and why MNEs emerged in greater numbers and growing size in the recovery after 1945 is beyond the scope of this book. Suffice to say that the shift in policy begun in Ireland in the 1950s was "precisely what was needed to ride the future wave of American FDI" (Best and Bradley, 2018, p.177). This shift added a range of supportive policies and incentives, including zero taxes, to the country-specific advantages offered by Ireland. The nature of the MNEs in Ireland has changed over the years, from manufacture to assembly to component production to software and services, but with a focus on out-competing other potential locations, the Irish state has continued to provide incentives, particularly through the fiscal regime, to maintain the flow of FDI.

³ Though, on the basis of a special agreement with the European Economic Community – which Ireland joined in 1973 – Ford continued to assemble vehicles in Cork until 1984.

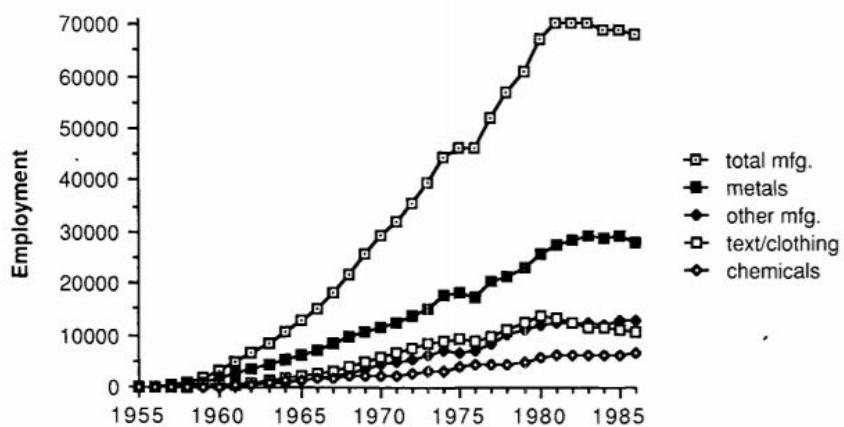
Employment

The disastrous decline in economic performance in the 1950s was the backdrop to the shift in policy towards the encouragement of FDI and exports. There was a prevailing view that the problem of absence or inadequacy of Irish entrepreneurs could be solved by relying on foreign-owned firms. Successfully leading the charge in Ireland's pursuit of FDI has, ever since, been the Industrial Development Authority (IDA)⁴.

The IDA was established in 1949 to encourage exports, not particularly in relation to MNEs. The focus on FDI did not become central until the First Programme for Economic Expansion, 1958-1963. However, from then on, although the IDA had responsibility for all industrial development, as an autonomous agency from 1969 and formally as an organization for attracting MNE subsidiaries to Ireland since 1994, most of its efforts have always been on FDI.

The early results were impressive, though not without criticism. Figure 1.1 shows the employment by sector in foreign owned firms from the mid-1950s to the mid-1970s.

Figure 1.1: Employment in Foreign-Owned Firms, by Sector, 1956-1986



Source: O'Hearn (1987)

Among the criticisms were that "Metals" was a very broad sector, and that although the employment came from new projects, they were not advanced technologically but rather "traditional", including aluminium extrusion and metal nut production. The more technologically advanced electronics manufacturing did not predominate until the 1970s (O'Hearn, 1987).

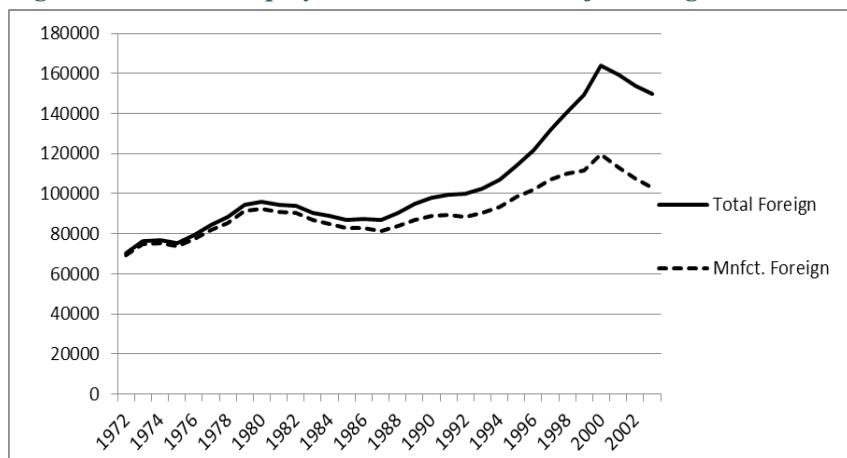
The success itself also led to criticism. Some warned of increasing dependence on MNEs (Walsh, 1980; Wickham, 1983; O'Malley, 1985; Crotty, 1986; O'Hearn, 1986). Even the increasing importance of the more sophisticated electronics industry raised questions first, when this industry suffered in the recession of the early 1980s, and second in relation to the quality and quantity of employment potential in a peripheral location (Murray and Wickham, 1986).

The impact of the recession is clearly evident in Figure 1.1. However, supporters of the policy of encouraging FDI – who were and still are in the vast majority among economists and other commentators – continued to justify the policy, arguing for example that the impact of recession on employment in MNEs was less than on indigenous firms (McAleece and Counahan, 1979).

⁴ The protectionist period from the 1930s to the end of the 1950s, and the change to outward looking policies, are discussed in more detail in the chapter by Jacobson and O'Malley.

Following the recession, with the success of the IDA and the support of all Irish governments – and little or no opposition in Dáil Éireann – employment in MNEs rose throughout the period until the recession of the early 2000s. This is shown in Figure 1.2, which also indicates that by the end of the 1980s MNE employment in the service sector was growing at a greater rate than in manufacturing. Services, including finance, in recent years have exceeded manufacturing employment in MNEs in Ireland.

Figure 1.2: MNE Employment, Total and Manufacturing, 1972-2003



Source: ESRI Database.

In more recent years, employment in MNEs has continued to grow, now about half of the total being in services.⁵ The Great Recession clearly impacted on MNE employment, which, as can be seen in Figure 1.3, fell by about 17,000 between 2007 and 2010. However, it has risen quite sharply since then, both in absolute terms and as a proportion of total employment in Ireland. An IDA press release in 2017 trumpeted its achievement of nearly 200,000 jobs in FDI employment, accounting for very nearly 10 per cent of total employment in Ireland.

While few would deny that Ireland, and the IDA in particular, have been exceptional in encouraging FDI over the entire period since the opening up of the economy, there remain questions about the specific incentives resulting in this success. The latest National Competitiveness Council concludes that Ireland's "taxation regime, highly skilled young workforce, and environment in which to do business remain for the most part relatively competitive" (NCC, 2018, p.7). However, the huge efforts by the Irish government and continued insistence on the maintenance of the 12.5 per cent corporate profit tax rate, suggest that this is the single most important element in Ireland's incentive policy (see, for example, Roche, 2014; Smyth, 2017). This is, moreover, in the face of strong pressure from Ireland's European partners to change its fiscal regime (Smyth, 2017).

If we see the nominal tax rate and the fiscal regime in general as an 'artificial' country-specific advantage of Ireland, and as such not necessarily permanent, then how would its removal impact on the attractiveness of Ireland as a location for MNEs? In the context of the completion of the Single

⁵ It should be pointed out, however, that precise data are extremely difficult to come by. As Stewart shows in his chapter in this volume, there are significant differences between the data provided by different sources – and sometimes by the same source. The IDA provides data not on "foreign-owned firms" but on "agency supported firms". This then excludes major employers like foreign-owned supermarkets.

Market in 1992, Jacobson and Andreosso (1990, p.310) wrote: "Removal of Ireland's artificial country-specific advantages in a competitive harmonisation of tax and grant regimes in the EC would have a dramatic and negative effect on Ireland's locational attractiveness". At the time Ireland, as a relatively less developed economy in Europe, had significant leeway in encouraging investments through grants. Ireland is now not relatively less developed in Europe so no longer has this leeway (as the European Commission case against Ireland in relation to state aid for Apple shows⁶). And in relation to taxes, a range of factors threatens Ireland's competitiveness, including the reduction of the rate in other countries (for example the US in 2017 and the UK in 2018), and continued pressure from the EU and the OECD for some form of corporate tax harmonisation⁷.

The US tax situation is particularly problematic, given the predominance of US companies among the MNEs in Ireland. Under Trump the situation is particularly volatile, too. The "Trump risk", as Taylor (2018) calls it, "is to the modern foreign direct investment sector". Trump's reduction of corporate taxes in the US and encouragement to invest at home rather than abroad, are bound to have implications for US FDI into Ireland (Taylor, 2018).

Does all this not suggest that there is now an even greater threat to Ireland's attractiveness to FDI than in 1992? If so, then the greater the proportion of total employment accounted for by MNEs, the greater the extent to which Ireland's continued prosperity is at risk.

The key providers of employment among the more recent MNEs establishing subsidiaries in Ireland, are those at the forefront of the digital economy including Google (2003), Amazon (2004) and Facebook (2008). Between them these three companies employ at least 10,000 people. It might be argued there is a more 'natural' country-specific advantage, the skilled Irish workforce, that has at least contributed to these companies coming to Ireland. However, according to some sources, 70 per cent of Google's employees in Ireland are foreign (Henigan, 2016)⁸.

The taxation of these software or web-based companies is even more susceptible to profit switching than manufacturing firms. A major factor in this, as shown in the chapter by Stewart on Apple, is the apparent location of intellectual property (IP). And Ireland, with a low corporate tax regime, is therefore a favourable location. Does this make the Irish employment of these companies any more secure than that of manufacturing companies?

Taxation of digital companies has also become an issue on which those calling for fair taxation of MNEs have focused. A major element in the proposals from the European Commission is that tax should be based on the location of the customer base. With a small part of these companies' markets in Ireland, this would reduce both Ireland's tax take and the advantage of Ireland as a location for these companies. As in other proposals on corporate tax, therefore, the Irish government has objected (see Hamilton, 2018). Ultimately, as in relation to corporate tax in general, the continuation of the current situation is contingent on Ireland being able to resist the pressures of its European and other trading partners for change. That there are other ways to encourage industrial development is clear from the chapters in this book by Jacobson and O'Malley, and Pianta.

6 Reported on in some detail in Stewart's chapter.

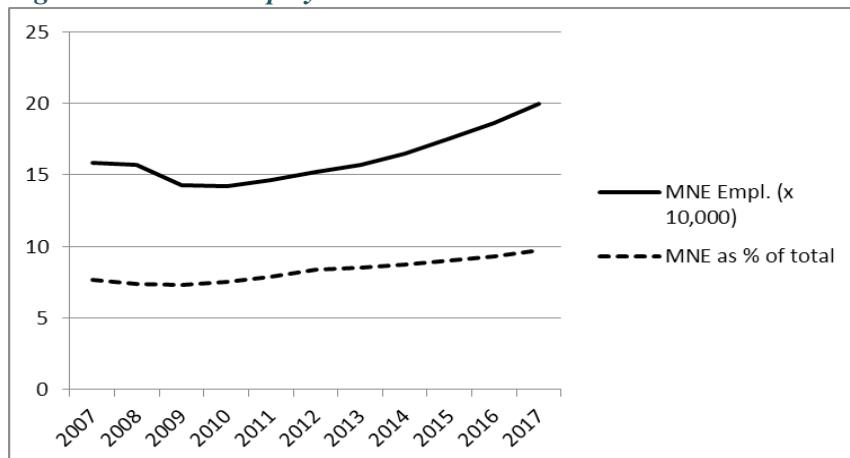
7 In addition, there is a 'race to the bottom' in relation to corporate taxes, as described in some detail in the chapter by Berkout in this book.

8 The increasing numbers of non-Irish employees of MNEs have had positive and negative consequences. Among the positives is the growth of companies like Relocom, finding accommodation and other aspects of settling into life in Ireland, for up to 500 people a week (interview with Relocom employee, July 2018). Among the negatives is the increase in rents to which this has undoubtedly contributed. This negative is exacerbated by another digital company, Airbnb, which has encouraged short-term rentals for tourists, reducing availability of long-term rentals for residents, particularly in Dublin.

MNE Linkages?

Best and Bradley (2018) suggest that the industrial development system in Ireland, driven by the IDA's growth strategy and financed in part by EU Regional Development and Structural Funds, included "material and human-resource infrastructures" and tax policies, that were "tailored... to turn Ireland into an export platform for hundreds of world-leading technology enterprises" (p.398).

Figure 1.3: MNE Employment 2007-2017



Source: DJEI (2016); IDA (2017)

Note: The data are for "agency-assisted, foreign-owned firms".

In the 1970s such leaders of the computer industry as Digital, Prime, Nixdorf and Amdahl established subsidiaries in Ireland, and Apple followed in 1980. In the 1990s Intel and early in the 2000s IBM set up substantial production operations in Ireland (Van Egeraat and Jacobson, 2004, Table 1).

Porter's (1990) work on clusters made the concept a key focus for industrial development. Did all the work of the IDA, for example in the creation of a foreign-owned computer industry in Ireland, lead to a computer cluster, which would imply sustainable employment in the sector? From early on in the implementation of the IDA's strategy – in the free trade zone in the Shannon area – evidence of embeddedness into the economy⁹ was thin (Stewart, 1975). Even many years after the computer MNEs had come to Ireland the sustainability of their activities in this location was extremely uncertain. Van Egeraat and Jacobson (2005) show that of the five microcomputer assemblers operating in Ireland in the late 1990s, only two remained (Dell and Apple) in 2003, Apple having significantly downsized, and Dell to leave six years later. They concluded that "a strategy of building integrated vertical clusters around manufacturing subsidiaries of MNEs does not look promising in the context of Ireland" (van Egeraat and Jacobson, 2005, p.302). Taking into consideration not just material but also information linkages, their research showed "that during the 1990s and early 2000s the microcomputer assembly plants... were not really part of a cluster or agglomeration. The main factors behind the concentration of assembly plants were the relatively low wages and fiscal incentives" (van Egeraat and Jacobson, 2006, p.416).

Other industries in which MNEs predominate have suffered similar lack of integration into the local economy. Best and Bradley (2018, p.198) highlight this with a heading, "clusters of autarchic enterprises". There has been success in attracting MNEs, they show, but in none of the sectors – like electronics, pharmaceuticals and medical devices – in which these MNEs predominate, have the branch plants

⁹ Or what Hirschman (1958) called backward linkages.

"fostered the emergence and growth of a significant number of indigenous entrepreneurial firms. [These plants] have remained a remotely managed production and business system, organized to make and export products designed at their home base" (Best and Bradley, p.205).

Conclusion

This chapter has focused on MNEs; they have been important in the growth of numbers of jobs in Ireland, throughout the entire period since the opening up of the Irish economy in the late 1950s. The chapter has also raised the possibility of risks involved in the continued dependence of decision makers on FDI for employment creation. In the other chapters in this book these issues are further considered: in the chapter by Jacobson and O'Malley more focus on indigenous industry is considered as a possible alternative; Sweeney looks at the successes and failures of the tax system in general; Stewart focuses on the Apple tax case, suggesting that the Commission has a strong case against Apple and Ireland; the chapter by Berkhouwt puts the Irish corporate tax regime in an international context; finally, Pianta shows that there are alternatives to a tax-based industrial policy.

References

- Best, M.H. and Bradley, J. (2018) "Ireland's Divided Economy: Growth without Indigenous Innovation," in M.H. Best, *How Growth Really Happens: The Making of Economic Miracles through Production, Governance, and Skills*, Princeton: Princeton University Press.
- Crotty, R. (1986) *Ireland in Crisis: A Study of Capitalist Colonial Underdevelopment*, Dingle: Brandon.
- Dunning, J.H. (1981) *International Production and the Multinational Enterprise*, London: Allen and Unwin.
- Dunning, J.H. (1988) *Explaining International Production*, London: Allen and Unwin.
- Hamilton, P. (2018) "EU digital economy tax could cost Ireland €160m, Revenue says", *Irish Times*, May 1st.
- Henigan, M. (2016) "Does Google Ireland have 6,000 employees in Ireland?" *Finfacts*, June. Available at http://www.finfacts.ie/Irish_finance_news/_articleDetail.php?Does-Google-Ireland-have-6-000-employees-in-Ireland-649, accessed 20th July, 2018.
- Hirschman, A.O. (1958) *The Strategy of Economic Development*, New Haven: Yale University Press.
- Jacobson, D. S. (1977) "The Political Economy of Industrial Location: The Ford Motor Company at Cork 1912-1926", *Irish Economic and Social History*, Vol. IV, pp.36-55.
- Jacobson, D. and Andreosso, B. (1990) "Ireland as a Location for Multinational Investment" in A. Foley and M. Mulreany (eds.) *The Single European Market and the Irish Economy*, Dublin: IPA.
- McAleese, D. and Counahan, M. (1979) "'Stickers' or 'Snatchers'? Employment in Multinational Corporations during the Recession", *Oxford Bulletin of Economics and Statistics*, Vol. 41, No. 4, pp.345-358.

Murray, P. and Wickham, J. (1986) "Women Workers and Bureaucratic Control in Irish Electronics Factories", in H. Newby, *et al.* (eds.) *Restructuring Capital*, London: Macmillan.

National Competitiveness Council (NCC) (2018) *Ireland's Competitiveness Scorecard 2018*, July, Dublin: NCC. Available at: <http://www.competitiveness.ie/News-Events/2018/NCC-publishes-Ireland-s-Competitiveness-Scorecard-2018.pdf>, accessed 20th July 2018.

O'Hearn, D. (1986) "Free Trade Ideology, the Planning Myth, and Export-Led Industrialisation in Ireland", Paper read at the Annual Conference of the Sociological Association of Ireland, Dublin, April.

O'Hearn, D. (1987) "Estimates of New Foreign Manufacturing Employment in Ireland (1956-1972)", *Economic and Social Review*, Vol. 18, No. 3, pp. 173-188.

O'Malley, E. (1985) "The Problem of Late Industrialisation and the Experience of the Republic of Ireland", *Cambridge Journal of Economics*, Vol. 9, No. 2, pp.141-154.

Porter, M. (1990) *The Competitive Advantage of Nations*, New York: Macmillan.

Roche, R. (2014) "Taoiseach Defends Corporate Tax Rate", *Irish Times*, October 2nd.

Smyth, P. (2017) "EU leaders put pressure on Ireland over corporate tax: Taoiseach defends Ireland's low tax stance amid calls for harmonisation of tax rates", *Irish Times*, September 29th.

Stewart, J.C. (1975) "Linkages and Foreign Direct Investment", *Regional Studies*, Vol. 10, No. 2, pp.245-258.

Taylor, C. (2018) "There are always budget uncertainties but we are facing a couple of whoppers", *Irish Times*, July 21st.

Van Egeraat, C. and Jacobson, D. (2004) "The Rise and Demise of the Irish and Scottish Computer Hardware Industry", *European Planning Studies*, Vol. 12, No. 6, pp.809-834.

Van Egeraat, C. and D. Jacobson (2005) "Geography of Production Linkages in the Irish and Scottish Microcomputer Industry: the Role of Logistics", *Economic Geography*, Vol.81, No.3, pp.283-303.

Van Egeraat, C. and Jacobson, D. (2006) "Geography of Production Linkages in the Irish and Scottish Microcomputer Industry: the Role of Information Exchange" *Tijdschrift voor Economische en Sociale Geografie (Journal of Economic and Social Geography)*, Vol. 97, No. 4, pp.405-417.

Walsh, F. (1980) "The Structure of Neo-Colonialism: The Case of the Irish Republic", *Antipode*, Vol. 12, No. 1, pp.66-72.

Wickham, J. (1983) "Dependence and State Structure: Foreign Firms and Industrial Policy in the Republic of Ireland" in O. Holl (ed.) *Small States in Europe and Dependence*, Vienna: Bramuller.

Indigenous Industrialization

Indigenous Industrialization

David Jacobson

Emeritus Professor of Economics at Dublin City University

and Eoin O'Malley

*Independent Economist and Member of the TASC Commission
on Industrial Policy*

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 industrialization? 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 industrialization. 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 industrialization 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 Britain¹⁰, 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

¹⁰ This was a trade war, 1932-1938, in which Ireland under de Valera refused to make certain payments (land annuities) to Britain related to 19th century land acts, and Britain responded with restrictions on trade. Further restrictions followed, both in Ireland and Britain, on trade between them.

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 drink¹¹. 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

¹¹ This, and the rest of this paragraph, draws on O'Malley (1989, Ch.6).

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 industrialization. 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.

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. Long-term success of firms is more likely if they are in "sticky places in slippery space" (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"¹². 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,

¹² 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 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.

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.¹³ 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 Industrialization

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.¹⁴ 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

¹³ See, for example, Girvin (1989).

¹⁴ 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.

example continued to support protectionism as a factor in the support for 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 industrialization.

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 markets¹⁵, 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.¹⁶ 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, 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 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

¹⁵ After all, the aims of the IDA, when first established, were to support indigenous firms and prepare them for international competitiveness.

¹⁶ See O’Malley (1989, Ch.6) for more detail on these developments.

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.¹⁷

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.¹⁸

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 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 2.1 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

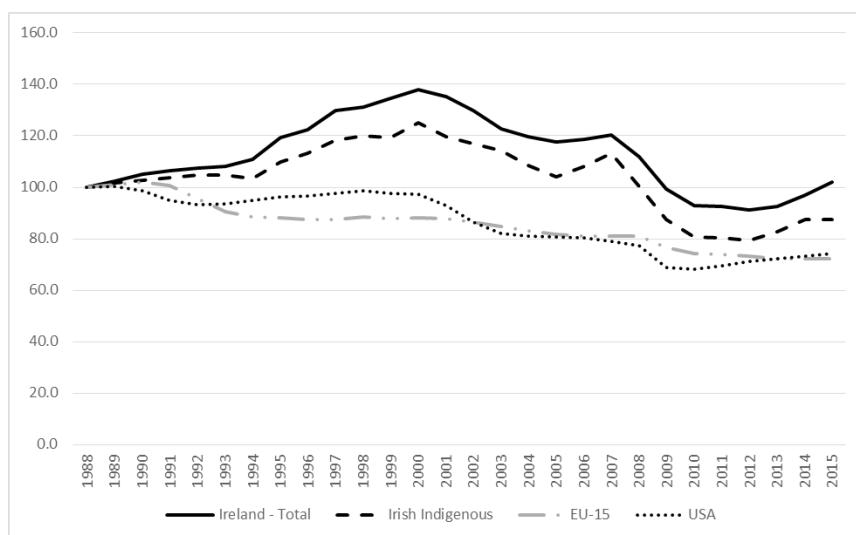
¹⁷ This was done first in 1988 by means of an internal reorganisation within the Industrial Development Authority (IDA) which involved the establishment of separate divisions for the promotion of indigenous and overseas industry. Since 1993 there have been separate agencies for these two functions.

¹⁸ 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).

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 2.1 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.¹⁹ 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).

Figure 2.1: 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 2.1 shows the size difference between foreign-owned and Irish enterprises.

Table 2.1: 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
Average employment per manufacturing plant	46	173

Source: Forfás (2013)

¹⁹ Data from Department of Jobs, Enterprise and Innovation, Annual Business Survey of Economic Impact.

The relative concentration of MNEs, both in particular sectors and from a particular country, the USA, is also important²⁰. 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 2.2.

What Table 2.2 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.

Table 2.2: 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*.

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

²⁰ The following two paragraphs draw on Jacobson (2015).

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)²¹.

²¹ 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."

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. Before²², during²³ and since²⁴ the bailout, there has been significant European and American²⁵ 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 Recession after 2008²⁶. 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, pp.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.

²² "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).

²³ "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'Hora and Collins, 2011).

²⁴ "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).

²⁵ Headline in Irish Times: "Hillary Clinton criticises Irish corporate tax 'perversion'" (Carswell, 2016).

²⁶ O'Riain (2014, p.240) references Laeven and Valencia's (2012) research showing that "Ireland's banking crisis was among the most severe in world economic history".

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 Business²⁷. 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 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

²⁷ See also IDA Ireland (no date) *Winning: Foreign Direct Investment 2015-2019*.

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.²⁸ 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.²⁹

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 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.³⁰

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

²⁸ Measured in current Irish pounds, Census of Industrial Production (various years).

²⁹ 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.

³⁰ National Software Directorate data, quoted in O'Malley and O'Gorman (2001).

per cent per year in 2000-2016 compared with 8.9 per cent per year for foreign-owned exports.³¹

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.).³² 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 2000.³³

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 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.³⁴

The combination of the two data sets tells us that there were significant net transfers of ownership from

³¹ Data from Department of Business, Enterprise and Innovation, *Annual Business Survey of Economic Impact*.

³² Data from the *Census of Industrial Production* (various years).

³³ *Census of Industrial Production* for Irish indigenous data. EU-15 data from EUKLEMS database (euklems.net).

³⁴ 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.

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.³⁵ 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.³⁶

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.³⁷ 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.³⁸ 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 294,000.³⁹ 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

³⁵ If so, then a pattern of takeovers of Irish firms by foreign-owned firms might be expected to recur under more benign conditions.

³⁶ CIP data for 2015 do not have sufficient sectoral detail to include 2015 here while 2016 results are not yet published.

³⁷ 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).

³⁸ Central Statistics Office, "Outward Foreign Affiliates Statistics - 2015".

³⁹ The 11 MNEs concerned are CRH, Primark, Smurfit Kappa, Kerry Group, Greencore, Ryanair, Kingspan, Grafton, Glen Dimplex, Glanbia and Total Produce.

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 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 MNEs 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 conjuncture, 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. In short, "Ireland's policymakers have not solved the challenge of growing mid-sized, technology-driven companies" (Best and Bradley, 2018, p.205).

Conclusion

There can be little doubt, therefore, that better policies, better implemented over the decades since the introduction of ELI in Ireland, could 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.
- Best, M.H. and Bradley, J. (2018) "Ireland's Divided Economy: Growth without Indigenous Innovation," in M.H. Best, *How Growth Really Happens: The Making of Economic Miracles through Production, Governance, and Skills*, Princeton: Princeton University Press.
- 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 Giztdinov, 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) *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, NESI, Dublin.

O'Hora, 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, NESI, Dublin.

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

The Apple Tax Case and Implications for Ireland

The Apple Tax Case and Implications for Ireland

Jim Stewart

Adjunct Professor in Finance, School of Business, Trinity College Dublin

Introduction

Ireland is central to the tax strategies of several major US corporations such as Apple and Google. This chapter deals in particular with Apple tax strategies, including recent disclosures from the 'Paradise Papers', and the EU ruling on Apple. The chapter critically examines the Irish government and Apple case opposing the EU ruling. This chapter then considers the US government arguments against the European Commission state aid rulings, the main thrust of which is that these decisions create additional uncertainty in tax with adverse effects on economic growth. Issues relating to a possible windfall gain of more than twice tax revenues for Ireland and possible revenue losses for the US are not discussed.

A low corporation tax and attracting foreign direct investment are key aspects of Irish economic policy. Industrial policy can be summarised as continuing to focus "on attracting and retaining foreign direct investment and a competitive corporate tax strategy is a key tenet of that policy" (Department of Finance, 2013; Grant Thornton, 2014). In particular tax policy and attracting FDI have been seen as key to Ireland's economic recovery. The Apple case is significant because it calls into question the use of favourable corporate tax regimes to attract FDI.

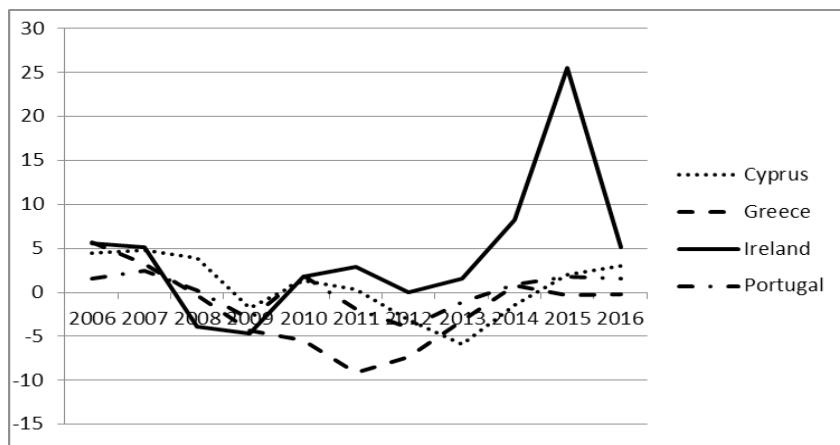
This chapter is structured as follows: The first two sections discuss the role of FDI in Irish economic growth and recovery. The next section discusses the European State Aid cases and their implications. This is followed by sections dealing with Apple tax strategies and effective tax rates. The Commission Apple Decision and appeals are then considered. The next section examines Apple's most recent tax strategy. Finally the paper considers some conclusions for industrial strategy⁴⁰.

⁴⁰ For other work by the author on MNE tax strategies, see for example Stewart (2017).

FDI and Irish economic Growth and Recovery⁴¹

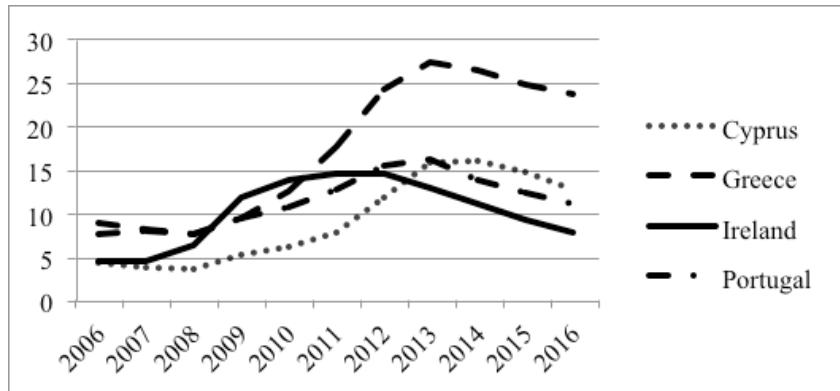
Figure 4.1 shows the recent fall in Irish GDP followed by recovery. The figure shows GDP change for three other bailout countries. All four 'bailout countries' have experienced growth in recent years; Irish economic growth has been spectacular at 26.5 per cent for 2015. Some reasons for this will be discussed later.

Figure 3.1: GDP Change 2006-2016



Source: IMF World Economic Outlook Database

Figure 3.2: Unemployment 2006-2015



Source: IMF World Economic Outlook Database

Figure 4.2 shows rising rates of unemployment followed by a fall in all countries. Again Ireland has shown the steepest decline in unemployment rates. In common with other bailout countries there has been net migration from 2009 to April 2015, but also growth in employment. An important question: was the fall in employment due to Ireland's industrial policy to attract FDI?

⁴¹ All charts are from the IMF World Economic Outlook data base available at <http://www.imf.org/external/pubs/ft/weo/2016/02/weodata>

What Explains Ireland's Recent Economic Success?

a) Reasons for the recovery

Ireland's very favourable corporate tax regime and the role of foreign direct investment (FDI) are often cited as the main reason for the economic recovery in Ireland. The recent growth in GDP (and growth in corporate tax payments) may be largely explained by MNE tax strategies. The level of direct investment, excluding the Irish Financial Services Centre, rose from €168 billion in 2013 to €560 billion in 2016⁴². This increase is mostly explained by FDI inflows. For 2015 FDI inflows into Ireland amounted to €216 billion, (41 per cent of total FDI inflows into the EU⁴³) most of this likely to consist of intellectual property (IP). The increased value of IP has in turn led to an increase in profits and corporate tax payments. Trading profits increased from €95.3 billion in 2014 to €143.9 billion in 2015 and to €158.8 billion in 2016. At the same time, the value of capital allowances on intangibles amounted to €2.6, €28.8 and €35.7 billion respectively for the years 2014-2016 (Tancred, 2016, p.8; McCarthy and McGuinness, 2018, p.19), reflecting the large increase in IP tax credits. While trading profits increased by €48.6 billion between 2014 and 2015, corporate tax payments increased by just €2.2 billion to €6.87 billion. Between 2015 and 2016, trading profits increased by €15 billion, but tax receipts by €0.85 billion. Capital allowances on the value of IP, plus interest deductions on the financing of IP are an integral part of the recent tax strategy of Apple as discussed later⁴⁴.

The US Bureau of Economic Analysis (BEA) has consistently reported larger net income of US owned investment in Ireland than is compatible with published Irish economic data (Table 4.1). One reason for this was because a small number of firms were 'stateless' such as Apple. That is they were not regarded as resident in Ireland for tax purposes and their profits were not recorded in Irish economic data. Apple famously declared to the US Senate subcommittee on investigations, that they were not resident anywhere for tax purposes⁴⁵.

Similarly profits of MNE subsidiaries using a 'double Irish' tax strategy, for example Google, were allocated in Irish economic data to countries where they were deemed to be 'managed and controlled', and hence resident for corporate tax purposes, such as Bermuda or the Cayman Islands. Companies registered in Ireland could no longer be Stateless for tax purposes since 2014 and restrictions on the 'Double Irish' were introduced in 2015.⁴⁶

The recent increase in measured GDP reflects the incorporation of previously earned profits in Irish incorporated but not tax resident subsidiaries, in Irish economic data. It is no longer possible for Apple

42 CSO, Dublin, Quarterly International Investment Position and External Debt, Table 4.

43 See FDI in Figures, OECD April 2018 Table 1.

44 The European Commission (2017a) states (p.12): "Ireland stands out as the Member State with the highest net royalty payments (as a percentage of GDP), which is consistent with a potential ATP (Aggressive Tax Planning) channel using royalty payments".

45 Apple famously stated to the Senate subcommittee (2013) that "Apple has not made a determination regarding the location of AOI's central management and control. Rather, Apple has determined that AOI is not managed and controlled in Ireland".

46 In the budget statement (15 October 2013) the Minister for Finance stated "I will be bringing forward a change in the Finance Bill to ensure that Irish registered companies cannot be 'stateless' in terms of their place of residency". This was enacted in the Finance (no. 2) Act, 2013, section 39. In the Budget 14th Oct. 2014, the Minister for Finance stated "I am abolishing the ability of companies to use the 'Double Irish' by changing our residency rules to require all companies registered in Ireland to also be tax resident" (s. 43 of the Finance Act, 2014). This legal change will take effect from the 1st of January 2015 for new companies. For existing companies, there is a transition period until the end of 2020. A major exception relates to companies that are regarded as tax resident in a country with a double tax treaty with Ireland.

to remain stateless for tax purposes, and around 60 per cent of the value of Apples Group profits are declared in Ireland, so that Apple is now one of the largest payers of corporate tax in Ireland⁴⁷.

Table 4.1 shows profits of US MNEs reported in US data increased by 30 per cent between 2013 and 2015. The size of US firms reported profits in Ireland also indicates discrepancies between BEA data and CSO data relating to the size of corporate profits in Ireland. Table 4.1 also shows that nearly 68 per cent of total profits earned by U. S. firms within the EU are earned within three countries Netherlands, Ireland and Luxembourg, where tax rates are low (under 3 per cent for 2015) and have fallen in recent years for Ireland and the Netherlands.

Table 3.1: Net Income of US MNEs in Various Countries (\$ billions)

Low tax Countries	2013	2013	2013	2014	2014	2014	2015	2015	2015
	Net Income	Tax Paid	Tax Rate %	Net Income	Tax Paid	Tax Rate %	Net Income	Tax Paid	Tax Rate %
	Netherlands	134.1	3.7	2.7	152.6	5.6	3.5	186.5	3.8
Others									
France	6.8	3.5	33.9	2.4	4.1	63.0	7.9	3.5	30.1
Germany	16.9	3.9	18.7	23.0	6.7	22.6	21.1	4.9	18.8
UK	72.3	8.6	10.6	9.7	9.1	48.4	11.8	7.1	37.6
EU	483.2	32.0	6.2	544.3	40.3	6.9	585.8	32.6	5.3
Total World	1044.6	138.9	11.7	1166.2	160.6	12.1	1065.8	91.2	7.9

Source: US Bureau of Economic Analysis various issues

b) What about Employment?

Discussions of the impact of FDI sometimes refer to the total number employed in foreign owned firms. For example the Department of Jobs, Enterprise and Employment (2014, p.1) states: "Foreign Direct Investment (FDI) has been a key contributor to Ireland's economic development and growth through providing rewarding employment for over 250,000 people directly, knowledge transfer, and transformation of the enterprise base".

⁴⁷ Apple is quoted as stating that \$1.5 billion was paid in corporate tax in Ireland in the period 2015-2017, see 'Paradise Papers: Apple's secret tax bolthole revealed' By Paradise Papers reporting team, BBC Panorama, 6 November 2017.

The CSO estimated the total number of those employed in foreign owned firms at 297.7 thousand in 2012 and 305.9 thousand in 2015, an increase of 7,200 thousand. Table 4.2 shows that total employment increased between these two dates by 18,500. This would seem to indicate that employment in foreign owned firms while important is not the most important contributor to recovery.

Rather than total employment in foreign owned firms (which includes for example, Tesco, 14,500 employees, Lidl, 4500, (<http://jobs.lidl.ie>), Marks and Spencer, 2,300 <http://www.top1000.ie>, etc.), most analysis focuses on what are described as 'agency supported' foreign owned firms, in particular US-owned firms.

According to the Industrial Development Authority (IDA Annual Reports various years) there were 111,600 employees in US companies in Ireland in 2012 and 137,700 in 2015, giving an increase in employment of 26,100. However CSO data for employment amongst US companies shows a much smaller increase of 6,100 to 115,900 over the same period.

Table 3.2: Employment by US firms in Ireland

Year	US BEA Data ¹	IDA Data ²	CSO ³	CSO ⁴
2016		144.06	n.a.	n.a.
2015	124.8	137.7	115.9	122.0
2014	123.6	125.6	111.6	117.9
2013	106.8	118.4	110.04	116.6
2012	106.6	111.7	109.7	116.3
2011	98.3	106.8	n.a	n.a.

¹ Majority owned foreign affiliates.

² IDA Annual Report and Accounts.

³ CSO (2017) defined as 'location of owner and referred to as "United States".

The data refers to "Foreign affiliates with voting rights resident in the US". CSO (2017) Table 3.3. Location refers to the location of the "Ultimate Controlling Parent".

⁴ Defined as "regional location of owner" referred to as "America".

Source: CSO (2017), <http://www.cso.ie/en/releasesandpublications/ep/p-fdi/fdi2015/ae/> Fig. 3.1.

Table 4.3 shows most employment growth in the period Q3 2011 and Q4 2015 came from sectors other than those dominated by US MNEs.⁴⁸ The table also shows that employment in these sectors continued to grow between Q4 2015 and Q4 2016, but that employment has yet to reach a pre-recession peak of 2.146 million.

⁴⁸ Reported employment by firms such as Apple often varies for the same period for different sources. For example The Irish Examiner (July 19th 2012) reports that Apple had 3,000 employees while Testimony of Apple Inc. Before the Permanent Subcommittee on Investigations US Senate, May 31, 2013 states (p.2), that Apple "employs nearly 4,000 people". The Senate Subcommittee report (PSI, 2013, footnote 103) states there were 2,452 employees.

Table 3.3: Employment by Sector ('000)

Year	Jun/Aug 2007	Q3 2011	Q4 2012	Q4 2015	Q4 2016	Change Q3 2011 to Q4 2015
Agriculture and Food process.	104.7	81.1	90.0	106.4	109.7	+25.3
Accommodation and Tourism	138.4	111.1	118.3	143.1	148.0	+32.0
Construction	283.2	107.5	103.2	126.6	138.2	+19.1
Total employment	2146	1796.5	1849.9	1983	2048.1	+ 186.5

Source: CSO, Quarterly National Household Survey, Q3 2016, Table 2, and Q4 2008, Table 2b.

In conclusion even though attracting FDI has been the main focus of industrial policy and has been credited with Ireland's economic success and recovery, its role has been exaggerated. The negative effects following the EU Competition Directorate Apple decision have also been exaggerated in terms of reputational damage and economic impact.

While many attribute Ireland's recovery and economic success to a low corporate tax rate and favourable tax regime. Low tax policies have resulted in controversial tax minimisation strategies⁴⁹. The relative high profitability of US firms in Ireland is also long established (Grubert and Altshuler, 2006, p.29). Ireland has been described as a tax haven for many years (Hines and Rice, 1990, Table 2), but more frequently in recent years (for example, Permanent Subcommittee on Investigations (PSI), 2013, p.6; Jaafar and Thornton, 2015; Citizens for Justice, 2016); it has also been referred to as a "secrecy jurisdiction" (Shaxson, 2011, p.17; Torslov *et al.*, 2018).

On a global basis the widespread use of tax havens and tax avoidance strategies has resulted in considerable adverse comment, due to the growth and size of assets held offshore (Henry, 2012, p.36), and tax avoidance. Losses due to corporate tax avoidance alone are estimated at \$100-\$240 billion per annum by the OECD (2015, Table 3.3). Other estimates are much higher (Oxfam, 2016, pp.12-13).

As a result of low tax policies and tax avoidance strategies there have been proposals for reform of corporation tax from the OECD BEPS program (OECD, 2015) and various anti-avoidance initiatives from the EU (European Commission, 2016a). Examples of these include directives requiring increased information exchange and an anti-tax avoidance directive (European Commission, 2016b).

State aid cases initiated by the European Commission have also been important. One of the most significant of these relates to Ireland.

⁴⁹ Some examples: Luxleaks (<https://www.icij.org/project/luxembourg-leaks>), Panama papers (<http://panamapapers.sueddeutsche.de/articles/56febff0a1bb8d3c3495adf4/>), Bahamas corporate filings (<https://www.icij.org/blog/2016/09/icij-publishes-leaked-bahamas-info-offshore-database>). For Ireland see Jesse Drucker (2010).

State Aid Cases

State aid cases are important because for many countries such as Ireland, the corporate tax regime is more important than the nominal tax rate. For example tax rulings that permitted 'stateless income', or the 'double Irish' and legislation that enables financial firms availing of special tax reliefs ('section 110 firms) to have an effective tax rate close to zero, are far more important than the nominal tax rate⁵⁰. State aid cases have resulted in a number of these tax rulings becoming illegal, and furthermore have signaled that rulings that give tax concessions to one sector could potentially be challenged by the Competition Directorate.

Similar to the OECD, a key motivation of EU policy is to prevent 'unfair tax competition'. A second key objective is to ensure the "attributing of income to where value is created" as in proposals for a common tax base (European Commission, 2016c). The Directive on Tax rulings is also designed to "deter tax authorities from offering selective tax treatments to companies" (European Commission, 2015).

The EU Competition Directorate has been investigating tax rulings of member states since 2013 on the basis that tax rulings have resulted in granting "selective tax advantages" which constitute state aid (Almunia, 2014)⁵¹.

Decisions that tax rulings constituted illegal State aid have been made, for example, in relation to the Belgium government (requiring repayment of €700 million from 35 MNEs), Luxemburg in relation to Fiat (repayments of €20-30 million), Amazon (requiring repayments of €250 million), and the Netherlands in relation to Starbucks requiring repayments of €20-30 million (European Commission, 2016e). In these latter cases tax repayments will amount to €20-€30 million. The Commission has required Ireland to reclaim from Apple a far larger sum of €13 billion in illegal State aid plus €6 billion in interest, (a total of almost three times annual corporate tax receipts) (European Commission, 2016d). Preliminary findings of illegal State aid have also been made in relation to McDonalds in Luxembourg and IKEA in the Netherlands and further investigations of other companies are possible⁵².

Prior to publication of the Commission ruling on Apple, the Irish Minister for Finance stated that "Ireland is confident that there is no state aid rule breach in this case". Even though Ireland would benefit from any tax payments the Minister also stated that "we will defend all aspects vigorously"⁵³. This is a similar position taken by the governments of other countries such as Luxembourg and the Netherlands⁵⁴.

The Minister for Finance stated after publication of the Commission findings:

The Government has decided unanimously to bring an appeal before the European Courts to challenge the European Commission's decision on the Apple State aid case. I believe that there are some very important principles at stake in this case and that a robust legal challenge before the Courts is essential to defend Ireland's interests (Department of Finance press release 2/9/2016).

There are a number of reasons given why the Irish government is appealing the Apple decision, for example "to challenge the encroachment of EU state aid rules into the sovereign Member state

⁵⁰ See Stewart and Doyle (2017) for a discussion of the tax benefits to 'Section 110' firms.

⁵¹ See EU Press release "State aid: Commission investigates transfer pricing arrangements on corporate taxation of Apple (Ireland) Starbucks (Netherlands) and Fiat Finance and Trade (Luxembourg), Brussels, 11th June 2014.

⁵² Brunsden and Noble (2016).

⁵³ See Department of Finance Press Release 11th June 2014.

⁵⁴ For example in relation to Starbucks the Dutch Deputy Finance Minister is quoted as stating "I am confident that this investigation will ultimately show that no state aid has been provided" see Barker and Houlder (2014).

competence of taxation⁵⁵ and other reasons which will be discussed later. The next section discusses some key features of Apple and its tax strategy.

Because of delays in collecting the illegal State aid from Apple, the Commission initiated legal proceedings in October 2017 (European Commission, 2017c). Subsequently the Irish government agreed terms to collect sums due and announced the fund manager (Brennan, 2018).

Key Features of Apple

Table 4.4 below shows values for Apple using different criteria. The table shows that market values are almost twice Balance Sheet values, and that the largest valued item in the Balance sheet is not fixed assets but rather cash and near cash. So that all non – cash assets (buildings, machinery, inventories) are under 15 per cent of market values for each year 2012-2016.

Table 3.4: Apple Balance Sheet values (\$ billion)

	Market value	Balance Sheet values	Balance Sheet/market values %	Non-cash assets/total B/S assets %	Non-cash assets/Market values	Cash and near cash/Balance Sheet values
2016	617.588	321.686	52.1	26	13.5	74
2015	598.344	290.345	48.5	29	14.0	71
2014	647.361	231.839	35.8	33	11.8	67
2013	504.770	207.000	41.0	29	11.9	71
2012	500.610	176.064	35.1	31	10.9	69

Source: Apple Form 10K, various years.

This asset structure is similar to new economy and internet based firms such as Google and Facebook and has key implications for tax strategies. Intangible assets are hard to value and highly mobile, and add to the difficulty of identifying where value is created and where profits are located.

A central aspect of Apple tax strategy is the location of its intangible capital including intellectual property. Ambiguity in relation to the location of intangible capital is extremely important in tax planning (Bryan *et al.*, 2017). Bryan *et al.* argue that "it is increasingly possible to unbundle assets in terms of their legal protection, their tax jurisdiction and the location for registering revenue streams that they generate" (Bryan *et al.*, 2017, p.67). This means that Apple IP assets may be owned in the US with strong patent protection, but income from this IP may be transferred to Ireland with low effective tax rates.

The Apple Group has seven (identified) subsidiaries incorporated in Ireland, two (AOI and ASI) are not resident in Ireland for tax purposes. One, AOE was not tax resident in Ireland until 2015, but is now tax resident in Ireland. All are organized as unlimited companies.

There are a number of reasons for the success and high profitability of Apple and other US companies. US MNEs often establish a dominant market position for a variety of reasons. This dominant market position is then used to enhance profitability and has also attracted the attention of regulators⁵⁶.

⁵⁵ The US Treasury (2016) has also published a detailed critique of Commission state aid cases.

⁵⁶ Google was fined €2.42 billion for market dominance abuse, http://europa.eu/rapid/press-release_IP-17-1784_en.htm

Their organizational structure and competencies are particularly well suited to take advantage of the European single market. For example:

1. **Organization specific competencies**, for example the ability to outsource production, with no reduction in quality, as in the case of Apple; the development and use of 'enabling technology', in the case of Facebook and Google.
2. **Organizational structure** in particular the use of value chains and 'shell companies' (for example unlimited companies in Ireland, Dutch Partnerships). The location of key subsidiaries in tax havens/ low tax jurisdictions such as Jersey, enables widespread use of tax avoidance strategies and further distorts competition. 'Shell' companies may have billions in assets, revenues and profits yet have no employees. They are administered by firms providing secretarial services and directors. Each director may be a director of hundreds of other firms.
3. **First mover advantages**, marketing, and extensive use of litigation to protect market position, for example litigation in relation to patent infringements in the case of the 'smart phone wars', and to develop market dominance;
4. **Regulatory arbitrage**. US firms have particular advantages in exploiting differences in regulation across countries for example in data collection and transmission, and also within countries where absence of regulation enables firms to behave for example, as a news organization, without being regulated as one. Or in the provision of accommodation without regulatory requirements faced by hotels⁵⁷;
5. **Market Power**. Market power enables anti-competitive practices and exploitation of market dominance.

The success and high profitability of Apple is driven by the development of 'organizational competencies', market power and intellectual property.

Organizational competencies for Apple include 'factoryless production' (or contract manufacturing). For example, Apple subsidiary in Cork, ASI, contracts with Foxconn in China to produce finished products⁵⁸. These are then shipped from China to the final market. While en route ASI pays for the goods. The US Senate Report states (2013, p.27) "Once ASI took initial title of the finished goods, it resold the goods to the appropriate distribution entity, in most cases without taking physical possession of the goods in Ireland". ASI thus earned substantial income.

Apple has built considerable market power through bundled technologies and products that are not compatible with rival producers; marketing, and obsolescence in products through for example continuous software updates, enhanced features, and far greater memory and computing capacity⁵⁹.

Mazzacuto (2013a, p.210) argues: "Apple's success did not hinge on its ability to create novel technologies; it hinged on its designing, operational and organizational capabilities in integrating, marketing and selling those low-hanging technologies".

Once Apple gained control of these technologies, Apple has been involved in law suits over several en.htm; Google was further fined a record €4.3bn "for abusing the dominant market position of its Android operating system for mobile phones" (Barker and Khan, 2018); Microsoft was fined €561 million, http://europa.eu/rapid/press-release_IP-13-196_en.htm and Facebook, €110 million, http://europa.eu/rapid/press-release_IP-17-1369_en.htm.

⁵⁷ There are other examples of regulatory arbitrage as an organisational competence by non-US companies, for example Ryanair and the rather elastic concept of 'self employed'.

⁵⁸ Foxconn produces iPhones in a 'customs free zone' within China. Production and other facilities received aid of over \$1.5 billion from the local government and also receives ongoing aid via lower taxes, training and other subsidies, etc.

⁵⁹ See 'Apple investigated by France for 'planned obsolescence'', BBC news, Jan. 8th 2018.

years where Apple has been sued by rivals such as Nokia (Waters and Dye, 2016), and has in turn sued other firms such as Samsung (Gibbs, 2015). These have been widely reported and referred to known as the "patent wars" (Waters and Dye, 2016; Bradshaw, 2018)⁶⁰.

Effective tax Rates and Apple

As noted Ireland is very important to Apple in terms of profitability and tax structure. Since 2013 Apple (Form 10K) states: "Substantially all of the Company's undistributed international earnings ... were generated by subsidiaries organized in Ireland".

Prior to 2013 Apple had no reference to Ireland and its tax position in Form 10K. Apple has numerous subsidiaries throughout the world. However the Annual Report refers from 2012 refers to just four, three of which are in Ireland. For 2010-2011, the annual report refers to three subsidiaries of which two were in Ireland, and prior to 2009, the Annual Report refers to two subsidiaries one of which is in Ireland. In fact Apple has at least seven long established subsidiaries in Ireland. Form 10K has also referred to 'uncertain tax positions' since 2010.

The US Senate (Permanent Subcommittee on Investigations - PSI, 2013) found that one subsidiary located in Ireland (Apple Sales International) had no employees, income of \$22 billion in 2011 (64 per cent of group income) and paid \$10 million in tax (Table 7). This compares with income before tax for the Apple group of \$34 billion for 2011 and cash tax payments of \$3.3 billion. The US Senate Report groups Ireland along with Bermuda and the Cayman Islands as a tax haven (p.3) and states (p.21) that "Ireland has essentially functioned as a tax haven for Apple, providing it with minimal income tax rates approaching zero". For 2014 the effective tax rate for ASI fell further to 0.005 per cent (European Commission, 2016d).

The low tax rate for ASI is explained by:

- (1) Switching profits to Ireland via transfer pricing in particular relating to IP (PSI, p.5, p.8);
- (2) Key subsidiaries of Apple had "no declared tax residency anywhere in the world" and consequently paid no corporate tax (PSI, 2013, p.4). This is an example of what has been described as 'double non-taxation' (OECD, 2015, par.7).

Table 4.5 shows profits and the tax charge for ASI for the years 2004-2011, and 2014. For 2011 ASI earned 64 per cent of group profits for Ireland, of just under 92 per cent of non-US profits.

⁶⁰ Because of the need to protect IP and perhaps more important, expensive litigation, Apple also has strict secrecy rules and rarely gives interviews to journalists. Stone and Vance writing in the New York Times (June 22, 2009) state "Few companies, indeed, are more secretive than Apple, or as punitive to those who dare violate the company's rules on keeping tight control over information".

Table 3.5: Profits and Taxes Paid (\$ billions) for Apple Sales International (ASI) 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2014
Pre-Tax profits	\$0.268	\$0.725	\$1.18	\$1.844	\$3.127	\$4.794	\$12.0	\$22.0	n.a.
Tax charge	\$2.1	\$3.9	\$6.5	\$8.9	\$14.9	\$3.653	\$7.0	\$10.0	n.a.
Effective Tax Rate	0.78%	0.54%	0.55%	0.48%	0.48%	0.08%	0.06%	0.045%	0.005%

Source: PSI (2013), p.21, Apple Sales International Accounts filed with the Australian Securities and Investment Commission, European Commission (2016d)

Table 4.6 shows various measures of ETR for Apple for the period 2006-2015. One measure of ETR based on cash flows (cash tax payments/pre-tax profits, ETR 2, column 8), is considerably lower at 17.0 per cent than the ETR reported in company accounts of 25.6 per cent (calculated as the tax charge/pre-tax profits, ETR1 column 7).

The table shows that while the Apple group pays corporation tax, little corporation tax is paid outside the US (columns 2 and 5). The foreign tax charge on overseas earnings (non-US tax charge/non-US earnings) amounted to 5.2 per cent for 2016 (ETR4, Table 4.6). A similar pattern exists for other US MNEs.

An alternative measure shows an even lower ETR of 3.4 per cent for 2016, although up from 1.2 per cent in 2011 (ETR 5, Table 4.6)⁶¹. This measure estimates tax paid on unremitted earnings as the difference between the US statutory rate of 35 per cent and tax shown as due if remitted as disclosed in Form 10K (Donohoe *et al.*, 2012). In contrast to Apple, most US firms do not disclose tax due on unrepatriated earnings, because as stated in accounts 'it is not practicable' to do so.

Because Apple's overseas tax rate is so low, a tax credit for overseas tax is also low, so that on repatriation of those profits, Apple would be subject to a much higher tax rate.

⁶¹ This increase in overseas tax payments means that Apple is now 'the largest tax payer in Ireland'; Letter from Tim Cook to Apple customers, April, 30th 2016 available at <http://www.apple.com/ie/customer-letter>.

Table 3.6: Tax Payments and Effective Tax Rates for Apple (\$ million) 2006-2016

Year	Group Pre-tax profits	Tax shown in income statement	Cash Paid	Foreign earnings (4)	Tax on Foreign Earnings	Foreign Tax Savings	ETR1 % (7)	ETR2 % (8)	ETR3 % (9)	ETR4 % (10)	ETR5 % (11)
	(1)	(2)	(3)		(5)	(6)					
2016	61372	15685	10444	41100	2138	5582	25.6	17.0	14.5	5.2	3.4
2015	72515	19121	13252	47600	2938	6470	26.4	18.3	15.8	6.2	3.3
2014	50483	13973	10026	33600	1489	4944	26.1	18.7	16.3	4.4	2.4
2013	50155	13118	9128	30500	1133	4614	26.2	18.2	16.0	3.7	1.8
2012	55763	14030	7682	36800	713	5895	25.2	13.8	13.0	1.9	1.3
2011	34205	8283	3338	24000	602	3898	24.2	9.8	9.3	2.5	1.2
2010	18540	4527	2697	13000	-93	2125	24.4	14.5	13.8	-0.7	n.a.
2009	12066	3831	2997	6600	310	647	31.8	24.8	15.4	4.7	n.a.
2008	8947	2828	1267	4600	200	500	32	14.2	13.4	4.3	n.a.
2007	5008	1512	863	2200	87	297	32	17.2	16.2	4.0	n.a.
2006	2818	829	194	1500	84	224	29	6.9	6.4	5.6	n.a.

Source: Form SEC 10K. The year end for each year is September.

Notes:

ETR 1, 2 and 3 are defined as for Table 4.2

ETR 4 = is defined as in Table 4.4

ETR 5 = Tax rate on unremitted profits (column 11).

Apart from Apple the number of Irish incorporated entities, which were not resident in any country for corporate tax purposes is not known.⁶² The ability to remain incorporated in Ireland but not resident for tax purposes in any country was ended in the Finance Act 2014 (see Revenue Commissioners, 2017).

⁶² Reasons given for non-disclosure are "confidentiality" and the "small number of companies involved" (Minister for Finance, Parliamentary answer 25th June 2013).

The Commission Apple Decision

a) The Role of the Branch Structure and Profit Split

In the Commission Apple decision, the European Commission (2016d) state:

Specifically, Revenue endorsed a split of the profits for tax purposes in Ireland: Under the agreed method, most profits were internally allocated away from Ireland to a 'head office' within Apple Sales International. This 'head office' was not based in any country and did not have any employees or own premises. Its activities consisted solely of occasional board meetings. Only a fraction of the profits of Apple Sales International were allocated to its Irish branch and subject to tax in Ireland. The remaining vast majority of profits were allocated to the 'head office', where they remained untaxed.

Apple (2016) replied to this point (third plea in law) by stating:

The Commission made fundamental errors by failing to recognise that the applicants' profit-driving activities, in particular the development and commercialisation of intellectual property (Apple IP), were controlled and managed in the United States. The profits from those activities were attributable to the United States, not Ireland... The Commission wrongly considered only the minutes of the applicants' board meetings and ignored all other evidence of activities.

The Commission comment on this organizational structure (par. 271) as follows:

since ASI's and AOE's Irish branches do not have a separate legal personality from the companies to which they belong, neither those branches nor any other part of those companies, in particular their respective head offices, could be said to separately own the assets or owe the liabilities of those companies.

b) Why should ASI and AOE be regarded "as non-resident companies"?

Apple and Ireland claim (Commission Decision, par. 113): "that critical business activities conducted by or for ASI and AOE are conducted outside of Ireland, for example through Apple Inc. employees or the board of directors of ASI and AOE".

In contrast the Commission could find no evidence that AOI or ASI were managed and controlled outside Ireland. For example (par. 282) states:

the only evidence provided of activities performed by ASI's and AOE's board of directors during the period when the contested tax rulings were in force is the decisions taken in the meetings of the boards... Those minutes do not demonstrate that ASI's and AOE's board of directors performed active and critical roles with regard to the management and effective control of the Apple IP licenses.

ASI and AOI were regarded by Revenue as not tax resident in Ireland because: "ASI and AOE had a trading activity in Ireland through their respective branches and were managed and controlled outside Ireland" (European Commission, 2016d, par. 50).

Furthermore both companies were not resident in any other jurisdiction. The Commission Decision, (par. 52) states: "During the time that the contested tax rulings were in force, ASI and AOE could therefore be best described as "stateless" for tax residency purposes".

The 'central management and control test' is applied on "the basis of fact and precedent" (Revenue, 2013, p.1). These "facts" cannot be the location of fixed assets or employees, Board meetings were mostly conducted in the US (Senate subcommittee Report (2013, p.22, 24), but board meeting minutes do not indicate that the Board of directors performed 'active and critical roles'⁶³.

The Department of Finance summary of the basis of Ireland's appeal⁶⁴ does not refer to the fact that ASI and AOI are registered companies in Ireland, but rather refers to the 'Irish branches' of ASI and AOI.

There are several important legal requirements for an Irish incorporated company, as distinct from a branch. The country of incorporation has assumed greater significance because of European Court of Justice Rulings, and has ruled that the registered office, (the place of incorporation) was the 'centre of main interests' (CoMI), and where the firm should be liquidated even though this subsidiary had no employees and no fixed assets (Judgement of the Court of Justice in Case C-34/04 Eurofood IFSC 2 May 2006).

The proposed multilateral convention to implement tax treaty changes to implement BEPS proposals states in relation to the tax jurisdiction of dual resident entities that this will be determined by mutual agreement on the basis of: "its place of effective management, the place where it is incorporated or otherwise constituted and any other relevant factors"⁶⁵.

c) The Postal address of ASI and AOE

The address of ASI and AOE given on various contract agreements "provided in the different versions of the CSA [Cost sharing agreement], it is always an address in Ireland" (Commission Decision, footnote 254). In 2008 a marketing services agreement between Apple Inc. and ASI in relation to payments to

⁶³ Furthermore Revenue Guidelines state "central management and control is not necessarily located where it appears to be located, for example where the board of directors holds its meetings" (Revenue Commissioners, 2013, p.1).

⁶⁴ 'Explanation of the main lines of argument in Ireland's annulment application lodged with the General Court of the European Union on 9 November 2016', published on 19th December, 2016.

⁶⁵ See OECD, 2016. Article 4 available at: <http://www.oecd.org/tax/beps/beps-actions.htm>

Apple Inc. by ASI refers to "the postal address of ASI in Cork, Ireland as the address of the counterparty to the agreement" (par. 133 of Commission Decision).

The address is important because Apple advisors and Revenue agree that ASI has two component branches, and that the larger of these branches is not tax resident in Ireland.

The Commission (par. 281) argues that: "Based on the facts presented to the Commission, it appears that during the period the contested tax rulings were in force the head offices of ASI and AOE existed on paper only, since ASI and AOE had no physical presence or employees outside of Ireland during that period."

As the overseas branches of ASI and AOE have no fixed assets, employees, or no address abroad it is difficult to envisage what the "facts" were that led to the Revenue decision.

In contrast in the case of the 'Double Irish' or bilocation tax strategy, tax strategy the subsidiary which was deemed to be located for corporate tax purposes in another jurisdiction, for example had an address abroad. In a number of cases this consisted of the address of a law firm Conyers Dill and Pearmann (Stewart, 2014).

d) Would Ireland become a tax collector for the rest of the World?

One of the criticisms of the Commission Decision is that Ireland would become a "tax collector for the rest of the world".

The Commission press release of 30th August 2016 states: "The amount of unpaid taxes to be recovered by the Irish authorities would be reduced if other countries were to require Apple to pay more taxes on the profits recorded by Apple Sales International and Apple Operations Europe for this period".

The Commission Decision refers to two cases where this has happened, Italy and one unnamed country (2016d, par. 99). The transfer is indirect. It is not a direct transfer from the Irish state.

Such reallocation of profit from Ireland to other countries (mostly EU countries) has become common, with around 100 such adjustments since 2005 (Stewart, 2018). This involves a reduction in profits declared in Ireland, a consequent repayment of Irish corporate tax of around €900 million and an associated increase in reported profits and corporate tax payments in other countries. It is also likely that the increased in reallocated profits will result in larger corporate tax payments than the fall in Irish corporate tax receipts because of high rates of corporate tax.

There are likely to be far more cases involving Irish subsidiaries in future years, because of increased data provision to other countries, in particular country by country reporting. Such adjustments could be seen as a form of introduction of CCTB (Consolidated Corporate Tax Base) but on a bilateral basis.

Minister for Finance Noonan (2017) stated "Ireland is not seeking to defend the outcome achieved by the company [Apple]". By appealing this case the Irish government appears to be doing just that. The Irish government case is identical to the Apple case. The Irish government has spent considerable sums in defending the Apple case and there will be further expenditures in the future. Without the Irish government, Apple expenditures would likely be much higher. The phrase "Apple" and "Ireland" are continuously conjoined in the Commission Decision, giving the impression both cases are identical. For example (par. 53) states: "Ireland and Apple provided descriptions of the functions performed by the Irish branches of ASI and AOE, which were used as a basis to present and support Apple's estimates of the taxable profit of those companies for Irish corporation tax purposes".

e) Tax Certainty and the Arguments against Commission State Aid Rulings

The US Treasury (24th August 2016) published a White Paper which was highly critical of EU Competition Directorate decisions on illegal State Aid (See: <https://www.treasury.gov/resource-center/tax-policy/treaties/Documents/White-Paper-State-Aid.pdf>).

The US government (and Apple) have argued that the Apple decision (11th plea in law) violates "the principles of legal certainty and non-retroactivity" and (in plea 14) that the Commission "violated legal certainty by ordering recovery under an unforeseeable interpretation of State aid law" (Apple, 2016).

However, critics of the EU decision (Hufbauer and Lu, 2016, p.5) recognize that: "Retroactive changes in tax law are not forbidden [in the US] but they are regarded as bad public policy, because retroactivity creates doubt about legal stability, upsets financial plans, and prompts firms to seek higher "hurdle rates" before undertaking an investment."

In most jurisdictions not only is retroactive collection of taxes not illegal, it is normal in the case of 'aggressive tax avoidance' that are found to be illegal⁶⁶.

This document is highly critical of EU policies in relation to State aid. Effectively the US government is acting as an advocate on behalf of affected US companies and has devoted considerable resources to setting out the case against the Commission in relation to recent Commission decisions involving illegal State aid.

The US White Paper states:

(i) Recovery "of past allegedly unpaid tax would constitute retroactive enforcement of a newly adopted approach to State aid", and "As a general matter, retroactive enforcement runs counter to one of the fundamental principles of EU jurisprudence: the principle of legal certainty (p.14).

However, retrospective recovery is a long established principle in relation to cartel cases (sometimes for very large amounts), taken by the Directorate General for Competition. Retrospective recovery is also a long established principle of tax law where a particular tax or elements of a tax strategy has been found by the courts to be illegal.

(ii) The White Paper states (footnote 74 p.19) "...the Commission has suggested that it may also become an arbiter of tax settlements agreed to by Member States with taxpayers". The case referred to is the agreed settlement between the UK government and Google. The Commission became involved only after a complaint from the First Minister and Leader of the SNP in Scotland.

The Competition Directorate may often initiate investigations following complaints. Indeed US firms are sometimes the initiator of these complaints as in the complaint by Microsoft against Google in relation to the dominance of the Google search engine.

⁶⁶ See for example the case of Huitson and HMRC involving retrospection. Source BBC news , Will retrospective taxes affect us all ? BBC news 5th Feb, 2010.

Apple Tax Strategy: From Stateless Income to Jersey

As noted earlier in this chapter, a number of firms moved IP assets to Ireland in 2014 and 2015 in response to the announced ending of the 'double Irish' and new valuable tax concessions enabling the cost of IP purchased abroad and the cost of financing it to be offset against Irish corporate tax.

Discussions of tax reliefs and incentives for R&D in Ireland often refer to a tax regime known as a 'Knowledge Development Box' (KPD), R&D tax Credits, and an Intellectual Property Regime⁶⁷. There is much discussion and analysis of R&D tax Credits and the Knowledge Development Box, but discussion of the IP write off and associated interest deductions are obscure. This is despite the enormous disparity in the cost in terms of tax reliefs for the three regimes. For 2016 the cost of KPD tax reliefs was €5 million, R&D tax Credits €670 million and the Intellectual Property regime €35.7 billion (McCarthy and McGuinness, 2018). Often viewed as a replacement for the ending of the 'double Irish' and 'stateless income' in 2014, the origins of this tax relief are the Finance Act 2009 (s. 13) which amended an earlier Finance Act ('The Principal Act') by ensuring interest paid on funds to purchase IP was tax deductible and that purchased intangible assets "shall be treated as plant and machinery".

Much recent commentary is on 2017 amendments to the existing regime which put some restrictions on the IP and associated interest write off regime, rather than the origins and costs of this regime. The Coffey Report (2017, p.130) for example, which preceded tax changes recommended change on the basis that it would of "smoothing corporation tax revenues over time".

The 'Paradise papers' revealed new structures in relation to Apple in 2017⁶⁸. However the European Commission (2016d, par. 12) decision on Apple refers to new structures being discussed with the European Commission in January 2016. The new structures were discussed (by telephone) with the boards of ASI and AOE in August 2014 and December 2014 (Commission Decision par. 128-129). The December 2014 Board meeting of ASI changed tax residency from that decided in August 2014 to Jersey (as revealed in the Panama papers). The period between the ending of 'stateless income' in 2013 and the ending of a 'double Irish' tax strategy for new companies provided an important 'window' for Apple to introduce a new tax strategy. The new tax strategy depends on elements of the 'double Irish' tax strategy in conjunction with valuable new tax reliefs introduced in 2015.

The US Senate PSI describes Apple operations in Ireland as consisting of five companies, three of which were stateless – ASI, AOI and AOE (PSI Report, p.20) and two other companies ADI (Apple Distribution International) and Apple Retail Holding. Until recently the bulk of Apples profits were earned in ASI. Following recent corporate restructuring it is likely that the bulk of Apples profits are now earned in another Apple Irish subsidiary AOE. So that even though Apple has for a number of years disclosed sales and other information for five regions America, Europe, China, Japan and Asia Pacific, the bulk of profits are earned in two countries, the US and Ireland, and the bulk of corporate tax is paid in the US (See Table 4.6) with Ireland likely to be the next largest recipient of corporate tax and the largest recipient outside the US.

⁶⁷ See for example PWC, Ireland Corporate Tax Credits and Incentives; KPMG at <https://home.kpmg.com/ie/en/home/services/tax>, and <https://assets.kpmg.com/content/dam/kpmg/pdf/2016/04>

⁶⁸ See 'Paradise Papers: Apple's secret tax bolthole revealed' BBC Panorama, 6 November 2017; Hopkins and Bowers (2017).

However the structure of Apple operations in Ireland has undergone a number of changes. The US Senate PSI report (2013, p.20), noted that ASI was a wholly owned subsidiary of AOE, which in turn was owned by AOI. In 2014 ASI became the direct parent of Apple's main distribution company, ADI which sold Apple products to Europe, Asia, Australia, and other countries (ADI, B1, 2014, PSI subcommittee, 2013, p.27). AOE remained the parent and AOI the ultimate parent in Ireland both before and after these changes. In 2015 ADI became directly owned by AOE⁶⁹. The address and registered office of each company remained the same both before and after these changes (Hollyhill Industrial Estate, Cork).

The Paradise papers revealed other organizational changes. ASI which owned Apple IP and AOI, which owned cash held overseas amounting to \$250 billion, moved their tax domicile to Jersey (Hopkins and Bowers, 2017). AOE moved its tax domicile to Ireland.

ASI which owns Apple IP, sold this IP to AOE, now tax domiciled in Ireland . AOE financed the purchase of IP by borrowing money from recently AOI now domiciled in Jersey. The interest on this borrowed money is deductible against ASI profits in Ireland, thus further reducing taxable profits in Ireland. There are also likely to be continuing outflows from AOE, relating to interest payments, continuing acquisition of IP and repayment of loans.

Despite the considerable economic significance of these changes, as all Apple subsidiaries in Ireland operate as 'unlimited companies' there is very little public information available in relation to changes in corporate structure. The only clue available in documents lodged with Companies Registration Office in Ireland to these organizational changes is changes in ownership of Apple subsidiaries and the appointment of a joint company secretary to AOE and ADI, whose address is given as Cork. Previously the address of the company secretary had been the US. Hence the above analysis of Apple tax strategies remains speculative, but is consistent with evidence from the Paradise papers the European Commission decision on Apple, and macroeconomic data relating to the size of corporate profits in Ireland, tax payments and capital inflows.

Some firms using a 'double Irish' tax strategy now use countries such as Malta (with which Ireland has a tax treaty) in place of the Cayman Islands, Bermuda, etc. (with which Ireland does not have a tax treaty (Christian Aid, 2017). Apple may also use a 'double Irish' tax strategy for some of its operations using Malta as the tax resident company.

69 See BI Annual Return for Apple Distribution International for June 2017, available at <https://search.cro.ie>.

Conclusion: Are Irish Corporate Tax Policies a Model for Sustainable Growth?

Industrial policy in Ireland emphasises low tax rates to attract FDI, in particular US FDI. This policy is frequently described as the "cornerstone of industrial policy"⁷⁰. This industrial policy model is risky. The most attractive aspect of tax incentives offered by Ireland is not the tax rate but the tax regime, and Ireland's tax regime has been subject to sustained criticism from governments of other countries, NGO's and others⁷¹. As a result, policies that discourage 'aggressive tax strategies' have been introduced through the OECD BEPS Programme and from the European Commission. For example increased disclosure (Country by Country reporting) and exchange of information on tax planning.

The value of tax incentives may also change because of proposals to introduce a Common Corporate Tax Base (CCTB), and a Common Consolidated Corporate Tax Base (CCCTB). A proposal to introduce a type of digital tax on companies could also pose a threat to the operations of MNEs in Ireland⁷². The relative value of tax incentives could also change because of 'tax competition' for example the new Trump administration has introduced corporate tax rate of 21 per cent and the U.K. Prime Minister has stated that Britain will have "the lowest corporate tax rate in the G20" (*Financial Times*, November 21, 2016). It is likely that such changes will trigger reductions in corporate tax rates in other countries.

Table 4.1 shows that 55 per cent of US MNEs' profits earned outside the US are earned with the EU. The EU is thus a very profitable location for US firms and proposed increases in taxation are unlikely to affect their location within the EU. However while these firms are likely to continue to operate within the EU, they may not necessarily continue to operate within low tax jurisdictions such as Ireland.

An industrial policy for Ireland that is less dependent on tax incentives needs to be developed and implemented. Balanced growth requires a greater emphasis on indigenous firms.

Brexit and possible trade and regulatory barriers as well as volatility in the Sterling/Euro exchange rate pose considerable risks to Ireland especially to indigenous firms⁷³.

State support for indigenous firms is vital as is finance, in particular to small and medium sized enterprises. But as noted by Mazzucato (2013b, p.v), it is not just the supply of finance that is missing it is also demand from "private firms able and willing to engage with the difficult uncertain worlds of innovation". Mazzacutto argues that an emphasis on competitiveness in terms of unit labour costs is misplaced. Germany is competitive because of a strong innovation system, patient capital, for example from the KfW, strong science and industry links, for example through the Fraunhofer institutes, and high spending on R &D.

⁷⁰ See Budget Statement 14th October 2014.

⁷¹ Ireland has been ranked 6th in the world in terms of corporate tax havens, see Oxfam, (2016). Tax Battles, The dangerous global Race to the Bottom on Corporate Tax, p.13. Available at <https://www.oxfam.org/en/research/tax-battles-dangerous-global-race-bottom-corporate-tax>

⁷² See European Commission (2017); Khan et al. (2018).

⁷³ See CSO (2016, Tables 14a and 14b).

Further risks arise because in the context of Brexit Ireland may need important concessions from our EU partners, and special economic measures (perhaps in an emergency) for certain sectors. It is unfortunate that in two major areas, tax reform (the possible introduction of CCTB, CCCTB and a digital tax), and the Apple case, Ireland is in dispute with the Commission. The CCTB, CCCTB and digital tax proposals are supported by the European Parliament, a majority of governments in the EU and by other groups, such as those advocating tax reform.

References

- Apple (2016) Action brought on 19 December 2016 – Apple Sales International and Apple Operations Europe v Commission (Case T-892/16). Available at: <http://curia.europa.eu/juris/recherche.jsf?cid=789854>, accessed 25th July, 2018.
- Barboza, D. (2016) How China Built 'iPhone City' With Billions in Perks for Apple's Partner, *New York Times*, Dec. 29th.
- Barker, A. and Houlder, V. (2016) "EU Confronts Netherlands over Starbucks deal", *Financial Times*, November 14th.
- Barker, A. and Khan, M. (2018) "EU fines Google record €4.3bn over Android: Brussels penalises US group for abusing dominance in mobile operating systems", *Financial Times*, 18th July.
- Bradshaw, T.(2018) "Apple and Samsung settle long-running patent dispute", *Financial Times*, June 27th.
- Brennan, J. (2018) "Ireland picks BNY Mellon to manage €14bn Apple escrow account", *Irish Times*, March 5th.
- Brunson, J. and Noble, J. (2016) "European Commission to examine Google's UK tax deal", *Financial Times*, January 28th.
- Bryan, D., Rafferty, M. and Wigan, D. (2017) "Capital Unchained: finance, intangible assets and the double life of capital in the offshore world", *Review of International Political Economy*, Vol. 24, No. 1, pp.56-86.
- Christian Aid (2017) 'Impossible Structures': tax structures outcomes overlooked by the 2015 tax spillover analysis, Christial Aid Report 2017, part 2, available at: <https://www.christianaid.ie>.
- Citizens for Justice (2016) Offshore Shell Games, available at: <http://ctj.org>.
- Coffey Report (2017) Review of Ireland's Corporation Tax Code Presented to the Minister for Finance and Public Expenditure and Reform by Mr. Seamus Coffey, June. <https://www.finance.gov.ie/wp-content/uploads/2017/09/170912-Review-of-Irelands-Corporation-Tax-Code.pdf>, accessed 16th July, 2018.
- CSO (2016) Brexit: Ireland and the UK in numbers. Dublin: CSO. Available at: <http://www.cso.ie/en/media/csoie/releasespublications/documents/statisticalpublications/Brexit.pdf>, accessed 16th July, 2018.

CSO (2017) Foreign Direct Investment in Ireland 2015. Dublin: CSO. Available at: <https://www.cso.ie/en/releasesandpublications/ep/p-fdi/fdi2015/>, accessed 16th July, 2018.

Department of Finance (2013) Ireland's International Tax Strategy. Dublin: Department of Finance.

Department of Jobs, Enterprise and Employment (2014) Policy Statement on Foreign Direct Investment in Ireland. Dublin: Department of Jobs, Enterprise and Employment.

Donohoe, M., McGill, G. and Outslay, E. (2012) "Through a Glass Darkly: What Can We Learn About a U.S. Multinational Corporation's International Operations From its Financial Statement Disclosures?" *National Tax Journal*, Vol. 64, No. 4, pp.961-984.

Drucker, J. (2010) "Dutch Sandwich saves Google billions in tax", Bloomberg 10/22/2010.

European Commission (2015) Press Release: Tax transparency: Commission welcomes agreement reached by Member States on the automatic exchange of information on tax rulings. http://europa.eu/rapid/press-release_IP-15-5780_en.htm, accessed 16th July, 2018.

European Commission (2016a) The Anti-Tax Avoidance Package – Questions and Answers (Updated), June. http://europa.eu/rapid/press-release_MEMO-16-2265_en.htm, accessed 16th July, 2018.

European Commission (2016b) Anti-Tax Avoidance Package, January. https://ec.europa.eu/taxation_customs/business/company-tax/anti-tax-avoidance-package, accessed 16th July, 2018.

European Commission (2016c) Proposal for a Council Directive on a Common Consolidated Corporate Tax Base (CCCTB), October. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52016PC0683>, accessed 16th July, 2018.

European Commission (2016d) COMMISSION DECISION (EU) 2017/1283 of 30 August 2016 on State aid SA.38373 (2014/C) (ex 2014/NN) (ex 2014/CP) implemented by Ireland to Apple, <https://eur-lex.europa.eu/eli/dec/2017/1283/oj>, accessed 27th July, 2018.

European Commission (2016e) Press release: Belgian "Excess Profit" tax scheme, January. Available at http://europa.eu/rapid/press-release_STATEMENT-16-44_en.htm, accessed 27th July, 2018.

European Commission (2017a) Aggressive Tax Planning Indicators, Final Report, Taxation Papers, Working Paper, no. 71 -201, TAXUD/2016/DE/319, FWC No. TAXUD/2015/CC/131.

European Commission (2017b) Press release: State aid: Commission refers Ireland to Court for failure to recover illegal tax benefits from Apple worth up to €13 billion, October. Available at http://europa.eu/rapid/press-release_IP-17-3702_en.htm, accessed 27th July, 2018.

European Commission (2017c) Communication from the Commission to the European Parliament and the Council, A Fair and Efficient Tax System in the European Union for the Digital Single Market 21st 9, 2107, COM(2017) 547 final.

Gibbs (2015) "Facebook, Google, Dell, HP, eBay back Samsung in patent war with Apple", *Guardian Newspaper*, 21st July.

Grant Thornton (2014) Foreign Direct Investment in Ireland: Sustaining the Success, available at the website of the Department of the Taoiseach:

https://www.taoiseach.gov.ie/eng/Publications/Publications_2014/GrantThornton_.pdf, accessed 16th March, 2018.

Grubert, H. and Altshuler, R. (2006) "Corporate Taxes in the World Economy: Reforming the Taxation of Cross-Border Income", Working Paper, Department of Economics, Rutgers, available at: snde.rutgers.edu/Rutgers/wp/2006-26.pdf.

Henry, J. (2012) "The Price of Offshore Revisited" Tax Justice Network. Available at:

https://www.taxjustice.net/cms/upload/pdf/Price_of_Offshore_Revisited_120722.pdf, accessed 27th July, 2018.

Hines, J and Rice, E. (1990) "Fiscal Paradise: Foreign Tax Havens and American Business", *NBER Working Paper*, no. 3477, NBER, Cambridge, MA, US.

Hopkins, N. and Bowers, S. (2017) "Apple secretly moved parts of empire to Jersey after row over tax affairs: Rearrangement allowed tech firm to keep paying ultra-low tax rate when Ireland tightened rules, Paradise Papers reveal", *Guardian Newspaper*, Monday 6 November.

Hufbauer, G.C. and Lu, Z. (2016) "Apple's Tax Dispute with Europe and the Need for Reform", *Peterson Institute for International Economics: Policy Brief*, 16-16, p.1-7.

Jaafar, A., and Thornton, J. (2015) "Tax Havens and Effective Tax Rates: An Analysis of Private versus Public European Firms", *The International Journal of Accounting*, Vol. 50, No. 4, pp.435–457.

Khan, M., Parker, A. and Toplensky, R. (2018) "Google, Facebook and Apple face 'digital tax' on EU turnover: Proposed Brussels levy will target big-tech revenues rather than profits", *Financial Times*, March 15.

Mazzucato, M. (2013b) "Foreword" in D. Jacobson (ed.) *The Nuts and Bolts of Innovation: New Perspectives on Irish Industrial Policy*, Dublin: Glasnevin Publishing.

Mazzucato, M. (2013a) *The Entrepreneurial State*, London: Anthem Press.

McCarthy L. and McGuinness, G. (2018), Corporation Tax 2017 Payments and 2016 Returns, Statistics & Economic Research Branch, Revenue.

Noonan, M. (2017) Joint Oireachtas Committee on Finance, Public Expenditure and Reform, 2nd February. Available at: https://www.oireachtas.ie/en/debates/debate/joint_committee_on_finance_public_expenditure_and_reform_and_taoiseach/2017-02-02/2/, accessed 27th July, 2018.

OECD (2015) OECD/G20 Base Erosion and Profit Shifting Project Measuring and Monitoring BEPS, Action 11 Final Report, OECD: Paris.

OECD (2016) Multilateral Convention to Implement Tax Treaty Related Measures to Prevent BEPS. <http://www.oecd.org/tax/treaties/multilateral-convention-to-implement-tax-treaty-related-measures-to-prevent-beps.htm>, accessed 16th July, 2018.

OECD (2018) Tax Challenges Arising from Digitalisation – Interim Report 2018, OECD/G20 Base Erosion and Profit Shifting Project, OECD: Paris.

Oxfam (2015) Ending the Era of Tax Havens: Why the UK government must lead the way, available at: <https://policy-practice.oxfam.org.uk/publications/ending-the-era-of-tax-havens-why-the-uk-government-must-lead-the-way-601121>, accessed 16th July, 2018.

Oxfam (2016) Tax Battles: The dangerous global Race to the Bottom on Corporate Tax. Available at <Https://www.oxfam.org/en/research/tax-battles-dangerous-global-race-bottom-corporate-tax>, accessed 16th July, 2018.

PSI, US Senate Permanent Sub-Committee on Investigations (2013) Offshore Profit Shifting and the US Tax Code - Part 2 (Apple Inc.).

Revenue Commissioners (2013) Company Residence in the State: Briefing Article. Replaced, following legislative changes in 2014, by Revenue Commissioners (2017).

Revenue Commissioners (2017) Company Residence in the State ITCGTCT Manual – Part 02-02-03. <https://www.revenue.ie/en/tax-professionals/tdm/income-tax-capital-gains-tax-corporation-tax/part-02/02-02-03.pdf>, accessed 16th July, 2018.

Shaxson, N. (2011) *Treasure Islands: Tax Havens and the Men who Stole the World*, London: The Bodley Head.

Stewart, J. (2018) Ireland, US multinationals to face new tax landscape in 2018, MNE Tax, 19th January. <https://mnetax.com/ireland-us-multinationals-face-new-tax-landscape-2018-25692>, accessed 16th July, 2018.

Stewart, J and Doyle, C. (2017) "The Measurement and Regulation of Shadow Banking in Ireland", *Journal of Financial Regulation and Compliance*, Vol. 25, No. 4, pp.396-412.

Stewart, J. (2017) "MNE tax strategies and Ireland", *Critical Perspectives on International Business*, <https://doi-org.dcu.idm.oclc.org/10.1108/cpoib-02-2016-0002>.

Stewart, J. (2014) Corporation Tax: Is Ireland Exceptional?, IIIS Discussion Papers no. 449.

Tancred, P. (2017) An Analysis of 2015 Corporation Tax Returns and 2016 Payments, Dublin, Revenue. <https://www.revenue.ie/en/corporate/documents/research/corporation-tax-returns-2016.pdf>, accessed 16th July 2018.

Torslov, T., Wier, L. and Zucman, G. (2018) "The Missing Profits of Nations", *NBER Working Paper* No. 24701.

US Treasury (2016) The European Commission's Recent State Aid Investigations of Transfer Pricing Rulings. Available at: <https://www.treasury.gov/resource-center/tax-policy/treaties/Documents/White-Paper-State-Aid.pdf>, accessed 16th July 2018.

Waters R. and Dye J. (2016) "Apple and Nokia reboot patent wars", *Financial Times*, December 21.

While the health of Europeans has improved over recent years, differences by gender, birthplace, and/or socioeconomic background persist. This report maps the extent of such health inequalities, its determinants, and costs to society. The findings indicate that differences in health between and within countries are attributable not only to social and health policies, but also depend on economic policy and the social determinants of health. Thus, holistic policy interventions are required to tackle health inequalities.

FEPS (Foundation for European Progressive Studies) works in close collaboration with social democratic organisations, and in particular national foundations and think tanks across Europe, to tackle the challenges that Europe faces today.

TASC (Think tank for Action on Social Change) is an independent progressive think-tank whose core focus is addressing inequality and sustaining democracy.