

# Economic Development Through Europeanization The Case of Ireland

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## ABSTRACT

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Many actors are involved in the economic development of any country, but for Ireland the network is especially complicated. There is the Irish government. There's the European Commission, European Central Bank, and International Monetary Fund—sometimes combining their powers as the Troika. There are powerful foreign technology corporations operating sizable portions of their business through Ireland for tax benefit, and the Irish people working for these corporations. And there are many others indirectly involved—writers, investors, and economists. This thesis uses each perspective to develop the mechanisms of Ireland's economic development over the last sixty years. The two most important policies promoting Irish growth have been membership in the European Community, and a low corporate tax rate. Historically, these policies have positively reinforced one another, sustaining Ireland through the 'Celtic Tiger,' period. Considering recent events, most important the fiscal crisis, and government bailout of 2010, Ireland's economic foundations have been called into question. Depending on the outcome of upcoming political events in Europe and the United States, Ireland will have to choose whether to maintain the status quo, or implement a new economic strategy.

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## IMPORTANT EVENTS

<b>1921</b>	Irish independence from Great Britain
<b>1932</b>	First of Control of Manufactures Acts enacted
<b>1951</b>	European Coal and Steel Community established by the Treaty of Paris
<b>1957</b>	European Economic Community established by Treaty of Rome
<b>1958</b>	Most provisions of Control of Manufactures Acts repealed
<b>1960</b>	Export Sales Relief (ESR) enacted in fully developed form
<b>1966</b>	Anglo-Irish Free Trade Agreement
<b>1973</b>	Ireland joins EEC as part of first enlargement along with Denmark, Great Britain.
<b>1979</b>	Exchange Rate Mechanism introduced – Ireland is a member
<b>1981</b>	Ireland adopts 10% corporate tax rate, replacing ESR
<b>1989</b>	German Reunification
<b>1992</b>	European Union established by Maastricht Treaty
<b>1999</b>	Euro adopted as common currency for European Union
<b>2003</b>	Ireland adopts 12.5% corporate tax rate, replaces 10% rate
<b>2008</b>	Ireland guarantees the debts of six large financial institution, including Anglo-Irish Bank.
<b>2010</b>	Ireland accepts bailout package from the European Commission, European Central Bank, and International Monetary Fund
<b>2016</b>	European Commission challenges Ireland's tax arrangement with Apple

# INTRODUCTION

## GLOBAL IRELAND



Although Ireland contributes a small portion of aggregate European Union GDP (less than one percent in 2013) it caught the attention of economists, financiers, journalists and politicians as an “economic miracle” in the 1990s and early 2000s.<sup>2</sup> Dubbed the “Celtic Tiger”<sup>3</sup> in the mid-1990s, Ireland hit a peak GDP growth rate of 9.3% in 2000, rivaling the astounding growth of the East Asian “Tiger” economies of the previous decade.<sup>4</sup> This economic success was noticed in traditional and business-oriented press with particular enthusiasm as Ireland prepared to adopt the Euro in January 1999. Headlines in the *Financial Times* included “Celtic tiger’s

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<sup>1</sup> Kipper Williams, “Take the Money!” Illustration, *The Guardian*, November 19 2010. Kipper Williams is a regular cartoonist for the Guardian, contributing a significant amount of material on the Irish economy since the financial crisis.

<sup>2</sup> Donal Donovan and Antoin E. Murphy, *The Fall of the Celtic Tiger: Ireland and the Euro Debt Crisis* (Oxford: Oxford University Press, 2013), 19.

<sup>3</sup> Ibid, 16.

<sup>4</sup> Ibid, 59.

strength amazes,”<sup>5</sup> and “Unsated appetite for Celtic Tiger.”<sup>6</sup> *Global Investor Magazine* went so far in 1998 to label Ireland as “the European Union’s investment darling,” applauding its policy makers for attracting FDI and committing to responsible fiscal regulation.<sup>7</sup> In the same vein *The Economist* hailed Ireland as “Europe’s shining light,” as living proof that the “curse of the periphery [was] a myth.”<sup>8</sup> Ireland was praised by journalists and financiers alike as a role model for economic growth, especially among other smaller, less advanced economies of Europe.

Less than fifteen years later, beginning in 2008, Ireland experienced a myriad of financial crises, ending in an \$85 billion-dollar bailout from the Troika—the International Monetary Fund, the European Central Bank (ECB), and the European Commission. First the property market began to collapse in early 2008. In September that year, the Irish government guaranteed the debts of three major banks, only to discover by 2010 that they were fundamentally insolvent. In just two years-time, GDP had fallen by 3% in 2008, and 7% in 2009.<sup>9</sup> Unable to sustain the burden of its failed banks, Ireland was forced to accept aid from Europe, along with a host of strict austerity measures in November 2010. The Celtic Tiger had gone extinct, or at least into hibernation. In hindsight, many questioned the foundations of Ireland’s economic growth and wondered what went wrong. Had Irish citizens really benefited from recent economic development? Were foreign corporations taking unfair advantage of Ireland’s tax policies? Should Ireland have joined the European Union? The Eurozone? One fact was certain: Ireland was caught in a web of foreign investors and European alliances that would be difficult to untangle.

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<sup>5</sup> David Brown and John Murray Brown, “Celtic tiger’s strength amazes,” *Financial Times*, September 22 1998.

<sup>6</sup> Tony Tassel, “Unsated appetite for ‘Celtic Tiger’,” *Financial Times*, May 15 2000.

<sup>7</sup> “The European union’s investment darling,” *Global Investor*, June 1998, 53-55.

<sup>8</sup> Note that the Economist keeps their authors anonymous for the most part, to avoid “byline inflation,” and allow authors to speak with a “collective voice. See “Why are the economist’s writer’s anonymous,” *The Economist*, September 5 2013. “Ireland Shines,” *The Economist*, May 15 1997.

<sup>9</sup> Donovan and Murphy, *The Fall of the Celtic Tiger*, 2.



Much has been written about Ireland since 2010, tracing the steps of its financial crisis. Perhaps the most thorough book on the subject is *The Fall of the Celtic Tiger: Ireland & the Euro Debt Crisis*, by Donal Donovan and Antoin Murphy (2013). Other works focus on specific aspects of the collapse. The title of Cormac Lucey's *Plan B: How Leaving the Euro Can Save Ireland*, speaks for itself (2014). Another Irish author, Simon Carswell, wrote a tell-all of Anglo Irish Bank's risky investments in the Irish property market in *Anglo Republic: Inside the Bank that Broke Ireland* (2012).<sup>10</sup> There is also a wealth of economic theory behind asset bubbles, and financial crises. Seminal works include Charles Kindleberger's, *Manias, Panics and Crashes: A History of Financial Crises* (1978), Reinhart and Rogoffs' *This Time is Different: Eight Centuries of Financial Folly* (2009) and Hyman Minsky's *Stabilizing an Unstable Economy* (1986). This thesis augments this literature by reaching father back into Ireland's economic development.

Ireland's emergence as an economic equal with other OECD countries a subject of recent history, and has been closely tied with its membership in the European Economic Community. Partnership with Europe beginning in 1973 was the spark the Irish government needed to pursue a policy of inward foreign direct investment in earnest, and develop Dublin as a global financial center. Accession to the European Union in 1992, and adoption of the Euro in 1999 aided Ireland's economic development for many reasons. Funding from the European Commission for agriculture and infrastructure helped Ireland catch up to European standards. Increased confidence on the part of foreign investors convinced American technology companies to take advantage of Ireland's generous corporate tax incentives, and compatible workforce. The Irish

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<sup>10</sup> Carswell was a finance correspondent for the Irish Times during the financial crisis, and author of *Something Rotten: Irish Banking Scandals* (2006). *Anglo Republic* was a major commercial success, becoming the number one best-selling book in Ireland at its peak.

government and financial institutions borrowed money for less, stimulating social policy and new business ventures. This thesis will use Ireland's evolving relationship with Europe as a framework to assess the history of its economic development over the last sixty years.

Ireland's membership in the European Union (formally the EEC) and the Euro has been a source of both praise and discontent, depending on the health of the Irish economy. The same can also be said for Ireland's corporate tax policy, the long-term cornerstone of Ireland's economic strategy. More than any other issue, the Euro, and corporate tax policy have dominated the conversation on Irish economic policy, both domestic and abroad. The conversation has been pessimistic following the Troika bailout. Sovereign debt crisis, and the austerity measures employed during recovery have come to define much of Ireland's recent economic and political history.

Many actors are involved in the economic development of any country, but for Ireland the network is especially complicated. There is the Irish government, with Prime Minister, Minister of Finance, special agencies and legislature all involved in the making and execution of economic policy. There's the European Commission, the European Central Bank, and the International Monetary Fund—sometimes combining their powers to become the *Troika*. There's England, former colonizer, and close partner of Ireland, now preparing for its departure from the European Union. There are executives of powerful technology corporations, among them Apple, Dell and Intel, operating substantial portions of their business through Ireland for tax benefit. There are the Irish people who work for these corporations. And there are many others indirectly involved—writers, investors, and economists. In real time, all of these characters interact simultaneously. This thesis uses each perspective to develop the mechanisms of Ireland's economic development.

The complex array of economic actors in Ireland's economic development is reflected in the diversity of sources employed. This thesis relies heavily on periodicals including newspapers, magazines and economic journals, to construct the changing perception of Ireland's economic health. Other sources serve the same purpose, including statements by statesman, books by Irish economists, and political cartoons. Academic journals also provide a wealth of data on the activity of foreign corporations operating in Ireland, and how inward investment changes over time. Economic models are used as a framework to understand historical point of view, and think current economic scenarios. This thesis focuses on the reality and the *perception* of Irish economic development, by using both objective and subjective sources. Underneath the contrast between perception and reality, lies a remarkably consistent model for economic development.

The first chapter of this paper will focus on the policies that sustained Ireland's economic growth during the Celtic Tiger period (1992-1999). Beginning in the late 1950s Ireland initiated a series of trade and tax policies to open its economy to the global market. Around the same time, Irish leaders made membership in the European Economic Community a strategic objective. The successful combination of European diplomacy and domestic corporate tax policy allowed Ireland's economy to grow dramatically during the 1990s. The chapter ends with analysis of Ireland's ratification of the Maastricht treaty in 1992, securing a permanent position in the European Union and Eurozone (adopted in 1999). Maastricht ignited the positive feedback loop of Europeanization and tax policy that allowed for an explosion of inward investment and economic development. Membership in the European Union gave foreign companies the confidence to take advantage of the generous tax incentives the Irish government already had in place. Increasing investment made Ireland a role model for peripheral European economies, elevating its position in the European Commission.

The second chapter draws attention to the “miraculous” GDP growth that defined the Celtic Tiger period until 1999. Tax policy and membership in the European Union continued to reinforce one another, leading the Irish economy to new heights. Controversy surrounding Ireland’s corporate tax policy began to appear in these years, with critics pointing to tax manipulation and transfer pricing as signs that the domestic economy remained weak at the expense of opportunistic technology corporations. Concerns over Ireland’s compatibility with the Eurozone were also present, among concerns that a single currency in Europe was an altogether flawed idea. This chapter will identify the roots of many of the criticisms that were used after the sovereign debt crisis.

The first and second chapters present a detailed account of the policy strategy that enabled Ireland’s current stage of development. The goal of the third chapter is to evaluate whether a combination of European-centered foreign policy, and low corporate tax rates will continue to promote economic development in Ireland. Ireland’s financial crisis, and subsequent bailout (2008-2010) led to a loss of credibility within the European Community, which has lingered through more recent events. American frustration over tax avoidance, and challenges from the European Commission have put Ireland in a position to fiercely defend her most basic policies. British exit from the European Union has only added fuel to the fire, begging the question of whether Ireland can continue to live by its status quo.

# CHAPTER ONE

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## FOUNDATIONS FOR ECONOMIC DEVELOPEMENT

The goal of this chapter is to introduce the economic and political changes beginning in the 1950s that culminated in the Irish ratification of the Maastricht treaty. Apart from Spain and Portugal, Ireland had the unique experience among members of the European Community of neutrality during the Second World War.<sup>11</sup> And apart from England, Ireland also did not have a history of violent conflict with other European states. Ireland's business cycle was historically tied to the UK, and involvement with other economies of Europe was minimal until the 1960s.<sup>12</sup> How exactly then, did Ireland become *European* in the years leading to its accession to the European Economic Community in 1973?

### ***I. 'Industrialization by invitation' and Europeanization: 1959-1989***

Prominent Irish historian Eoin O'Malley recently published a comprehensive summary, *Contemporary Ireland*, which lends necessary insight on Ireland's economic history. O'Malley makes an important distinction between England in Ireland with respect to industrialization. Despite Ireland's official union with England since 1800 (having been a longtime colony beforehand), Ireland did not undergo a simultaneous industrial revolution, advancing in only a few localized industries.<sup>13</sup> When Ireland formally separated from England in 1921, it retained an almost identical parliamentary structure to England, and continued to enforce many pre-existing

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<sup>11</sup> The twelve members of the European Commission, and members of the original European Union were Germany, France, Italy, Belgium, The Netherlands, Luxembourg, Denmark, The United Kingdom, Ireland, Greece, Portugal and Spain.

<sup>12</sup> This is not to say that Ireland did not have relations with continental Europe. Specifically, there is a body of literature on the historic connection between Ireland and France, much of which centers on revolutionary values. See a recent book by WJ Cormack on the influence of French thought on the Easter Rising of 1916, *Dublin 1916: The French Connection* (Palgrave Macmillan, 2012).

<sup>13</sup> Eoin O'Malley, *Contemporary Ireland* (London: Palgrave MacMillan, 2011), 7.

trade agreements. Unfortunately, independent Ireland lacked the technology needed for an advanced economy based in manufacturing and services.

A series of political initiatives in the post-war years allowed Dublin to join the European Commission, and develop into an advanced economy. This is the main argument of O'Malley's book, and one that goes unchallenged in this paper.<sup>14</sup> Ireland in the 1930s and 40s operated under an economic policy of "self-sufficiency," which manifested in aggressive tariffs, and "economic war" with England.<sup>15</sup> Import substitution and high import tariffs were symbolic, if not practical measures to separate from British influence. Agriculture remained the country's most important industry with little official focus on nurturing manufacturing-based industries. The closed economy model deteriorated into the 1950s due to rising levels of poverty, unemployment and immigration. "Backwardness" continued to be associated with Irish culture, as strict religious policies on book censorship, family life and divorce remained law.

The foundations for Ireland's advanced economy were laid in 1958 under the new leadership of Taoiseach Sean Lemass.<sup>16</sup> New policies focused on eliminating trade barriers and creating incentives for inward investment. That year, most regulations under the Control of Manufactures Acts of 1932 and 1934 were repealed, which allowed for foreign ownership within all industries.<sup>17</sup> The most important economic policy out of this administration was Export Sales Relief (ESR), which beginning in 1960, exempted all exported Irish goods from taxation.<sup>18</sup>

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<sup>14</sup> Ibid, 14.

<sup>15</sup> Ibid, 38.

<sup>16</sup> Taoiseach is the equivalent title to Prime Minister, and assumes essentially the same role over Irish Parliament as in the English model. Gaelic titles were assigned to government roles following Irish independence in a greater effort to reinstate traditional Celtic culture.

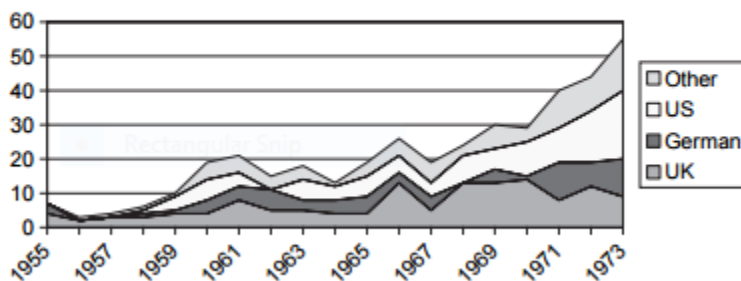
<sup>17</sup> Frank Barry, "Foreign Direct Investment and Institutional Co-Evolution in Ireland," *Scandinavian Economic History Review* 55.3 (2008), 264.

<sup>18</sup> ESR was officially introduced in 1956, but only half of the tax owed was waived until 1960. Dividends on profits earned from ESR exports were also tax exempt. Ernst and Young commissioned by the Irish Department of Finance, *The historical development and international context of the Irish corporate tax system*, by Aidan Walsh and Chris Sanger, 2014.

Quipped “industrialization by invitation,” inward investment remained Ireland’s dominant focus throughout the 1970s. Figure 1.1 shows foreign companies from the United States, United Kingdom and Germany beginning to relocate to Ireland in significant numbers between 1955 and 1973.<sup>19</sup>

**Figure 1.1 Foreign companies locating in Ireland 1955-1973**

**Figure 1** New foreign companies locating in Ireland each year, 1955–73.  
**Source:** Author’s calculations from IDA (1973).



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ESR was also accompanied by trade liberalization in the mid-1960s, beginning with the United Kingdom. The Anglo-Irish Free Trade Agreement of 1966 eliminated all tariffs between Ireland and its biggest trading partner, forging a path for Ireland to enter the global marketplace.<sup>21</sup>

Ireland experienced mild economic growth and industrialization into the 1970s, but was inhibited by the international oil crisis and British decline, as well as its own flawed fiscal decisions.<sup>22</sup>

Most expansion during this period is attributed to traditional industries such as textiles, metals and paper, which have less technology requirements relative to electronics and software

[http://www.budget.gov.ie/Budgets/2015/Documents/EY\\_Historical\\_Dev\\_International\\_Context\\_Irish\\_%20Corporation\\_Tax.pdf](http://www.budget.gov.ie/Budgets/2015/Documents/EY_Historical_Dev_International_Context_Irish_%20Corporation_Tax.pdf)

<sup>19</sup> See Appendix 5 for levels of inward foreign direct investment to Ireland over time (1970-2012). See Appendix 6 for commonly cited economic models of foreign direct investment.

<sup>20</sup> Data courtesy of the Ireland’s Industrial Development Agency, a subgroup of the Department of Industry & Commerce. Data compiled and graphed by author, Frank Barry. Frank Barry, “Foreign Direct Investment and Institutional Co-Evolution in Ireland,” *Scandinavian Economic History Review* 55.3 (2007), 265.

<sup>21</sup> While the legislation was signed in 1966, the tariff was lifted gradually at a rate of 10% per annum to avoid economic disruption. Ibid, 265.

<sup>22</sup> O’Malley, *Contemporary Ireland*, 138.

manufacturing.<sup>23</sup> Irish policy-makers, and the Industrial Development Agency began to target specific companies in more lucrative sectors like electronics and pharmaceuticals in the late seventies by offering more generous incentive packages.<sup>24</sup>

Transition to an open economy made Ireland an eligible candidate for membership in the European Economic Community. Despite Charles DeGaulle's continued opposition to enlargement of the EEC, the Irish government made membership in the European Community a foreign policy objective.<sup>25</sup> Ostensibly limited to consolidation of coal and steel production among France, West Germany, Italy, and the Benelux countries<sup>26</sup> ("the six"), the European Coal and Steel Community began a gradual movement towards a generalized "European Economic Union."<sup>27</sup> Ireland acceded along with Denmark and Great Britain as a founding member of the new European Economic Community in 1973, with the support of its two major political parties Fine Gael and Fianna Fail, and 5/6 support of the general population.<sup>28</sup>

The positive effects of the Community's Common Agricultural Policy and Structural Funds for economic development were among the most highly anticipated initiatives. Accession to the European Economic Community also preserved the status quo with Great Britain that the Irish economy depended on for survival. Scholar Paul Sharp made this point in 1990, arguing that it would have been "very difficult to make a case for Ireland remaining outside the EEC that did not entail a major transformation of its economy or, at least, immediate costs and disruptions."<sup>29</sup> Whether the decision was made by will or necessity, Ireland's membership in the

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<sup>23</sup> Barry, "Foreign Direct Investment and Institutional Co-Evolution in Ireland," 265.

<sup>24</sup> Peter J. Buckley and Frances Ruane, "Foreign Direct Investment in Ireland: Policy Implications for Emerging Economies," *The World Economy* (2006), 1614.

<sup>25</sup> Paul Sharp, *Irish Foreign Policy and the European Community* (Dartmouth Publishing Company Limited, 1990), 100.

<sup>26</sup> Belgium, The Netherlands and Luxembourg.

<sup>27</sup> *Ibid.*, 90.

<sup>28</sup> *Ibid.*, 100.

<sup>29</sup> *Ibid.*, 101.



European project had by far the largest impact on its future economic success, and further separation from British influence. Dublin continued to support the Community's initiatives, and committed to monetary integration in 1978 by joining the Exchange Rate Mechanism.

Ireland's membership in the European Community was accompanied by economic growth fueled by inward investment into manufacturing. Recognizing that total tax exemption on exports "could not survive in a [European Union] environment," the Irish government adjusted its corporate tax policy in 1981.<sup>30</sup> Under the new rule a 10% tax rate was applied to all trading manufacturing profits. The same rate was applied to businesses surrounding the Shannon Airport, and financial services companies licensed by the International Financial Services Centre.<sup>31</sup> ESR was grandfathered until 1990 for corporations with preexisting arrangements, to *avoid disruption to the European Economic Community. Despite the increase in the tax rate* offered to corporations manufacturing in Ireland, the Irish rate was still significantly lower than countries like the United States, United Kingdom or Germany. As these countries continued to innovate in lucrative industries like electronics, pharmaceuticals and software, Ireland remained an attractive location to avoid taxation. "Industrialization by invitation," began to pay off in the late 1980s, as Ireland was preparing to become a founding member of the European Union.

## ***II. Mind Over Maastricht***<sup>32</sup>

The Maastricht Treaty, ratified in 1992, founded the European Union, and outlined a seven-year plan towards monetary unification. By this time, Ireland was an established voice

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<sup>30</sup> Aidan and Sanger, *The historical development and international context of the Irish corporate tax system*, 5.

<sup>31</sup> The International Financial Services Centre (IFSC) is a physical area of Dublin intended for financial services companies. Firms approved to operate within the IFSC enjoy the low corporate tax rate also given to trading manufacturing profits (10% until 2003, 12.5% after).

<sup>32</sup> Title of an article published in the December 1991 issue of *The Economist*, anticipating the ratification of the Maastricht Treaty. Ireland is only briefly mentioned and the author predicts strong Irish support due to the large amount of developmental aid from the European Commission. "Mind Over Maastricht," *The Economist*, December 7 1991.

within the European Commission. In April of 1990, German Chancellor Helmut Kohl, and French President, Francois Mitterrand penned an invitation to the Irish President Patrick Hillery<sup>33</sup>, to contribute to the conversation of the European Council on formal economic and political union:

“In light of far-reaching changes in Europe and in view of the completion of the single market and the realization of the economic and monetary union, we consider it necessary to accelerate the political construction of the Europe of the Twelve. We believe that it is time ‘to transform relations as a whole among the member states into a European Union...and invest this union with the necessary means of action,’<sup>34</sup> as envisaged by the Single Act.”<sup>35</sup>

Time was of the essence with a unified Germany emerging as a powerful fixture of the geopolitical landscape. French and German leaders, among others throughout the Commission recognized the moment of inertia for greater European integration. France especially had the immediate necessity of building an equitable, or advantageous relationship with the new nation. The expression ‘A French jockey riding a German horse,’ adopted during the negotiations summarizes the political climate well, characterizing the French as the idea generators of European Union, and the Germans as the economic force.<sup>36</sup> The late Tony Judt connected this historical moment to the project of a single European currency; adoption a single currency would “[bind] the Federal Republic firmly to the ‘West,’” relieving French anxiety of a more powerful Germany.<sup>37</sup> Helmut Kohl, Francois Mitterrand and Jacques Delors, notorious leaders who

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<sup>33</sup> Not to be confused with the Irish Prime Minister or Taoiseach, which is a more influential position in practice.

<sup>34</sup> Text taken from the Single European Act (abbreviated here as ‘Single Act’) implemented in 1986 under the direction of Jacques Delors, then President of the European Commission. The act made definitive goals to achieve an integrated market by 1992. Ratification of the Act required a constitutional change, and referendum (as a result), in Ireland, which was approved by nearly 70% in the popular vote.

<sup>35</sup> Finn Laursen and Sophie Vanhoonacker, *The Intergovernmental Conference on Political Union: Institutional Identity of the European Community* (Norwell: Kluwer Academic Publishers, 1992), 295.

<sup>36</sup> Taken from Karl H. Karhs, “Meeting the Maastricht Targets,” *The Review of Policy Research* 19.4 (2002), 53.

<sup>37</sup> Tony Judt, *Post War: A History of Europe Since 1945* (London: Penguin Books, 2005).

carried personal memory of wartime were nearing the end of their careers, escalating the pressure for swift action.<sup>38</sup>

Fortunately, the Maastricht Treaty was expected to garner enthusiastic support in Ireland. After centuries of English colonization and hard-handed influence, Dublin had met unprecedented economic success as a member of the European Commission. Accepting the conditions of monetary union was a natural next step. Urgency for tighter European economic integration was received well by the Ireland's political leadership, and especially by the standing Taoiseach<sup>39</sup>, Charles Haughey. In an address to the Dail Eirann, the lower house of Ireland's legislature, Haughey called the outcome of the Maastricht negotiations "very satisfactory for Ireland" ensuring his audience that "[Ireland's] economic and social interests have been specially favored and protected."<sup>40</sup> In particular, Ireland was to benefit from grants from the Cohesion Fund to improve transport networks, because its Gross National Product still remained below 90% of the average for the Commission.<sup>41</sup> Cohesion funds were especially valuable to Ireland's "industrialization by invitation" policy because they could be allocated to infrastructure development or incentive packages for foreign multinational corporations.<sup>42</sup> In a more decorated statement from the same address Taoiseach Haughey gave high praise for the European Union as a whole:

"The Maastricht Council was a success. It can be described as historic. The outcome was that we established a new European Union. It is a political union of the twelve member States which will

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<sup>38</sup> Kahrs, "Meeting the Maastricht Targets," *The Review of Policy Research* 19.4 (2002).

<sup>39</sup> Prime Minister.

<sup>40</sup> Charles Haughey. "Statement by the Taoiseach, Mr. Charles J. Haughey, T.D., in the Dail Eireann on 12<sup>th</sup> December, 1991, on the European Council in Maastricht." Provided by the Department of Foreign Affairs, Dublin in *The Intergovernmental Conference on Political Union: Institutional Reforms, New Policies and International Identity of the European Community* ed. Laursen and Vanhoonacker, 495.

<sup>41</sup> Gross National Product as opposed to Gross Domestic Product. *Ibid.*, 498

<sup>42</sup> Ana Teresa Tavares and Stephen Young, "EU Periphery and the Quality of Manufacturing," in *European Union and the Race for Foreign Direct Investment in Europe* ed. Oxelheim and Ghauri (Kidlington: Elsevier Ltd., 2004), 258.

have a common foreign and security policy, unified economic and monetary systems, a single market, a charter of social rights, and Community competence in greatly increased number of important areas. It will promote a new level of prosperity among the people who belong to it and improve the quality of their lives.”<sup>43</sup>

Even the simple statement, “it can be described as historic,” gave the implication that Ireland had contributed to a shared concept of European integration by joining the European Union, and committing to the single currency.

Haughey’s enthusiastic endorsement of the Maastricht Treaty, and single currency was reflected in the actual ratification process in Ireland. Once the text of the Maastricht Treaty was finalized by the European Commission in December of 1991, it was sent to each member country for ratification according their own legal procedure. Depending on the balance of power within individual governments, treaties drafted by the European Commission faced relatively small or large obstacles to ratification. Ireland’s process for ratification required a cumbersome number of approvals, not the least of which was a constitutional amendment and popular referendum.<sup>44</sup> Figure 1.2 underscores this point by comparing the obstacles to ratification between member countries of the European Commission. It can be assumed that from a procedural perspective simple legislative majority is more readily achieved than majorities in multiple chambers, changes to the national constitution or a referendum (or some combination).

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<sup>43</sup> Ibid., 495.

<sup>44</sup> Results of all Irish referendums on European Community membership can be found in Appendix 4.

**Figure 1.2: Procedural Steps to Ratification of the Maastricht Treaty<sup>45</sup>**

	Simple Majority in Legislature	Majority in Two Legislative Chambers	Constitutional Change	Referendum
Ireland**	X		X	X
Belgium		X		
Denmark*	X			X
Germany**	X		X	
France**			X	X
Greece	X			
Italy		X		
Luxembourg	X			
Netherlands	X			
Portugal**	X		X	
Spain**		X	X	
United Kingdom*	X			

\*Prospective but not actual members of the Eurozone at its adoption or since.

\*\*In nearly all cases a constitutional change required bicameral approval of at least three fifths majority in each chamber, creating a significant barrier to ratification compared with simple majority of the legislature.

This comparison lends important insights into the amount of approval individual countries needed to earn for ratification. In the case of Ireland, which required a constitutional change and referendum (parliamentary approval notwithstanding), the treaty would have been impossible to approve without a healthy majority in support among leadership and the populace alike. This conjecture is supported by the history of Irish party politics on the issue of European integration. Former Fine Gael Taoiseach, Garret FitzGerald, recalled in an essay published in 2004 that the referendum of 1972 on Ireland’s accession to the European Economic Community was “the first time” that the two dominant political parties, Fianna Fail and Fine Gael<sup>46</sup> genuinely collaborated, in an effort to garner support for the EEC.<sup>47</sup> Shared support of economic integration

<sup>45</sup> Information on ratification procedures taken from Thomas König and Simon Hug, “Ratifying Maastricht: Parliamentary Votes on International Treaties and Theoretical Solution Concepts,” *European Union Politics* 1.1 (2002).

<sup>46</sup> See Appendix 3 for a detailed overview of Ireland’s influential political parties.

<sup>47</sup> Garrett FitzGerald, “The Economics of EU Membership,” in *Ireland and the European Union*, ed. Jim Hourihane (Dublin: The Lilliput Press, Ltd., 2004), 70.

with the European Community among Ireland's mainstream political parties continued into the ratification process for the Maastricht Treaty, with 69% of the general electorate voting "Yes."<sup>48</sup>

Irish support of the Maastricht Treaty was covered extensively in *The Irish Times*. A Q&A feature from June 1992 emphasizes that Ireland stood to gain from the economic opportunities afforded by integration. However, the *Times* correspondents reassure the reader that "Ireland's economic success or failure would continue to depend on [its] own efforts."<sup>49</sup> On a more somber note, the correspondents warn that voting "no" on the Maastricht referendum would lead to an increase in domestic interest rates and capital flight. The Danish rejection of the treaty in the first referendum was covered extensively, although not from a sympathetic point of view. Coverage from the *Times* continued to emphasize the new employment and leadership opportunities that larger European countries provide and protect. Reporters also acknowledged Ireland's longstanding participation in the European Economic Community. After almost twenty years of membership, the Irish economy had fully incorporated EC policies and subsidies into strategic decisions. Correspondent Sean Flynn reflected this viewpoint in an article titled "Farmers see little alternative to life in the EC," from June 1992.<sup>50</sup> Programs like the Common Agricultural Policy (CAP) had continued to benefit the Irish workforce, and was also now an expectation. Given Ireland's long term involvement with the European Community, support for the Maastricht Treaty was the intuitive response.

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<sup>48</sup> Brigid Laffan and Jane O'Mahony. *Ireland and the European Union* in *The European Union Series* ed. Neill Nugent and William E. Paterson (Dublin: Palgrave Macmillan, 2008). See Appendix 4 for breakdown of all ratification referendums in Ireland.

<sup>49</sup> Flynn, Boland and Cliff Taylor, "Yes of No?" *The Irish Times*, June 16 1992.

<sup>50</sup> Sean Flynn, "Farmers see no alternative to life in the EC," *The Irish Times*, June 2 1992.

### ***III. On the Eve of Economic Boom***

Despite its accomplishments in the realm of public policy the Irish economy did not take off in earnest until after the ratification of the Maastricht Treaty. Ireland's economic performance from the start of the postwar era through the mid-1980s did not achieve much to oppose its historical characterization, even with the resources afforded by the European Community. To most observers, Ireland was still a country trapped within ailing traditional industries, and plagued by emigration. A simple illustration of the point is the differential in income level between Ireland, and the other eight members of the European Economic Community (EEC) in 1973. Despite Dublin's eagerness to join the EEC as a part of the first enlargement of the Coal and Steel Community, its income level was only three fifths of the average for the other members.<sup>51</sup> This relative weakness, as well as Ireland's physical geography led to its designation as a peripheral nation within the Commission.<sup>52</sup>

Ireland's position within the European Community has been distinct from the beginning, both from the peripheral economies of Europe, and the larger traditional powers. From the standpoint of European integration, Dublin is a pioneer among peripheral European governments, joining the European Economic Community, the Exchange Rate Mechanism and the Euro at their founding, in step with much larger, more advanced economic powers. Ireland's small size has also proven advantageous in its participation in the European Community. Although its economic standards were low relative to other European countries, its economic performance has comprised almost a negligible proportion of the European Economic

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<sup>51</sup> Ireland, along with the United Kingdom and Denmark joined the European Economic Community in 1973 as part of the first enlargement of Europe's founding organization for economic integration the European Coal and Steel Community founded in 1951. The Coal and Steel Community included France, West Germany, Italy and the Benelux nations (Belgium, The Netherlands, and Luxembourg). Kieran A. Kennedy, "Real Convergence, the European Community, and Ireland," *Journal of Statistical and Social Inquiry Society of Ireland* 26.4 (1992): 224.

<sup>52</sup> Nietzsche, "From the Periphery to Core (and Back)?," 118.

Community, shielding their membership from controversy. As Kipper Williams, cartoonist for the Guardian has quipped, Ireland has been oftentimes “too little to fail,” within the European Economic Community.<sup>53</sup> This paradoxical advantage of insignificance came to end with the Celtic Tiger boom of the 1990s, bringing Ireland into the spotlight as a model peripheral economy, and example of economic growth for all countries. Nevertheless, Ireland’s small size, and proportion of the aggregate European economy, remains a fact that distinguishes it from other designated peripheral economies.

Ireland’s economic position was also distinct for its low-corporate tax policy aimed at directing foreign direct investment. Although the rewards of this generous tax policy were realized most dramatically in the 1990s and early 2000s, attracting foreign direct investment had been a strategic objective of the Irish government for almost forty years before the Celtic Tiger boom. Before 1990, the Ireland did not tax foreign investment so long as any goods produced were exported.<sup>54</sup> After 1990, tax legislation was adjusted so that all manufacturing profits, whether generated by Irish or foreign companies, were taxed at a rate of 10%.<sup>55</sup> Even products that had been mostly assembled in other countries could be deemed “made in Ireland” if the last step in the manufacturing process was completed there. This policy was enacted at the same time Ireland was preparing for further integration with the European Community. Membership in the European Union and adoption of the Euro ignited “industrialization by invitation.” The willingness of foreign multinational corporations to invest in manufacturing reflected increased confidence in the Irish economy.

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<sup>53</sup> Kipper Williams, “Surely, we’re too little to fail,” Illustration, *The Guardian*, November 12, 2010.

<sup>54</sup> Sheila Killian, “Where’s the harm in tax competition? Lessons from US multinationals in Ireland,” *Critical Perspectives in Accounting* 17 (2006), 1074-75.

<sup>55</sup> The definition of manufacturing was initially vague, but through legal challenges came to be defined as a “commercially different product,” made by an “irreversible process.” Ibid, 1075.



Ireland's GDP has never comprised even one percent of the European aggregate<sup>56</sup>, but the country has nonetheless exerted influence beyond its means through membership in the European Community and business with the United States. Unsurprisingly, Ireland's economy become a hot topic in Europe and across the Atlantic in the period leading to the adoption of the Euro.<sup>57</sup> The next chapter will draw focus on the period between the ratification of the Maastricht treaty and the launch of the Euro in January 1999, which coincides almost exactly with Ireland's most exciting period of economic growth.

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<sup>56</sup> Donovan and Murphy, *Fall the Celtic Tiger*, 19.

<sup>57</sup> Susan Nitzsche, "From Periphery to Core (and Back)? Political, Journalistic, and Academic Perceptions of Celtic Tiger- and post-Celtic Tiger-Ireland," *Journal of Irish Studies* 3 (2013): 115-135.

## CHAPTER TWO

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### ‘CELTIC TIGER’S STRENGTH AMAZES’<sup>58</sup>

Before the 1990s Ireland did not enjoy much praise in fashionable economic thought. At best, it might be described as “The Poorest of the Rich,” a backhanded compliment from a 1988 issue of *The Economist*.<sup>59</sup> But when Ireland adopted the Euro at its launch on January 1, 1999, the country had seen nearly six years of GDP growth rates between seven and eight percent. This was lauded as the highest rate within the European Union, and among the highest for the world, matched only by the other so called ‘Tigers’ of Southeast Asia.<sup>60</sup> Throughout the 1990s a number of economists made the argument that these dramatic growth rates were necessary if Ireland hoped to meet the Maastricht Criteria by the 1997 deadline.<sup>61</sup> In the period couching the adoption of the Euro, Ireland rivaled Germany for the lowest unemployment rate in the entire Eurozone, a dramatic change from its position at the time of the Maastricht agreement.

The first goal of this chapter is to assess whether Ireland met the economic standards of European Commission. “Economic standards,” are represented both by the fiscal criteria in the Maastricht Treaty, and the average performance metrics of other prospective Euro members. The second objective is to consider whether Ireland was a sound geopolitical fit for the Eurozone. This will be done by evaluating the Optimum Currency Area model which has often been used to assess the compatibility of Euro members. Ireland’s political history within Europe will be an equally important consideration.

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<sup>58</sup> Title from 1998 Financial Times article; also cited in introduction. David Brown and John Murray Brown, “Celtic tiger’s strength amazes,” *Financial Times*, September 22 1998.

<sup>59</sup> Frances Cairncross, “Poorest of the Rich,” *The Economist*, January 16 1988.

<sup>60</sup> Martin, “Celtic tiger burning bright, Ireland won’t follow Asia’s script.”

<sup>61</sup> Sweeney, *The Celtic Tiger: Ireland’s Economic Miracle Explained*, 64.

## *I. Convergence with members of the European Community*<sup>62</sup>

More jarring than the numbers themselves was the rapid pace of economic growth in what became known as the Celtic Tiger period. Paul Sweeney, economist with the Services, Industrial, Professional and Technical Union, Ireland's largest trade union, wrote glowingly of what he considered the "Irish Economic Miracle," in his book *Celtic Tiger: Ireland's Economic Miracle Explained*, published in 1998. He emphasized the unprecedented and incredible GDP growth rates of 7-8% from 1994 onward, hitting a peak of over 10% in 1995.<sup>63</sup> Sweeney's predicted that GDP growth rates would continue to average around 7.5% and that unemployment would continue to fall. He did however concede that productivity increases (and by relatedness GDP) were "slightly undermined" due to inversion by multinational corporations.<sup>64</sup>

Most observers would go farther than Sweeney and say that the speed of Ireland's development had *everything* to do with the 10% corporate tax rate on all traded manufactured goods. The tax environment incentivized foreign multinational corporations to engage in aggressive transfer pricing. Transfer pricing describes the transaction between a parent and subsidiary company where the parent company purchases goods produced by the subsidiary. For purposes of managerial accounting transfer pricing is often used to attribute profits to the country in which goods are made. For purposes of earning a greater profit margin, transfer pricing is used to attribute profits to the country that offers the lowest corporate tax rate, a role which Ireland

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<sup>62</sup> Convergence in this section refers to the average per capita income, and manufacturing output for other prospective members of the Eurozone. More generally, Kieran A. Kennedy, whose work will be examined in this section defines convergence as "a tendency for poor countries to catch up with rich countries in terms of living standards." Kieran A. Kennedy, "Real Convergence, the European Community and Ireland," *Journal of the Statistical and Social Inquiry of Ireland* 26.4 (1992).

<sup>63</sup> Donavan and Murphy in *Fall of the Celtic Tiger* identify Sweeney as among the first economic authors to develop a fascination by the 'shining light' of Ireland's transformation. Frank Barry's *Understanding Irish Growth* is also included in this description, and will also be a source for this paper. Paul Sweeney, *Celtic Tiger: Ireland's Economic Miracle Explained* (Dublin: Oak Tree Press, 1998), 1.

<sup>64</sup> *Ibid*, 3.

took on as a main component of its policy strategy. Sweeney provided an extreme but illustrative example of transfer pricing in an Irish manufacturing environment in his analysis of the Celtic Tiger boom (1998). He gives the example of a Coca-Cola plant in County Louth which reported £400 million in revenue for only 200 workers. This created a much higher profit margin in Ireland—where each worker is purportedly producing £2 million a year, for a salary of around £30,000 (example written before formal adoption of Euro).<sup>65</sup> Scenarios of this nature were possible if the last step of production took place in Ireland, even if most the labor and capital expenditures took place in other countries. Companies took advantage of this policy by creating final production steps that could be easily done in Ireland, ranging from computer assembly to artificially ripening fruit in Irish warehouses.<sup>66</sup>

The effect of transfer pricing manifested itself in the differential between Gross Domestic Product and Gross National Product. Gross National Product accounts for only goods and services produced by Irish corporations, eliminating the large profits accrued by foreign investors. In the late 1980s and early 1990s, the differential between GDP and GNP hovered as high as 10%. When GDP was used instead of GNP as the measure of national income, Ireland did fact converge with the European Union average. This led more skeptical authors to question how much of the economic activity in Ireland the Irish people could really claim, using phrases like “paper Tiger” to mock enthusiasts<sup>67</sup>. Based on empirical economic research in the Celtic Tiger period, arguments could be made for Ireland’s convergence or non-convergence with the European average, depending on whether GDP or GNP was used as the base metric. Kieran

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<sup>65</sup> Ibid.

<sup>66</sup> Killian, “Where’s the harm in tax competition? Lessons from US multinationals in Ireland,” 1075.

<sup>67</sup> O’Malley, *Contemporary Ireland*, 151.

Kennedy, from whose work O’Leary founded his own study, captured this complicated scenario in a report on Irish convergence published in 1992:

“...there is no assurance from economic theory, general historic experience, Ireland’s past performance or future projections of the [European Economic Community] developments, that Ireland is well established on a course towards convergence with its richer partners in the [European Community]. Neither, for that matter, does our review give support alarmist views that Ireland will diverge further.”<sup>68</sup>

Kennedy published this analysis before the peak of Ireland’s growth, but point of his argument stands. The nature of Ireland’s growth was dissimilar to both the other early members of the Economic Community and other peripheral nations, and that it had only objectively caught up to the Europe Union average in recent history.

Fellow Irish economist Frank Barry summarized the unique predicament demonstrated by Kennedy’s empirical findings in an essay on Ireland’s economic growth written in 1999. He wrote that “After experiencing little or no convergence between the 1960s and the late 1980s, Ireland has progressed rapidly towards the average European living standards over the last decade.”<sup>69</sup> Ireland’s levels of production (measured here in Gross National Product per capita) and income per capita did not meaningfully converge to the European Union average until after 1986.<sup>70</sup> Among other European peripheral economies, Spain, Greece and Portugal, Ireland was the only country that failed to catch up the EU average for GNP per capita from 1960 to 1990.<sup>71</sup> Barry’s observation is not presented as problematic, but it did signal a disconnect between the

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<sup>68</sup> Kennedy, “Real Convergence, the European Community, and Ireland,” 233.

<sup>69</sup> Barry, Hannan, and Eric Strobl, “Real Convergence an Employment Growth,” in *Understanding Ireland’s Economic Growth* edited by Frank Barry (New York: St. Martin’s Press, 1999), 23.

<sup>70</sup> Eoin O’Leary, “The convergence of performance of Ireland among EU countries: 1960-1990,” *Journal of Economic Studies* 24.1,2 (1997).

<sup>71</sup> *Ibid.* O’Leary concedes that GNP may overstate the effect of inversion due to foreign direct investment, but still finds it objectively a more accurate measure of Irish economic activity than GDP. Here Eoin O’Leary uses GNP is used instead of GDP as a measure of national income so that the transfer-pricing of foreign multinational corporations is not taken into account.

economic environment of Ireland, and that of its neighbors in the prospective Eurozone who had been growing, albeit at a slower pace, for a much longer period of time.

Sweeney's book presented heavy reliance on foreign direct investment relative to indigenous industry is presented as an area for improvement, among an otherwise healthy economic environment. In other writings from the end of the decade, Ireland's mixed economy of indigenous industry and multinational corporations is even portrayed in a strictly positive light. In 1999, Irish economist Brian Geoghegan suggested that the "dual nature" of Ireland's economy had the potential to cushion it from weakness among other members of the European Union.<sup>72</sup> Celebrated economist Paul Krugman joined the conversation, linking increased American FDI to relatively low labor costs and an English-speaking, well-educated workforce, outside of their particular tax policy.<sup>73</sup> Irish historian David Begg described this trend of optimism on Ireland in an essay published in 2004, writing, "historians and economists are quickly adjusting their assessment of Irish performance, acknowledging the newfound affluence and regretting it did not arrive sooner."<sup>74</sup>

A related concern was that Ireland's domestic industries remained relatively weak, even as new industries encouraged by foreign direct investment flourished. This point is in line with the predominant analysis of foreign direct investment in peripheral European economies, and was voiced by even the most optimistic observers. Sweeney commented that while Ireland has "one of the most successful state agencies to encourage foreign direct investment...it is far less successful in building its own indigenous industry."<sup>75</sup> Statistical analysis of industry

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<sup>72</sup> Brian Geoghegan, "Economic Management in Ireland Post-EMU: Ireland's Potential within EMU," *Journal of Statistical and Social Inquiry Society of Ireland* 28.1 (1999), 95.

<sup>73</sup> Paul Krugman, "Good News from Ireland: A Geographical Perspective." In *International Perspectives on the Irish Economy*. Ed. A.W. Gray (Dublin: Idecon, 1997), 38, 53.

<sup>74</sup> David Begg, "People, Work and Social Change," in *Ireland and the European Union* ed. Jim Hourihane (Dublin: The Lilliput Press, Ltd., 2004), 49.

<sup>75</sup> Sweeney, *Celtic Tiger*, 9.

composition in the mid-1990s showed that growth in exports (leading to GDP growth) was primarily driven by foreign firms locating to Ireland to enjoy its friendly corporate tax policy, among other incentives.<sup>76</sup> In 1993, foreign owned companies accounted for two thirds of total net output, and in particular sectors, namely Chemicals and Electric and Electronic engineering, the share of net output was over 90% for foreign-owned multinational corporations.<sup>77</sup> This did not stop optimistic writers like Neil Martin of *Barron's Weekly* from categorizing *Ireland* as the “world’s second-largest exporter of software after the U.S. ” The firms that produced this software were not usually products of Irish technological innovation, or management.<sup>78</sup> A more accurate statement would have been that foreign-owned subsidiaries *in Ireland* were the second largest exporters of software.

Given the lack of existing industrial infrastructure, host countries like Ireland rarely provided a source of technology during this period.<sup>79</sup> Economists recognized that Ireland needed to see impressive growth in domestic industries to become a powerful economy in her own right. Love and Roper published a study using data from the 1993 Product Development survey across three countries, Ireland, the UK, and Germany.<sup>80</sup> They compared how often domestic-owned manufacturing plants employed Research and Development (R&D) versus technology transfers from parent, or plants within the same group of companies. The results showed that Irish businesses tended to employ technology transfer instead of in-house R&D. More importantly,

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<sup>76</sup> Frances Ruane and Holger Gorg, “Aspects of Foreign Direct Investment in Irish Manufacturing Since 1973: Policy and Performance,” *Journal of Statistical and Social Inquiry Society of Ireland* 27.4 (1996): 40.

<sup>77</sup> *Ibid.*, 39.

<sup>78</sup> Neil A. Martin, “Celtic tiger burning bright, Ireland won’t follow Asia’s script,” *Barron's* 79.9 (1999).

<sup>79</sup> Tavares and Young, “EU Periphery and the Quality of Manufacturing,” 275.

<sup>80</sup> The Product Development Survey provides a wealth of information on how many new and differentiated products are created and a given year. The survey also gives information on how well new products sell in the marketplace. Love and Roper use this data to evaluate the level of innovation of individual businesses. Love and Roper, “Location and network effects on innovation success: evidence for UK, German and Irish manufacturing plants,” *Research Policy* 30 (2001) 646-647.

Love and Roper found that Irish businesses had lower “innovation intensity” than the UK or Germany.<sup>81</sup> Irish-owned manufacturing companies produced less new or improved products relative to German or British owned businesses.<sup>82</sup> This data does reinforce weakness in Irish industry, specifically manufacturing, during this period. However, it does not prove a causal relationship between R&D or technology transfer, and product innovation. This data also does not compare the long-term effects of either strategy. When the local workforce engages with technology imported from other countries, there is a transfer of valuable knowledge and skills which can be used independently by domestic business. On one hand, Ireland may have been losing out on an opportunity for business to invest in their own R&D. On the other hand, Ireland may have only been in the very beginning stages of a successful transfer of skills in technology manufacturing.

Another important consideration are the specific industries that promoted Ireland’s growth. Ruane and Gorg of Trinity College, Dublin, gave a detailed breakdown of manufacturing activity by foreign multinational corporations in Ireland, using data from 1993. Ruane and Gorg focused on the concentration of foreign direct investment in “high-tech” sectors, namely software, and other electronic goods.<sup>83</sup> They found that 68.4% of net output from Ireland was owned by foreign companies. Figure 2.1 gives a breakdown by output sector with subsectors with foreign owned shares upwards of ninety percent.<sup>84</sup> Most importantly, these high-share sectors—chemicals, electronic engineering and instruments fall under the lucrative categorization of “high tech.” At mid and high-level employment, these sectors require more

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<sup>81</sup>See full data table in Appendix 7. Ibid, 648.

<sup>82</sup> Ibid, 658.

<sup>83</sup> Frances Ruane and Holger Gorg, “Aspects of Foreign Direct Investment in Irish Manufacturing Since 1973: Policy and Performance,” *Journal of the Statistical and Social Inquiry Society of Ireland* 27.4 (1996), 51.

<sup>84</sup> Ibid., 39.



sophisticated skills, and offer better compensation than traditional industries like agriculture, or textile manufacturing, especially when design, engineering and programming work is needed.

**Figure 2.1 Net Output by Sector (1993)**

**Table 1.1 Net Output by Sector and Nationality, 1993**

Industrial sector	Irish-owned (£ 000)	% of Irish	Foreign-owned (£ 000)	% of Foreign-owned	Total (£ 000)	% of Total	Foreign as share of Total
Food, Drink and Tobacco	1,534,872	41.6	1,694,361	21.2	3,229,233	27.6	52.5
Textiles	72,454	2.0	125,850	1.6	198,304	1.7	63.5
Clothing and Footwear	106,396	2.9	63,060	0.8	169,456	1.5	37.2
Wood and Wood Prod.	72,940	2.0	23,036	0.3	95,976	0.8	24.0
Paper and Printing	534,973	14.5	830,663	10.4	1,365,636	11.7	60.8
Chemicals	152,359	4.1	2,502,757	31.3	2,655,116	22.7	94.3
Non-metallic Minerals	298,724	8.1	55,518	0.7	354,242	3.0	15.7
Metals and Engineering of which:	653,391	17.7	2,355,017	29.5	3,008,408	25.7	78.3
- Electric & Electronic	116,030	3.1	1,380,990	17.3	1,497,020	12.8	92.2
- Instruments	56,066	1.5	502,072	6.3	558,138	4.8	90.0
- Transport Equipment	145,196	3.9	63,923	0.8	209,119	1.8	30.6
- Other	336,099	9.1	408,032	5.1	744,131	6.4	54.8
Miscellaneous	262,300	7.1	345,315	4.3	607,615	5.2	56.8
Total Manufacturing	3,688,409	100.0	7,995,577	100.0	11,683,986	100.0	68.4

Source: Central Statistics Office (preliminary data)

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Barry showed in a second study the share of all US investments in Ireland of the European total.

**Figure 2.2. US Direct Investment Position in Ireland as Share of European Total<sup>86</sup>**

**Table 11** US direct investment position in Ireland as a share of European total in each sector (%)

	1973	1982	1989	1998	1999	2004
<b>Total manufacturing</b>	1.5	4.1	4.3	5.3	4.5	9.8
Food	3.5*	4.6	3.0	3.5	n.a.	1.7
Chemicals	4.5	3.7	5.9	6.1	6.4	14.9
Primary and fab metals	1.2	2.3	3.9	1.6	1.2	0.4
Industrial machinery and equipment		3.6	3.7	1.4		
machinery					0.9	0.2
Electronic and other electric equipment			8.6	9.9		
Computers and electronic products					5.8	20.5
Electrical equipment and components					4.3	6.8
Transportation equipment		0.2	0.3	0.1	0.8	1.4
Other manufacturing			4.7	9.5		
<b>Services</b>						
Non-financial services				14.8		
Information						48.9
Profession and technical services					10.4	9.0
Finance, banking and insurance			2.0	3.3	1.9	5.5

Source: US BEA.

Notes: \* refers to 1977. Blank cells reflect (i) changes in sectoral classification, or (ii) suppression of the data on Ireland in BEA publications.

<sup>85</sup> From Ruane and Gorg, "Aspects of Foreign Direct Investment in Irish Manufacturing," 39.

<sup>86</sup> Barry, "Foreign Direct Investment and Institutional Co-Evolution in Ireland," 276.

Given Ireland's small labor pool and geographical size, even a share of four of five percent is impressive relative to total European investment. Unsurprisingly, investment is most concentrated in chemicals, electronics, and professional and technical services.

Neil Coe, a Canadian scholar writing on the foreign software manufacturing industry in Ireland in 1997 used the term "embedded," to describe foreign multinational corporations which invested in transfer of knowledge to domestic employees.<sup>87</sup> "Embedded," manufacturing plants utilize large numbers of domestic employees to perform high-skill tasks under a large degree of autonomy. Under these conditions, a host country that crafts policies to attract copious amounts of foreign direct investment, will benefit from a foundation of technological innovation absorbed by the domestic workforce. One concern raised by scholars who specialize in transfer of skills or "spillover effects," is that the technology and/or cultural gaps may be too great for meaningful transfer of knowledge to occur.<sup>88</sup> Ireland's demographics, however, would at first glance be a good fit for this type of foreign direct investment. Irish workers speak English and are highly educated, not to mention Ireland's geographical convenience to large European markets. The evidence to support a phenomenon of transfer of skills between 1992 and 1999, however, is muddled. Coe makes the point that much of Ireland's domestic interaction with foreign multinationals came in the form of supplying inputs to the software manufacturing industry. And while this relationship in it of itself did promote growth in Ireland, Coe believes the input supply chain is "not necessarily [representative of] innovative high-technology industry."<sup>89</sup> Coe's findings showed as early as 1997 that the most desirable functions of the software manufacturing

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<sup>87</sup> Neil Coe, "US Transnationals and the Irish Software Industry: Assessing the Nature, Quality and Stability of a New Wave of Foreign Direct Investment," *European Urban and Regional Studies* 4.3 (1997), 212.

<sup>88</sup> Garrick Blalock and Paul J. Gertler, "Welfare gains from Foreign Direct Investment through technology transfer to local suppliers," *Journal of International Economics* 74 (2008), 404.

<sup>89</sup> Coe, "US Transnationals and the Irish Software Industry: Assessing the Nature, Quality and Stability of a New Wave of Foreign Direct Investment," 224.

industry, namely software development, were still predominantly performed by American employees.<sup>90</sup>

Incorporating this study does not by any means rule out transfer of technology focused knowledge and skills. Domestic industry in Ireland undoubtedly absorbed significant aspects of technology development and manufacturing, especially given the compatible nature of its workforce. However, the benefits of foreign direct investment were likely overstated. Transfer of skills was used as a justification by optimistic economists for reliance on partnerships with foreign multinational corporations. Period Irish economists like Paul Sweeney were guilty, writing that the foundation of economic transformation in Ireland was “investment in that important capital—human beings,” and that people were “empowered at every level of economy and society.”<sup>91</sup> Focus on attracting foreign direct investment from Western European and American technology companies certainly enabled Ireland to reach a comparable level of economic development with its prospective Euro partners. It is less apparent, however, that this investment laid the foundation for sustained, independent technological innovation in absence of a generous tax policy.

Ruane and Gorg, and Coe, as well as more emphatic authors like Sweeney, wrote a narrative of Ireland’s economic growth which emphasized its tax policies, and environment for foreign manufacturing. A second, but equally important aspect of Ireland’s growth leading to 1999, was the increased confidence in Ireland’s long-term economic success and stability because of its upcoming membership in the Eurozone. Ruane and Gorg, include this point in context of their empirical findings, writing, “membership of the European Economic Community

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<sup>90</sup> Ibid., 227.

<sup>91</sup> Sweeney, *Celtic Tiger: Ireland’s Economic Miracle Explained*, 15.

(EEC) provided a major boost to Ireland's attractiveness."<sup>92</sup> A more cohesive interpretation of Ireland's convergence to European Union averages in the 1990s would be that increased confidence in Ireland's economic trustworthiness enabled Ireland's longstanding tax policy to reap reward. The expectation that Ireland would join the Euro enforced important aspects of convergence, most obviously in the form of narrower bond yield spreads, but also the perception that Ireland, like more longstanding European powers was a stable home for long-term investment. Within this more nuanced interpretation of Ireland's economic convergence, foreign direct investment is both an inherent measure of confidence, and a metric to produce confidence.

This phenomenon is best explained by the period newspaper coverage. Terence Brown, author of *The Irish Times: 150 Years of Influence*, notes that the fact that major news outlets outside of Ireland and the United Kingdom were beginning to draw attention to Dublin was a sign of unprecedented optimism in itself. Brown points out that whereas in the past *The New York Times*'s "coverage of Ireland involved only reports of Northern violence," now the newspaper was publishing multiple articles a week on a variety of subjects.<sup>93</sup> That's not to say that all news coverage on Ireland and its economic boom was strictly positive. In a *New York Times* article from May 1997, James Clarity asks the question "Is Irish Celtic 'Tiger' a Kitten?"<sup>94</sup> In the article, he criticizes members of the Oireachtas for failing to recognize the weaknesses of the Irish economy in an effort to take credit its unexpected success. He cites the long-term unemployment rate, wherein over fifty percent of unemployed persons had been without work for over a year. Clarity claims that to continue to promote confidence in the economy, Irish

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<sup>92</sup> Ruane and Gorg, "Aspects of Foreign Direct Investment in Irish Manufacturing Since 1973: Policy and Performance," 43.

<sup>93</sup> Terence Brown, *The Irish Times: 150 Years of Influence* (New York: Bloomsbury Continuum, 2015), 380.

<sup>94</sup> James F. Clarity. "Election Brings 2<sup>nd</sup> Look: Is Irish Economic 'Tiger' a Kitten?" *The New York Times* May 30 1997.

leaders wanted to hide aspects of the Irish economy that had not converged to the standard of the European Community.

Some Irish journalists also suggested that the Celtic Tiger was overstated. Two articles from *The Irish Times* stand out with the titles “Time for Celtic Tiger to be slain”<sup>95</sup> and “Useless fixation with all parts of the Celtic Tiger,”<sup>96</sup> respectively. In the latter, author Oliver O’Connor writes that the metaphor of the ‘Celtic Tiger’ “serves not to clarify an idea, if ever, but to mish and mash what could be useful debate.”<sup>97</sup> Like Clarity writing for the *Times*, O’Connor criticizes the Irish for idolizing the Celtic Tiger as if it were a tangible object, rather than generating ideas of how to use GDP growth as a vehicle for addressing other longstanding challenges. Among news of Ireland’s incredible progress were warnings that the Celtic Tiger phenomenon “bred sloppy thinking, leading to a false sense of success and flawed criticism.”<sup>98</sup>

Charles Kindleberger, an acclaimed scholar on the history of financial crises, incorporates this phenomenon of “false sense of success” into his model of asset bubbles, emphasizing a tendency to over-estimate growth prospects at the Zenith of an economic boom.<sup>99</sup> Kindleberger’s concept of irrational expectations is a useful framework for understanding the expectations for Ireland’s economic performance in the years leading to the launch of the Euro. In the late 1990s, commentators praising the ‘Celtic Tiger’ were not ignorant to the idea that Ireland’s high GDP growth rate was unsustainable, but they emphasized that when the growth rate did peak it would gradually descend to a “soft landing.”<sup>100</sup> Although the Celtic Tiger took its name from the East Asian boom economies of the 1980s, a number of analysts pointed out that

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<sup>95</sup> Oliver O’Connor. “Time for Celtic Tiger to be slain.” *The Irish Times*. January 9 1998.

<sup>96</sup> Oliver O’Connor. “Useless fixation with all parts of the Celtic Tiger,” *The Irish Times*. June 2 2000.

<sup>97</sup> Ibid.

<sup>98</sup> O’Connor. “Time for the Celtic Tiger to be slain.”

<sup>99</sup> Edward J. Kane, “Charles Kindleberger: an impressionist in a minimalist world,” *Atlantic Economic Journal*, 33 no.1 (2005): 1.

<sup>100</sup> “Celtic Tiger,” *Financial Times*, June 21 1999.

“Ireland would not follow Asia’s script,” that of financial crisis following a prolonged economic boom period.<sup>101</sup> This is not to say that these authors did not have valid reasons to justify their predictions, among them, a developed financial sector, favorable demographic trends, and strong domestic demand.<sup>102</sup>

Doubts over the robustness of Ireland’s growth did not deter its European trajectory. However, there were concerns among European officials that Ireland’s 10% tax on manufacturing profits was unsportsmanlike. These concerns were laid out in two documents, the EU “Code of Conduct on Business Taxation” (1997), and “Guidelines on Harmful Preferential Tax Regimes published by the OECD (1998). The Irish government was cognizant of the criticism, and even helped to draft the European Union Report.<sup>103</sup> To appease its European partners Ireland raised its corporate rate to 12.5% in 1998, and extended it to all trading income by all firms, whether they were engaged in manufacturing, services or otherwise.<sup>104</sup> By supporting European Union initiated tax reforms, Ireland

## ***II. Meeting the Maastricht Criteria***

Through the 1990s, Ireland approached the living standards of the European Community, and surpassed its peers in GDP growth, making it a sound candidate for monetary union. Ratification of the Treaty set in motion the economic criteria for adoption of the Euro; prospective members had agreed to meet criteria regarding, inflation, budget deficit and national debt by 1997. Figure 2.3, taken from economist Karl Kahrs evaluation in 2002, shows how each

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<sup>101</sup> Asian Tigers refer to economies of Hong Kong, Singapore, South Korea and Taiwan in the 1990s. Neil A. Martin, “International Trader: Celtic tiger burning bright, Ireland won’t follow Asia’s script,” *Barron’s*, March 1 1999.

<sup>102</sup> “Celtic Tiger,” *Financial Times*, June 21 1999.

<sup>103</sup> Killian, “Where’s the harm in tax competition? Lessons from US multinationals in Ireland,” 1075.

<sup>104</sup> *Ibid.*

of the twelve prospective Eurozone members performed relative to the Maastricht criteria, specifically:

- 1) An inflation rate that did not exceed 1.5% above the average of the three highest performing economies, in this case, not exceeding 2.67%.
- 2) A national budget deficit that did not exceed 3% of Gross Domestic Product.
- 3) National debt that did not exceed 60% of Gross Domestic Product.<sup>105</sup>

### Figure 2.3. Monetary Union Admission Standards 1997

TABLE 1. WHO MET THE EMU ADMISSION STANDARDS AT THE END OF 1996?<sup>1</sup>

INFLATION RATE Percent		BUDGET DEFICIT Percent of GDP		NATIONAL DEBT Percent of GDP	
Finland	1.1	Luxembourg	0.9	Luxembourg	7.8
Sweden	1.1	Denmark	1.4	Britain	56.2
Germany	1.3	Ireland	1.6	France	56.4
Luxembourg	1.4	Netherlands	2.6	Germany	60.8
Netherlands	1.4	Belgium	3.3	Finland	61.3
Austria	1.8	Finland	3.3	Spain	67.8
Belgium	1.9	Sweden	3.9	Denmark	70.2
France	2.1	Germany	4.0	Portugal	71.1
Ireland	2.1	France	4.0	Austria	71.7
Denmark	2.3	Portugal	4.0	Ireland	74.7
Portugal	2.9	Austria	4.3	Netherlands	78.7
Britain	3.0	Spain	4.4	Sweden	78.1
Spain	3.6	Britain	4.6	Greece	110.6
Italy	4.2	Italy	6.6	Italy	123.4
Greece	8.3	Greece	7.9	Belgium	130.6

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Kahrs presents this table as a means of indicating that except for Luxembourg, none of the prospective members of the Eurozone met all three basic economic requirements. In this paper, the table demonstrates that Ireland is was competitive relative to the other prospective members of the Eurozone, including countries which had long been its economic and geopolitical

<sup>105</sup> Kahrs, "Meeting the Maastricht Targets," 46.

<sup>106</sup> From Kahrs, "Meeting the Maastricht Targets."

superiors. From a political perspective, this information gives the impression that Ireland could enter the Eurozone on equal footing with the other members. In the only area, which Ireland fell short in 1997, national debt, it was still far exceeded by tried and true members of the original economic community, Italy and Belgium, ensuring its security within the plan for Euro adoption. Taoiseach Haughey shared this confidence in Ireland's ability to meet the criteria for Euro membership in his 1991 address to the Dail. He stated that,

“[Ireland] is already in a better position than many members States to meet these conditions and intend to continue with the necessary policies to sustain and indeed improve this position over the coming years.”<sup>107</sup>

Ireland, despite its small size and constructive influence, was in political terms, in a comfortable position among its peers leading to the actual adoption of the Euro in 1999.

Media outlets presented a greater variety of opinions on Ireland's suitability for the European Union and the Single Currency. In an editorial for the *Irish Times* from February 3, 1996, just months before the deadline to achieve the Maastricht criteria, Mark Hamilton wrote that Ireland was caught in a “Maastricht Paradox,” wherein Ireland was being upheld as a model contender for monetary union, despite high unemployment and “an economy fueled by EU transfers.”<sup>108</sup> He concludes that “Maastricht madness is ensuring that we track the [Deutsche] mark, at the expense of jobs.”<sup>109</sup> Not unlike the criticisms of James Clarity for the *New York Times* or Oliver O'Connor for *The Irish Times*, on the overstatement of the Celtic Tiger,

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<sup>107</sup> Charles Haughey. “Statement by the Taoiseach, Mr. Charles J. Haughey, T.D., in the Dail Eireann on 12<sup>th</sup> December, 1991, on the European Council in Maastricht.” Provided by the Department of Foreign Affairs, Dublin in *The Intergovernmental Conference on Political Union: Institutional Reforms, New Policies and International Identity of the European Community* ed. Laursen and Vanhoonacker, 500.

<sup>108</sup> EU transfers here refers to the structural funds given to underdeveloped members of the European Union by the Commission to adequately prepare them to join the common currency. Because of the small size of Ireland's economy, it's cohesion funds comprised a significant percentage of national income. Mark Hamilton, “Maastricht Singlemindedness,” *The Irish Times*, February 3 1996.

<sup>109</sup> *Ibid.*



Hamilton expressed a concern that Irish leaders were supporting the single currency at the expense, rather than to the benefit of Ireland itself. And to what end? To be in economic union with a community of nations with which there was little shared memory outside of the official European Community?

### ***III. Optimum Currency Areas and comparisons to U.S. federal system***

Perhaps because of the degree of separation American economists approached the issue of monetary integration and European Union from a far more abstracted perspective. Many of these authors were disciples of the New Classical Macroeconomics School.<sup>110</sup> American economists brought forward more skeptical views on the economy of the European Union, many of which would be echoed by Paul Krugman and the like in the aftermath of sovereign debt crisis. European economists Lars Jonung and Eoin Drea, contextualize the role of American economists in the European Monetary Union debate in a way that is worth restating. They argue that the opinions of American economists on adoption of the Euro are necessary in any comprehensive study, because they were widely read and incorporated into the work of European economists. In more direct terms Jonung and Drea state that “the size and intellectual dominance of the U.S. academic profession,” allow American economists to “set the parameters of academic discussion.”<sup>111</sup> Unsurprisingly, the parameters set were undeniably American.

A common framework used in academic publications on the Euro, was to compare the economic relationships between the members of the European to those of American states. In these studies, suitability for monetary union is measured against the American federal system as

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<sup>110</sup> New Classical Economics, also referred to as New Classical Macroeconomics refers to a school of thought that gained popularity under the initial direction of Robert Lucas and Milton Friedman in the 1970s. The model emphasizes that economic agents always hold ‘rational expectations’ i.e. that they will always maximize their individual benefit or utility. While New Keynesian economists allow for endogenous market failures, the NCM school holds that the market is always at equilibrium (full employment, maximum potential output).

<sup>111</sup> Lars Jonung and Eoin Drea, “It Can’t Happen, It’s a Bad Idea, It Won’t Last: U.S. economists on the EMU and the Euro, 1989-2002,” *A Journal of the American Institute of for Economic Research* 7.1 (2010): 5.

an ideal case. Developed by Robert Mundell in collaboration with other notable American economists, the Optimum Currency Area model is a cost benefit analysis between the cost of lost autonomy in the realm of monetary policy, and the benefits of increased commerce between states that share common currency. More specifically the model stipulates two criteria for countries seeking to enter a common currency: (1) a high degree of factor mobility, or the ability for labor and capital to easily cross national borders, and (2) “country-specific [economic] shocks” are mild and infrequent.<sup>112</sup> In the years leading to full monetary integration in Europe, American economists filled academic journals with theoretical and empirical evidence on the compatibility of the prospective Eurozone states with the Optimum Currency Area criteria. It was also not unusual for the Optimum Currency Area model to be cited as evidence in research sponsored by the European Commission.<sup>113</sup> The empirical findings of two economists, Caporale and Karras, published in 1993 and 1996 respectively, provide clear examples of this academic fashion.

Both papers attempted to make direct comparisons between a hypothetical European monetary union, and the reality of American federal system. Karras drew attention to the second criteria of an Optimum Currency Area, that regional shocks be mild and infrequent. This is essentially true in the United States because it is easy to move between states, and the Federal government can smooth some differences between regions. In the Eurozone Karras found that

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<sup>112</sup> “Country specific shocks” are juxtaposed with “common shocks” which affect all member states. Optimum Currency Area theory suggests that a shared currency will be most beneficial when the relative impact of positive or negative turns in the economy are similar across member countries. Georgios Karras, “Is Europe an Optimum Currency Area? Evidence on the Magnitude and Asymmetry of Common and Country-Specific Shocks in 20 European Countries,” *Journal of Economic Integration* 11.3 (1996), 367.

<sup>113</sup> Caporale specifically cites “One Market, One Money,” (1990) published by the European Commission. The paper evaluates European Monetary Union within the Optimum Currency Area framework, developed by Robert Mandell. Guglielmo M. Caporale, “Is Europe an optimum currency area? Symmetric versus asymmetric shocks in the EC,” *National Institute for Economic Review* (1993), 95.

the volatility of country-specific shocks varied greatly between prospective members.<sup>114</sup> More importantly, for eighteen of the twenty countries included in the study, country-specific shocks, were more volatile than common shocks, France and Belgium being the only exceptions.<sup>115</sup> Not only were regional shocks historically more frequent in Europe, than in United States, but they varied greatly in severity. Karras concluded empirical deviation from the Optimum Currency Area model made monetary integration undesirable, despite potential political or credibility gains for individual members, and the European Community at large.<sup>116</sup> Caporale's findings were largely in agreement with Karras, also expressed concern with empirical evidence that suggested "asymmetric shocks account for a sizeable percentage of GDP fluctuations in the EC."<sup>117</sup> Unlike Karras, Caporale did not suggest that monetary union be abandoned altogether, but that Euro membership be restricted member states that are more economically and culturally homogenous. This compromise would allow for a shared currency area wherein there is greater factor mobility between member states, with less variation in country-specific shocks.<sup>118</sup> This solution resembles a system of fiscal integration that resembled that of the United States.

Other American economists compared the United States and the European member states directly. Barry Eichengreen for example published empirical findings in 1990 that suggested that labor mobility was greater between the American states than between European Union members.<sup>119</sup> Even in cases where American economists were not making comparisons to the

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<sup>114</sup> In this study, the magnitude of economic shock is measured as a percentage change in Gross Domestic Product over a set time period. Ibid, 374-375.

<sup>115</sup> All countries included in the study, with the exception of the United Kingdom, Turkey and Switzerland, are a part of the present-day Eurozone.

<sup>116</sup> Ibid., 378.

<sup>117</sup> Caporale, "Is Europe an Optimum Currency Area? Symmetric versus asymmetric shocks in the EC," 100.

<sup>118</sup> The "multi-speed" approach to European monetary integration was first proposed by Dornbusch et al (1990). Even after the Maastricht Treaty was signed in 1992, some American economists continued to expect that the Euro would be implemented through several stages of membership. See summary in Jonung and Drea, "It Can't Happen, It's a Bad Idea, It Won't Last: U.S. Economists on the EMU and the Euro," 14.

<sup>119</sup> Ibid, 16.

United States, the Optimum Currency Area criteria that they were using reflected economic conditions in the United States. The American federal system, in addition to a common set of cultural values and language, make the United States an example of a currency union with high factor mobility and mild member-specific shocks. Jonung and Drea tease out this critique through their review of American economists, suggesting that using the Optimum Currency Area model is an implicit comparison to the American system.

The compatibility of industries and business cycles between members of the Eurozone was, and remains difficult to assess. Even recent academic texts do not present a clear argument on how similar state economies must be to function well in monetary union. Paul Krugman argued in 1991 that a common currency would lead countries to be less compatible, because free trade would make it advantageous to concentrate industries countries. This scenario would lead to more asymmetry than in the starting scenario.<sup>120</sup> A potential flaw of this argument is that it assumes that manufacturing is the main source of economic output. Services have become an increasingly significant component of European economies since the 1990s; this transition has been especially relevant in Ireland as it has entered “high tech” industries. Because services are not reliant on economies of scale, there is no profit incentive to concentrate in one region, unless other advantages (i.e. corporate tax reduction) are available.<sup>121</sup> The application of the Optimum Currency Area model in the 1990s may have benefited from more attention to the industries that fueled Europe’s economy.

Despite its biases, the Optimum Currency Area approach pointed to areas of weakness within the prospective Eurozone. Some of these weaknesses became particularly relevant after the financial market crash, and sovereign debt crises experienced by peripheral economies. The

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<sup>120</sup> Paul De Grauwe, *Economics of Monetary Union* (Oxford: Oxford University Press, 2009), 24.

<sup>121</sup> *Ibid.*, 27.

problem of asymmetric country-specific shocks was, and remains a significant obstacle to Ireland's Euro membership. Because of its close ties with Great Britain, and the number of business arrangements with the United States, Ireland is less synchronized with the business cycle of the European Union than most other members. That being said, the Optimum Currency Area model in several ways neglects the peculiarities of the European project. Peter Kenen was among the minority of economists to raise this concern before adoption of the Euro in 1999. The Optimum Currency Approach as employed by American economists in this period operated under the assumption that the alternative to a common currency was a unique free floating currency in every state. Kenen suggested in a paper published in 1998, that this assumption of a "nonexistent ideal system of flexible exchange rates," biased American economists, resulting in unnecessary pessimism towards European Monetary Union. The fact of the matter, as Kenan emphasized, was that a system of completely flexible exchange rates within the European Union had not been a reality for some time. Exchange rates among European Union countries had been banded to varying degrees since 1979; to revert to a system of free floating rates would be a dramatic change in precedent, and likely a major political obstacle.

This discrepancy between the choices laid out by American economists and the reality of the policy decision to be made by European leaders rings even more true for Ireland. Kennedy notes in his study on Ireland's economic convergence that "Ireland has had longer experience than most countries of being part of a monetary and/or economic union with a larger, richer area."<sup>122</sup> Ireland's monetary policy before becoming a part of the Exchange Rate Mechanism in 1979, was pegged to that of the United Kingdom. For Ireland to pursue a free-floating currency would under no circumstances be a return to normalcy. If anything, participation in the Exchange

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<sup>122</sup> Kennedy, "Real Convergence, The European Community and Ireland," 228.

Rate Mechanism, and peg to larger European economies through the Euro, was an extension of a long-term pattern of constructing monetary policy around more economically robust neighbors.

This observed continuity of policy of course, does not minimize the ambiguities present in the Irish economy during the Celtic Tiger period, but it does suggest some reasons why Ireland's leaders would support Euro membership, despite known weaknesses. The Eurozone signaled a next-step in a decades' long economic and political trajectory to create distance from the United Kingdom, and grow closer with Europe. In a later reflection from 2010 on the biases of American economists under the Optimum Currency Areas framework, Kenen writes:

“To say, as many Americans did, that EMU was a political project without adequate economic justification, was to ignore the European consensus in favor of closer economic integration.”<sup>123</sup>

This political climate made it less likely that the European Commission would wait until all prospective members met the Maastricht economic requirements, or that a multi-stage implementation would occur to include less developed members more gradually.

#### ***IV. Loyalty to an Idea***<sup>124</sup>

Preparing to adopt the Euro in 1999, Ireland did not meet all the required targets stipulated by the Maastricht Treaty, nor did it always align to the economic climates of other European members. Yet Irish leaders, and the European Commission were optimistic that Ireland would be a sound contributor to the Eurozone. Dublin's dedication the European Economic Community in itself was a solid argument for its inclusion in the single currency.

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<sup>123</sup> Peter Kenan, “There Was No Analytical Alternative to the Theory of Optimum Currency Areas,” *A Journal of the American Institute for Economic Research* 7.1 (2010), 74.

<sup>124</sup> Sara Dillon remarks in the introduction to her paper, “It is fair to say that Ireland's approach has lacked the kind of *loyalty to an idea* that has been characteristic of the EU from its founding.” She is referring to the idea of preserving peace through economic integration. Sara Dillon, “Anglo-Saxon/Celtic/Global: The Tax Driven Tale of Ireland in the European Union,” *North Carolina Journal of International Law and Commercial Regulation* 36 (2010), 2.

One ingredient missing from Ireland's commitment to the European project is participation in the Second World War. Irish historian David Begg captured the sentiment from the Irish perspective well in 2004:

"We don't have the same memories of war that people in other European countries have. Yet many thousands of Irish men fought and died on the European main land during the two world wars of the last century. The peculiar circumstances of our history have caused us to disown that experience and it has not been without cost in terms of our maturity as a nation."<sup>125</sup>

This statement expressed concern that Ireland was adopting a political strategy to adopt a shared memory of wars which it was not involved, at the expense of its own history. This concern was taken by others, poignantly so in an *Irish Times* editorial from 2000. In the article, author Claire Oaks argues that the phrase "Celtic Tiger," mocks, rather than celebrates values of the Celtic tradition.<sup>126</sup> She wrote, "If Ireland is to prosper not just as an economy but as a people perhaps we need to relearn something of what it really means to be Celtic."<sup>127</sup> Both statements speak to the quote on quote "political purity," of Ireland's objective in seeking further integration with the European Community. The concern was two sided in nature: Ireland did not share the memory of violence that bound the other members' loyalty, and the other members were not particularly interested in the Ireland's unique geopolitical history. Patrick Keatinge (need to qualify), expressed this statement shortly after the meeting of the European Council in Maastricht: "...Ireland's detachment from the 'foundation trauma' of European integration – World War II – has done little to encourage appreciation of this political motivation."<sup>128</sup> Whether a new a new

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<sup>125</sup> Begg, "People, Work and Social Change," in *Ireland and the European Union* ed. Hourihane, 41.

<sup>126</sup> Claire Oaks, "'Celtic' Tiger?" *The Irish Times*, May 25 2000.

<sup>127</sup> Ibid.

<sup>128</sup> Patrick Keatinge, "From Community to Union," in *Maastricht and Ireland: What the Treaty means* ed. Patrick Keatinge (Dublin: Institute of European Affairs, 1992), 4.

political loyalty developed in Ireland's twenty years of EEC membership prior to Maastricht is a separate, but fair question.

Sara Dillon, Law Professor at Suffolk University, in an article published in 2010, accused the Irish government of seeking membership in the European Community strictly for its own economic gain. In her words, "Ireland treated its access to the European market, and the extremely low tax environment for U.S.-based multinationals, as a kind of get-rich-quick scheme."<sup>129</sup> Dillon's language serves as a null hypothesis for the question of Irish loyalty to the common objectives of the European Community, an extreme situation in which Dublin held no affinity towards the European Union outside of its foreseen economic benefit. One of the more accusatory passages from the article centers on Ireland's low corporate tax rate, and grant incentives for foreign multinational corporations. Dillon writes:

"While the European taxpayer was providing money for Irish infrastructural development, U.S. corporations were being assisted by Irish policies, even while these competitors of European corporations."<sup>130</sup>

Dillon is suggesting that Ireland blatantly knowingly misused its structural funding to lure American foreign direct investment, at the demise of European business. She does not elaborate on what the funds should alternatively be targeted towards, but we can conjecture that she believes that they are intended for promotion of domestic industry and services.

Dillon is not the only commentator to adopt a cynical view of the role of structural funds in Ireland. Tony Judt makes a similar backhanded comment on the subject in *Post War*, this time, targeting the wealthier member of the community:

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<sup>129</sup> Dillon, "Anglo-Saxon/Celtic/Global: The Tax-Driven Tale of Ireland in the European Union," 3.

<sup>130</sup> *Ibid.* 29.



“Jacques Delors, the Commission President, all but bribed the finance ministers of Greece, Spain, Portugal and Ireland, promising large increases in EU structural funds in return for their signature on the Treaty.”<sup>131</sup>

Judt suggests here that delegations from countries like Germany and France were aware of the frailty of Ireland’s loyalties, among other potential members, and made them an offer that they could not refuse by means of Cohesion Funds. More moderate authors, also recognize the importance of increased structural funding as a result of the Single European Act and commitment to joining the European Union, but consider it in a more complex political landscape. Laffan and O’Mahony held this opinion in their 2008 volume on Ireland and the European Union, adding that these structural funds further benefited Irish citizens because the Treaty required the funds to be matched by the Irish government.<sup>132</sup>

Ruane and Gorg provide empirical evidence on the nature of Irish inward foreign direct investment that sheds light on Dillon’s proposition. In a report published in June 1999, they took particular interest in whether American multinational corporations saw the European Union as a single market, or distinct countries to strategically choose between.<sup>133</sup> Figure 2.4 is taken from their article and shows the distribution of American capital expenditures in manufacturing across members of the European Union. The distribution metric was adjusted for size so that 1.0 represents the expected amount of capital expenditure given the country’s size; below one indicates a level lower than expected, and above one, higher than expected.

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<sup>131</sup>Judt, *Post War: A History of Europe Since 1945*, 715.

<sup>132</sup> Laffan and O’Mahony, *Ireland and the European Union*, 42.

<sup>133</sup> Holger Gorg and Frances Ruane, “US Investment in EU Member Countries: The Internal Market and Sectoral Specialization,” *Journal of Common Market Studies* 37.2 (1999), 334.

## Figure 2.4: Distribution of US capital expenditures in manufacturing across EU

Table 2: Scale-adjusted Distribution of US Capital Expenditures in Manufacturing across EU Countries, 1983–95 (Share of US Capital Expenditures in EU/Share of GDP in EU)

Country	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
BLEU	1.5	1.5	1.6	2.3	2.3	2.1	2.3	2.0	1.8	1.8	1.7	2.1	1.8
France	0.8	0.8	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.7	0.6	0.7
Germany	1.1	1.1	1.3	1.2	0.9	1.0	1.0	1.2	1.1	1.1	1.0	1.0	0.9
Italy	0.5	0.4	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.6
Netherlands	1.3	1.5	1.6	1.4	1.5	1.6	1.6	1.7	1.8	1.5	1.5	1.4	1.2
UK	1.5	1.5	1.7	1.5	1.6	1.5	1.5	1.9	1.7	1.5	1.6	1.7	1.6
Core	1.0	1.0	1.1	1.1	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0
Denmark	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
Greece	0.2	0.2	0.0	0.1	0.2	0.2	0.1	0.0	0.2	0.2	0.2	0.3	0.1
Ireland	3.5	4.7	3.9	3.6	3.7	4.0	3.6	3.9	4.0	6.3	7.4	7.4	6.3
Portugal	0.6	0.5	0.7	0.3	0.6	0.7	0.5	0.4	0.5	0.5	0.5	0.4	0.5
Spain	0.9	0.6	0.5	0.5	0.8	0.8	0.8	0.8	0.6	0.8	0.9	0.9	0.8
Periphery	0.8	0.8	0.4	0.6	0.8	0.8	0.8	0.5	0.7	0.9	1.2	1.1	1.0
EU 12	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Source: Estimates derived from US Department of Commerce data and GDP data from Commission (1996). 134

While both the core and peripheral country groups have the expected amount of capital expenditure, 1.0 by the end of the time series, it is obvious that Ireland is an anomaly in terms of inflow of capital expenditure. Lacking other empirical measures, this might support Dillon’s argument. Ireland now was receiving significant amounts of Structural and Cohesion funds from the European Union, while also attracting six to seven times the expected amount of capital expenditure given its size and other economic factors. There is no explicit implication, however, that attracting capital expenditure from American companies was necessarily detrimental to European multinational corporations. There was no stipulation that German or French corporations could not also take advantage of Ireland’s generous policy.

This counterpoint is better explicated by Ruane and Gorgs’ 1996 article on sectoral, and national distribution of foreign direct investment in Ireland. Figure 2.5 outlines the share of total firms and employment (in manufacturing sectors) in Ireland by country from 1973 to 1995.

<sup>134</sup> Ibid. 339. The scaled-distribution method takes into account that “larger countries will always attract a higher level of foreign investment than smaller countries.” The distribution metric is calculated by multiplying the market share of the country in terms of US investment by the country’s share of EU GDP. Ibid. 338.

**Figure 2.5: Share of total firms and employment by country**

**Table 3.1 Number of firms and total employment by nationality, 1973-1995**

Nationality	1973				1995			
	Firms	% of total	Employment	% of total	Firms	% of total	Employment	% of total
Ireland	4,123	86.8	152,553	66.6	5,307	86.7	117,826	55.2
UK	312	6.6	32,227	14.1	137	2.2	12,260	5.7
Germany	63	1.3	5,623	2.5	125	2.0	9,799	4.6
Other EU	115	2.4	18,119	7.9	177	2.9	13,989	6.6
US	116	2.4	17,793	7.8	319	5.2	52,047	24.4
Other non-EU	21	0.4	2,894	1.3	56	0.9	7,611	3.6
Total	627	13.2	76,656	33.4	814	13.3	95,706	44.8
Foreign Total	4,750	100.0	229,209	100.0	6,121	100.0	213,532	100.0

Source: Own estimates derived from Forfás Employment Survey data bank

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Perhaps the most interesting aspect of this table is the significant decrease in the proportion of firms and employment held by the United Kingdom over the time series. German shares of both firms and employment both increased, and the European Union as a whole captured a larger percentage of firms. anything, Table 4 indicates a trade for European influence over British influence.

A couple additional counterarguments to Dillon’s position are important to mention here. The first is presented by Laffan, on the nature of Irish involvement in the efforts of the European Community. She points to the flock of Irish-interest organizations to Brussels from 1973 onwards, including employer’s organizations, and farming groups, which set up offices in the capital of the European Community.<sup>136</sup> She also notes the accession of numerous Irish trade

<sup>135</sup> Taken from Gorg and Ruane, “Aspects of Foreign Direct Investment in Irish Manufacturing Since 1973: Policy and Performance,” 47.

<sup>136</sup> Brigid Laffan, “Irish Politics and European Politics,” in *Ireland and the European Union: The First 30 Years, 1973-1992* ed. Jim Hourihane (Dublin: The Lilliput Press, Ltd., 2004), 50.

unions to the European Trade Union Confederation.<sup>137</sup> It's possible, and likely, that these organizations made effort to engage with the European Community because of the potential economic benefits. However, the collaboration does signal a new shared history being formed in the twenty years between Ireland accession to the European Economic Community, and its ratification of the Maastricht Treaty.

Garret FitzGerald, former Taoiseach, introduces another compelling point in an essay in the same volume. He reminds us that the more pressing concern at the time of Ireland's accession to the European Community was the availability of significantly higher price levels for agricultural products.<sup>138</sup> Ireland's predominant agricultural sector had suffered at the hand of artificially depressed British food prices, which they used to secure a more competitive advantage for their manufacturing exports.<sup>139</sup> FitzGerald remarks that it is unsurprising that Ireland would want to join a Community alongside Great Britain, in which higher agricultural prices would be secured, corporate tax policy notwithstanding.<sup>140</sup> This observation introduces a larger theme of Irish membership in the European Union which has not yet been given much attention—that Ireland's taste for Europe is reflective of a *distaste* for the United Kingdom. There is a large aspect of Ireland's loyalty to European integration that can be accounted for by considering Dublin's desire to assert increasing independence from its former colonizer.

Dillon, too acknowledges the impact of Irish-British tension in Ireland's political calculation. She writes that "Ireland was eager to be airlifted out of the British sphere of influence,"<sup>141</sup> fueled by "a determination to climb out of the British shadow by playing in a

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<sup>137</sup> Ibid.

<sup>138</sup> Garret FitzGerald, "The Economics of EU Membership," in *Ireland and the European Union: The First 30 Years, 1973-1992* ed. Jim Hourihane (Dublin: The Lilliput Press, Ltd., 2004), 67.

<sup>139</sup> Ibid.

<sup>140</sup> Ibid. 68, 70.

<sup>141</sup> Dillon, "Anglo-Saxon/Celtic/Global: Tax-Driven tale of Ireland in the European Union," 22.

bigger league.”<sup>142</sup> Apathy of the core European Community members towards Great Britain, made the political environment even more suitable to this goal.<sup>143</sup> Bertie Ahern, Taoiseach from 1997-2008, wrote more poetically of Ireland’s dependence on Europe as a means of preserving independence:

“For much of its history, Europe, in Irish eyes, was our best hope of securing assistance in establishing out independence...during the time of the penal law elements of our national heritage were preserved the Irish colleges scattered across the continent...In every century prior to our independence, European political ideas and models, be they the French Revolution, the Young Italy movement, or the nationalist aspirations within the dual Austro-Hungarian monarchy, provided hope and inspiration to advocates of Irish freedom.”<sup>144</sup>

Despite not sharing a memory of warfare, there is certainly an association between “European values,” and Irish independence. Somewhat ironically limited sovereignty under the supranational dictate of the European Union and single currency may be viewed as a means of preserving sovereignty relative to the United Kingdom.

Sara Dillon’s rhetoric is compelling because she explicitly states a suspicion regarding Ireland’s membership in the European Community--that one is not like the others. Nonetheless, Ireland deserves credit for its own unique and complex history with the core powers of Europe, by means of prolonged cooperation, and preservation of independence. The position that “the concepts of obligation and cooperation,” were “psychologically cost-free” for Ireland, is oversimplified, and discounts the value of the twenty years Ireland spent as a member of the European Economic Community before ratifying Maastricht, and the nearly 30 years it has

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<sup>142</sup> Ibid. 34.

<sup>143</sup> Ibid.

<sup>144</sup> Bertie Ahern, “Ireland and Europe: Embracing Change,” in *Ireland and the European Union: The First 30 Years, 1973-1992* ed. Jim Hourihane (Dublin: The Lilliput Press, Ltd., 2004), 67.

devoted since.<sup>145</sup> The fact that Ireland's history with the European Community is markedly different than most other members is not unproblematic, but there is also a loyalty between the two parties that cannot easily be severed.

### ***V. Chasing the Tiger's Tail***<sup>146</sup>

A last point of consideration for this chapter is strands of discontent on European Union and single currency within the Irish population. Having set a precedent of popular referendum in 1973, and 1992, changes in public opinion matter a great deal in the context of more recent events. Although sentiment towards the Euro and EU membership were generally positive, and noncontroversial in the 1990s, some grievances were beginning to come forward that remain relevant today. In *The Celtic Tiger: The myth of social partnership in Ireland*, Kieran Allen of University College Dublin, is not so interested in the strategic objectives of the Irish government in acquiescing to further economic integration with Europe, but in the true outcomes for the Irish labor force, which he perceives to be insufficient. In his own more succinct words, "Ireland was supposed to be different."<sup>147</sup> His argument claims that the Celtic Tiger, and success through membership of the European Union and single currency, has produced "a discontented majority."<sup>148</sup> This proposition does not align with what we know of the preferences of the Irish electorate, based on their votes both to join the Economic Community, and the European Union in 1992. However, Allen does raise a principal issue of inequality; it's plausible that the initially wealthier segments of Irish society gained significantly more benefit from the economic and political innovations of the Celtic Tiger period. He best illustrated this point by referring to the

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<sup>145</sup> Dillon, "Anglo-Saxon/Celtic/Global: The Tax-Driven Tale of Ireland in the European Union," 36.

<sup>146</sup> The title of a Culture feature in *The Irish Times* on segments of the Irish population that were left out of the Celtic Tiger boom. The title is a play on the original phrase, "catch a Tiger by the tail." Brian Nolan, "Chasing the Tiger's Tail," *The Irish Times*, April 24 1997.

<sup>147</sup> Kieran Allen, *The Celtic Tiger: The myth of social partnership in Ireland* (New York: St. Martin's Press, Inc., 1998), 1.

<sup>148</sup> *Ibid.* 5.

percentage of Gross Domestic Product spent on private consumption, which fell some seven percent from 1987 to 1997, from 59.3 percent to 52.2 percent of GDP.<sup>149</sup> For an economy reaching unprecedented levels of economic growth, one would expect that this number would increase, as higher wages lead to greater private consumption. Kieran believed this trend occurred for two reasons, the first being that transfer-pricing inflated the GDP metric to begin with. Second, a more importantly, it was his opinion that the ordinary workforce held a declining share of the economy, even while on paper, Ireland was more successful than ever.<sup>150</sup>

While Kieran's conviction did not have much influence on the political mood of the Celtic Tiger period, it does set the tone for political discontent that has shown itself more prominently in recent years. The Maastricht Treaty, at its inception seemed like it might be the Zenith of European integration, leading to full economic, and subsequent political cohesion among the European Community. Scholar Brendan Halligan went so far in early 1992 as to suggest that Maastricht would be the last step in Ireland's complete integration with Europe, writing:

“Finally we must consider the question of whether this is the last opportunity for a referendum before the disappearance of the twelve nation states and the creation of a European Federal State”<sup>151</sup>

This has not proven to be the case. Recent events, including, but not limited to, sovereign debt crisis, scrutiny over corporate tax policy, and British exit from the European Union, have made Kieran's criticism even more relevant as Ireland's go-to strategy of European Integration, and tax incentives.

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<sup>149</sup> Ibid. 68.

<sup>150</sup> Ibid.

<sup>151</sup> Brendan Halligan, “Issues,” in *Maastricht and Ireland: What the Treaty Means* ed. Patrick Keatinge (Dublin: Institute of European Affairs, 1992), 107.

Ireland's economy following the publication of Kieran's book in 1998 was characterized by continued increases in foreign direct investment, especially in "high tech" sectors. Industrial development was accompanied by expansion of the financial sector, notably, Anglo Irish Bank, a newcomer to the Irish banking system. Irish banks were fueled by membership in the European Union, and Eurozone, and began to approve more ambitious loans.<sup>152</sup> Property prices rose dramatically, and construction became an important economic sector so much so that it became an area of study in secondary schools and universities.<sup>153</sup> The property market was the first segment of the Irish economy to show significant distress in 2007, followed shortly by declining share prices for Ireland's major banks. The third chapter begins in the fall of 2008, as the culminating factors of financial crisis began to manifest.

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<sup>152</sup> Stanford economics professor, John Taylor, found a positive correlation between the interest rate reduction of a Eurozone member (from its pre-Euro rate), and its increase in construction activity through 2006. Cited in *Cormac Lucy, Plan B: How Leaving the Euro Can Save Ireland* (Dublin: Gill & Macmillan, 2014), 30.

<sup>153</sup> Keelin Lahy and Pat Phelan, "A review of Technology Education in Ireland; a changing technological environment promoting design activity," *International Journal of Technology Design Education* 24 (2014).



## CHAPTER THREE

### FALSE MARKETS DO NOT LAST<sup>154</sup>



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It wasn't until November 2010 that the Irish government, and its citizens, had to truly reckon with the reality of economic collapse. Dublin guaranteed the debts of Anglo-Irish Bank, Allied Irish Banks and Bank of Ireland two years before, but it wasn't immediately apparent that the government would not be able to service the debt obligations for the burden.<sup>156</sup> At the time, the 2008 banking guarantee was received as a smart preventative measure by the Irish government, and there was a small uptake in deposits.<sup>157</sup> Donovan and Murphy wrote that the banking guarantee was made on the faulty assumption that Irish banks might face liquidity

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<sup>154</sup> RTE (Ireland's National Television and Radio Broadcaster) reported Michael Noonan, then Governor of the Central Bank of Ireland, making this statement "False markets do not last," in an article published in April of 1999. The statement reflects early concern over a possible Irish real estate bubble fueled by overextension of credit. Lucey, *Plan B: How Leaving the Euro Can Save Ireland*, 32.

<sup>155</sup> Kipper Williams, "Kipper Williams on Apple's tax bill," Illustration, *The Guardian*, August 30 2016. From <https://www.theguardian.com/business/picture/2016/aug/30/kipper-williams-on-apple-tax-bill-ireland-cartoon> (accessed April 17 2017).

<sup>156</sup> Bank of Ireland is a commercial, and not to be confused with the Central Bank of Ireland. The banking guarantee also covered Education Building Society, Irish Life & Permanent and Irish Nationwide Building Society. Michael Lewis, "When Irish Eyes are Crying," *Vanity Fair*, March 1 2011.

<sup>157</sup> Donovan and Murphy, *The Fall of the Celtic Tiger: Ireland & the Euro Debt Crisis*, 222.

problems, but were still fundamentally solvent.<sup>158</sup> This assumption was founded on speculation that Irish property prices would fall gradually without a significant economic shock.

The global economic climate was not so optimistic. Lehman Brothers filed for bankruptcy on September 15, 2008, and Bear Stearns was bought by J.P. Morgan in February for just \$2 per share.<sup>159</sup> Dutch bank, Fortis, received an emergency capital injection from the governments of Belgium, Luxembourg and The Netherlands.<sup>160</sup> Banks and building societies in Germany, England, and Iceland came under varying degrees of distress. In retrospect, all signs pointed in the direction of a property market and banking system collapse.

### ***I. Crisis of Confidence***

Ireland's economy ailed for two years before the climax of its sovereign debt crisis. Spring of 2008 saw dramatic layoffs in the construction industry, as individuals and corporations backed out of ambitious projects. Longtime American corporate investors, including Pfizer, Proctor & Gamble, and Allergan also began firing local workers in manufacturing.<sup>161</sup> Bernie Ahearn, minister of Finance, admitted in a statement in March that decreases in Irish competitiveness in most industries had been cloaked by a construction and housing boom. He quipped, "We are now seeing the emperor has no clothes."<sup>162</sup> However, pessimism was not a universal attitude this early on. Michael Flatley, celebrity Irish step dancer and "Lord of the Dance," continued performing his evening length work, *Celtic Tiger*, for captivated audiences. *The Irish Times* reported a speech he gave at one such performance: "I say no. I say this Celtic

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<sup>158</sup> Ibid, 178.

<sup>159</sup> For detailed reading on the US subprime mortgage crisis: Engel and McCoy, *The Subprime Virus: Reckless Credit, Regulatory Failure, and Next Steps* (New York: OUP USA, 2011).

<sup>160</sup> September 28-29, 2008. Ibid, 190.

<sup>161</sup> Kerry Capell, "Ireland's Luck is Running Out," *Spiegel Online*, March 19 2008.

<sup>162</sup> Ibid.

Tiger is not dead. This is not the end. This is only the beginning. It's only dead if we believe it's dead. It's only if our press keep writing it's dead over and over."<sup>163</sup>

Flatley is no financier, but his words fit the language of economists who specialize in speculative bubbles like the property boom in Ireland. *Perception is reality*, that is, until it spirals out of control. Princeton economists Carmen Reinhart and Kenneth Rogoff have their own term for it, the "This Time is Different Syndrome" where economic conditions are subject to the surrounding level of confidence, which by nature is precarious and fickle.<sup>164</sup> Reinhart and Rogoff elaborate on this syndrome with dramatic prose:

"Technology has changed, the height of humans have changed, and fashions have changed. Yet the ability of governments and investors to delude themselves, giving rise to periodic bouts of euphoria that usually ends in tears, seems to have remained a constant."<sup>165</sup>

Ireland's economic euphoria certainly ended in tears—a crash in real-estate prices, insolvency of the banking system, and eventually inability to service its foreign debt coupled with harsh austerity measures.<sup>166</sup> Similar to the United States, there were only a handful of individuals before 2007 who believed a banking, or fiscal crisis was impending. Morgan Kelley, economics professor at University College Dublin, was a kind of Michael Burry for Ireland, taking issue with the extent which construction had consumed employment and GDP, at 20% and 25% respectively.<sup>167</sup> Kelley penned several articles for the *Irish Times*, but they were rebuffed or

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<sup>163</sup> "Save the tiger," *The Irish Times*, November 27 2007.

<sup>164</sup> Donal and Murphy in *Fall of the Celtic Tiger* rely on Reinhart and Rogoff, among other American economists, namely Hyman Minsky and Charles Kindleberger, in the development of their argument that over-confidence in the Celtic Tiger boom led oversights of certain weaknesses in the Irish economy. Carmen M. Reinhart and Kenneth S. Rogoff, *This Time is Different: Eight Centuries of Financial Folly* (Princeton University Press, 2009).

<sup>165</sup> *Ibid.*, 290.

<sup>166</sup> Donovan and Murphy, *Fall of the Celtic Tiger*, 59-60.

<sup>167</sup> Michael Burry used the fund he founded, Scion Capital, to take a short position on U.S. mortgage backed securities, thinking correctly that the risk of many of the underlying loans had been severely understated. He has been popularized in American culture through Michael Lewis's *The Big Short*, and its movie adaptation. It is fitting that Lewis took interest in Morgan Kelley in the Irish context, authoring an extensive piece in *Vanity Fair*. Lewis, "When Irish Eyes Are Crying."

ignored. An article he submitted to the *Irish Independent* was altogether rejected for its “offensive” nature.<sup>168</sup> “Talking down the economy,” was unacceptable in a property market characterized by increasing momentum and elevated expectations.<sup>169</sup>

This type of response is not surprising given the deep-set belief held by many that Ireland was still a fundamentally healthy and growing economy, despite mounting evidence that its largest banks were insolvent. Due to staffing cuts, and prioritization of riskier economies the IMF did not conduct a consultation visit for Ireland in 2008 like it had the five years prior.<sup>170</sup> Well into 2008, executives of Anglo, Allied Irish and Bank of Ireland continued to buy shares in their own companies and pay out dividends.<sup>171</sup> 2007 and much of 2008 were remarkably business as usual considering what was to come. In 2007, Anglo-Irish Bank was named the “Best Bank in the World,” in a ranking by consulting firm Oliver Wyman.<sup>172</sup> By fall of the next year, Anglo would be one of the most villainized actors in the financial crisis, after the Irish government made a blind guarantee on its debt at the tax payer’s expense. Not only was there a dramatic change in circumstance, but a change in attitude was now unavoidable. Beliefs on the Irish economy adopted in the 1990s proved to be stubborn having aggressively circulated for upwards of fifteen years. But by fall of 2008 pessimism had finally begun to creep in, and by 2010, it was the new doctrine. Ireland’s economic miracle ended in high unemployment, unsustainable debt and lost credibility, with a lasting impact on its role within the European community.

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<sup>168</sup> Ibid.

<sup>169</sup> Simon Carswell, *Anglo Republic: Inside the Bank that Broke Ireland* (London: Penguin Books 2012), 118.

<sup>170</sup> Donovan and Murphy, *Fall of the Celtic Tiger*, 292.

<sup>171</sup> Lewis, “When Irish Eyes Are Crying.”

<sup>172</sup> Simon Carswell, *Anglo Republic: Inside the Bank that Broke Ireland* (London: Penguin Books, 2012), 97.

## *II. Euro Pessimism*

After the fiscal crisis and subsequent bailout, critics have argued that it was the single currency that enabled Ireland's economic destruction, asking questions like, "Was it a coincidence that Ireland's economic fundamentals began to deteriorate when Ireland joined the Euro area?"<sup>173</sup> University College Dublin professor Cormac Lucey took this view in his 2014 book, *Plan B: How Leaving the Euro Can Save Ireland*. He admits that there were many domestic errors made on the part of Irish banks and government officials, but that the main culprit was the country's adoption of the Euro.<sup>174</sup>

Lucey's narrative of Ireland's sovereign debt crisis mirrors the coverage of other Euro governments who received Troika bailouts. The Euro brought a false sense of security to economies plagued by risky fundamentals—Portugal, Ireland, Greece and Spain (abbreviated PIGS). An environment of significantly lower interest rates than any of these nations had previously enjoyed became one of gluttony with all its accompanying sins—over-borrowing, over-leveraging, and over-spending across public and private sectors. Contagion from the American mortgage backed security (MBB) crisis ended a period of financial folly. At this point PIGS's public deficit rapidly increased to cover welfare expenditures and bail out the banking sector which resulted in the accumulation of increasingly large government debt.<sup>175</sup> These governments were offered bailout packages by the Troika, under the condition of implementing strict austerity measures to reduce their current deficits and eventually debt.

The perception of lower risk in peripheral economies afforded by monetary union was arguably at odds with the reality of European fiscal policy. Absence of fiscal union at the level of

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<sup>173</sup> Thorhallsson and Kirby, "Financial Crises in Iceland and Ireland: Does European Union and Euro Membership Matter?" 826.

<sup>174</sup> Cormac Lucey, *Plan B: How Leaving the Euro Can Save Ireland* (Dublin: Gill & MacMillan, 2014), 44.

<sup>175</sup> Paul Krugman, "Can Europe Be Saved," *New York Times*, January 12 2011.

the European Union left members of the Eurozone still responsible for their own debts, even as peripheral governments borrowed at significantly lower rates. The tale of the Euro Crisis took shape: Greek, Irish, Spanish and Portuguese debts were always only as safe as the fiscal and regulatory policies of their respective governments, a fact that a single European currency could not rectify. At home and across the Atlantic, economists and journalists alike molded European Monetary Union as a provocative, but failed, monetary experiment. Among the loudest dissenters was Paul Krugman, long-time op-ed contributor for *The New York Times*. In 2011-2012, Krugman published a series of aggressive editorials under titles such as “The Road to Economic Crisis is Paved with Euros,”<sup>176</sup> “ECB Death Wish,”<sup>177</sup> “Killing the Euro,”<sup>178</sup> and “Apocalypse Fairly Soon.”<sup>179</sup> In his longest *New York Times* contribution on this topic, Krugman postulates that European political leaders were too distracted by the romance of European integration to grant fair consideration arguments presented against adopting a common currency. “Instead,” he writes, “they engaged in magical thinking, acting as if the nobility of their mission transcended such concerns.”<sup>180</sup>

Arguments of this nature cite the abundance of credit made available to ill equipped governments and financial institutions—a period of perceived “minimal risk” followed by harsh realization and crisis. When crisis does occur, manipulating monetary policy is obviously not an option. In this situation, wage cuts serve as a substitute for currency devaluation. Disciples of Milton Friedman argue that the effect of these two options is essentially the same, but devaluation is less painful because it forces the economy to react in a synchronized fashion, “sidestepping the

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<sup>176</sup> Ibid, 1.

<sup>177</sup> Paul Krugman, “ECB Death Wish,” *New York Times*, July 5 2012, 1.

<sup>178</sup> Paul Krugman, “Killing the Euro,” *New York Times*, December 1 2011, 1.

<sup>179</sup> Paul Krugman, “Apocalypse Fairly Soon,” *New York Times*, May 17 2012

<sup>180</sup> Krugman, “Can the Euro Be Saved?”, 2.

unwillingness of workers to be the first to take pay cuts.”<sup>181</sup> Paul Krugman illustrates this point by comparing de facto wage cuts through devaluation, and actual wage cuts in Ireland in 1993 and 2010 respectively. Following the recent debt crisis, a five percent reduction in average wages was only attained through two years of severe unemployment; by contrast, the 1993 devaluation brought an immediate ten percent decrease.<sup>182</sup>

This argument has gained popularity in recent years, and is objectively true. The major shortcoming of the logic however, is the idea that Ireland would have undergone the same rapid economic transformation without its longtime affiliation with the European Single Market. The Single Market and monetary union have provided an environment of low exchange rate volatility, inflation volatility and transaction costs—not to mention the economic effects of access to credit and solid reputation.<sup>183</sup> These conditions have allowed U.S. multinational corporations to respond to Irish corporate tax incentives with greater reassurance. Regression analysis on American FDI inflows between Euro and non-Euro membership suggests that Euro-membership had a statistically significant effect the amount of foreign investment, especially in the first few years.<sup>184</sup> Euro membership enabled both the success and demise of the Irish economy, making it a difficult scapegoat for the financial crisis. Ireland could have avoided the extent of its housing, banking, financial and debt crises, by maintaining its own currency, but at the expense of its economic development in lucrative sectors like software and financial services.

There are other important benefits of the Eurozone and European Union which Ireland has grown accustomed. Economic prosperity is a goal of the project of European Integration, but

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<sup>181</sup> Krugman, “Can Europe Be Saved?” 4.

<sup>182</sup> Ibid.

<sup>183</sup> Kilic, Bayar and Feyza Arica. “Effects of Currency Unions on Foreign Direct Investment Inflows: The European Economic and Monetary Union Case.” *International Journal of Economics and Financial Issues* 4.1 (2014), 14.

<sup>184</sup> Kryiacos Aristotoelous. “Do Currency Unions Affect Foreign Direct Investment?” *Economic Issues* 10.1 (2005), 8.

certainly not its sole reason for existence. The European Union also promises a common security policy, free movement of people across national borders, and a larger voice in global policy-making than any individual member could hope to achieve on their own. Descendent of the European Coal and Steel Community (1951) and subsequent European Economic Community (1957), the Euro rests on a legacy of promoting peace in Europe through economic bonds. Forty-four years in the European Economic Community have given Ireland ample time to develop its bargaining power, experience in leadership roles and a reliable reputation.<sup>185</sup> A survey of European public service officials across policy areas indicated that Ireland was one of the most active small states in European Union, second only to Denmark and Luxembourg.<sup>186</sup> Activity was measured by the number of instances that official used strategies to advance their own country's agenda, including partnerships with larger members, contacts within the Commission, and the Commission Presidency.<sup>187</sup> Most importantly, the study demonstrated empirically an intuition about European Community membership: the longer a country has been a member, the more successful they are at pushing their agenda forward.

Small countries like Ireland have amplified their influence over many years. There is no historic precedent for Ireland operating outside of the Eurozone, and certainly not the European Union, while maintaining the same degree of international bargaining power. A good argument can be made that negative consequences of monetary and fiscal integration have paled in

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<sup>185</sup> Diana Panke, "Small states in the European Union: structural disadvantages in EU policy-making and counter-strategies," *Journal of European Public Policy* 17. 6 (2010), 802.

<sup>186</sup> 19 EU members qualified as "small states" for this study, indicated by having fewer votes in the European Council of Ministers than the average for the EU-27. The policy areas that officials belonged to were "economic ministries, environmental/agricultural ministries, foreign ministries and permanent representations in Brussels." *Ibid*, 804-806.

<sup>187</sup> See Appendix 8 for full empirical results from Panke.



comparison to the security, opportunity for influence, and greater freedoms afforded by European Union membership. For Ireland, friendship with Europe has remained a dominant strategy.<sup>188</sup>

### III. Leprechaun Economics

Like its membership in the European Union and Eurozone, Ireland’s corporate tax policy has remained much the same. As the United States and Western Europe recovered from the global financial crisis, Ireland saw an increase in inward investment from foreign multinational corporations. The Irish government formally set a rate of 12.5 % on all company traded profits in 2003, although firms with preexisting agreements continued to pay 10% until 2010.<sup>189</sup> This rate places Ireland far below that of other global advanced economies. Figure 3.1 illustrates this point.

**Figure 3.1 Effective Corporate Tax Rates Across Comparative Countries**

International comparatives

Country	Main Effective CT Rate for company	Imputation, Classical or Exemption System for shareholder	Territorial or Worldwide for company	Tax Treaty with Ireland
Ireland	12.5%	Classical	Worldwide	N/A
United Kingdom	21%	Partial Imputation	Worldwide/Territorial	Yes
USA (Federal)	35%	Classical	Worldwide	Yes
Germany	15.825%	Classical	Worldwide	Yes
France	33.3%	Classical	Territorial	Yes
Estonia	0%/*21% (*on distributed profits)	Exemption	Worldwide	Yes
Hong Kong	16.5%	Exemption	Territorial	Yes
Singapore	17%	Exemption	Worldwide (if received into Singapore)	Yes
Australia	30%	Imputation	Worldwide	Yes

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<sup>188</sup> ‘Dominant strategy’ refers to the term used in Game Theory meaning that a particular strategy always ends a better result than an alternative strategy. For Ireland, this means that the benefits of the European Union have always outweighed the negative consequences (e.g. over-exposure in financial markets).

<sup>189</sup> Aidan and Sanger, *The historical development and international context of the Irish corporate tax system*, 5.

<sup>190</sup> From Aidan and Sanger, *The historical development and international context of the Irish corporate taxation system*, 7.

The differential between Ireland's effective corporate tax rate and most other advanced economies shown is significant, especially compared to the U.S. federal rate of 35%. The incentive to relocate to Ireland to avoid taxation remains strong. Ireland has recovered from its financial crisis using the same tax rate policy that fueled its economy through the Celtic Tiger period. In the post-2008 environment, however, the Irish government, as well as its financial sector, suffer from a loss of reputation. A senior tax advisor interviewed by Collins and Mulligan stated in 2013 (?) that "the post IMF bailout era" will be one of "heightened concern over how Ireland's tax policies are seen on the world's stage in a bigger picture."<sup>191</sup> The failures of the financial crisis have made outside commentators far more critical of Ireland's corporate tax policy than in the 1990s.

There are very recent examples of this change in perspective. In the summer of 2016, Ireland's statistics office opened itself to terse ridicule when it published a 26.3% GDP growth rate for 2015. Vincent Boland for the *Financial Times* categorized this metric as a great work of Irish fiction the likes of James Joyce and Flann O'Brien.<sup>192</sup> The more technology savvy Krugman took to Twitter, calling Dublin's calculation of GDP growth "Leprechaun Economics."<sup>193</sup> Moreover, previous methodology has been replaced a new framework developed by the United Nations, further enlarging the official number.<sup>194</sup> A lot of money was made in Ireland in the year 2015, but to call it Irish money would be deceiving.

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<sup>191</sup> Collins and Mulligan conducted interviews with thirteen senior tax advisors, eliminating their names for anonymity. Killian writes in "Where's the harm in tax competition?" that it is difficult to collect empirical evidence on tax avoidance techniques, because of the secretive nature of tax agreements. Collins and Mulligan's method is indicative of this problem, relying on anecdotal information. Tom Collins and Emer Mulligan, "Ireland's Introduction of Transfer Pricing: A New Institutional Theory Perspective," FINISH CITATION

<sup>192</sup> Vincent Boland, "Irish tell a tale of 26.3% growth spurt," *Financial Times*, July 12 2016.

<sup>193</sup> John FitzGerald, "'Leprechaun economics' set to change EU GDP calculations," *Irish Times*, August 19, 2016.

<sup>194</sup> FitzGerald, "'Leprechaun economics' set to change EU GDP calculations."

Only a month before “Leprechaun Economics” hit the headlines, the European Commission’s antitrust regulator ruled that Ireland’s tax arrangements with Apple were illegal, demanding \$14.5 billion in reparations to Ireland.<sup>195</sup> The rationale for the decision was Apple’s negotiated tax arrangement in Ireland, made in 1991 and again in 2007, amounted to state aid from the Irish government, a violation of Ireland’s membership in the Commission.<sup>196</sup> A simplified version of the Commission’s argument was that despite all profits from Apple’s European sales being recorded in Ireland, the company paid as little as 0.005% in tax to Ireland. Apple was then able to pay nearly all its profits to its centers of research and development in the United States.<sup>197</sup> Despite the Commission’s apparent interest in Ireland’s welfare, Ireland submitted an appeal on the ruling and emphasized its loyalty to its corporate partners at Apple. The appeal was backed in a parliament vote and endorsed by mainstream political parties Fianna Fail and Fine Gael.<sup>198</sup> And they had legitimate reason to do so—because the outcome does not break Irish law. Apple Operations International, going by its official title has been constructed so that it does not have to pay tax to the United States or Ireland. By Irish incorporation it avoids U.S. taxation, and by “fact-specific residency requirements of Irish law,” it also avoids status as an Irish tax resident.<sup>199</sup> Apple and the Irish government have reached an agreement both parties believe to be mutually beneficial. It just happens to be an agreement where Apple effectively pays no tax.

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<sup>195</sup> Paul Hannon, “Ireland Says \$14.5 Billion Windfall from Apple Judgement Isn’t Necessarily a Blessing,” *The Wall Street Journal*, August 30 2016.

<sup>196</sup> Natalia Drozdiak, Viktoria Dendrinou and Sam Schechner, “EU Set to Rule Apple Tax Deals With Ireland Illegal,” *The Wall Street Journal*, August 30, 2016.

<sup>197</sup> Paul Hannon, “Ireland to Appeal EU’s Apple Tax Ruling,” *The Wall Street Journal*, September 2 2016.

<sup>198</sup> Paul Hannon “Irish Lawmakers Back Appeal on Apple Ruling,” *The Wall Street Journal*, September 7 2016.

<sup>199</sup> Quoted statement from Phillip Bullock, head of Apple tax operations, in a 2013 U.S. Senate hearing. Adam Davidson, “How Apple Helped Create Ireland’s Economies, Real and Fantastical,” *The New Yorker*, August 31 2016.

Following the Commission’s ruling, business writer Adam Chandler for *The Atlantic*, titled his response with the rhetorical question, “Who wouldn’t want Apple to pay its taxes?”, drawing attention to the paradoxical nature of Ireland’s response.<sup>200</sup> In the view of many Irish policy makers the proposed repayment was not a gesture of overdue justice, but an attack Ireland’s longtime dominant economic strategy. The sentiment was captured well by Paul Hannon for *The Wall Street Journal* when he wrote that the ruling posed a threat “to the central pillar of Ireland’s economic model, which is to attract investment from U.S. companies looking to sell in Europe and other parts of the world.”<sup>201</sup> And the crux of Hannon’s statement is correct: foreign direct investment by multinational corporations is more than the “leprechaun economics” of the past year, but a *long-term strategy* in pursuit of economic development within the European community. In the words of Richard Murphy, founder of the Tax Justice Network, the “low rates and not too many questions” strategy was a staple of Irish economics.<sup>202</sup> Only the *perception* of this strategy has been subject to change in the years since Dublin’s Troika rescue.

When Apple CEO Tim Cooke explained in 2013 that he had been “recruited” to establish a subsidiary in Ireland in 1980s, he was not exaggerating.<sup>203</sup> It’s also no coincidence that Dell, Microsoft, Intel and Oracle also established subsidiaries in Ireland in the period from 1987-1999.<sup>204</sup> For a significant number of these multinational corporations, this was also the first center established in Europe, a sign that Ireland was identified as an idea location for new, lucrative technology firms entering the European market. This information comes as no surprise given the discussion of the Celtic Tiger period in the previous chapter, but the change in the way

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<sup>200</sup> Adam Chandler, “Who Wouldn’t Want Apple to Pay It’s Taxes?”, *The Atlantic*, August 30 2016.

<sup>201</sup> Hannon, “Ireland Says \$14.5 Billion Windfall from Apple Judgement Isn’t Necessarily a Blessing.”

<sup>202</sup> Olga Khazan, “You Can’t Blame Ireland for Apple’s Tax-Avoidance, Either,” *The Atlantic*, May 22 2013.

<sup>203</sup> *Ibid.*

<sup>204</sup> Patrick Collins and Seamus Grimes, “Ireland’s Foreign-Owned Technology Sector: Evolving Towards Sustainability?” *Growth and Change* 39.3 (2008), 448. See a copy of Table 2: Top 10 Technology Affiliates Operating in Ireland 2005 in Appendix 9.

Ireland’s partnerships were received by the European Union are striking. Writer Adam Davidson elaborated on this disparity in a piece for *The New Yorker* following the ruling:

“For the first few decades, this growth seemed to have been based on something beautiful and right: the Irish had always been highly educated, clever and hardworking, and they were now earning what they deserve.”<sup>205</sup>

Compare this statement to the venom of Krugman’s “leprechaun economics,” and it becomes clear that the Apple case was not the discovery of a deceitful policy, but the further condemnation of a country that had failed on its good reputation. In good times Ireland was characterized as a “benefactor” of globalized production for innovative technology companies. In times of uncertainty Ireland is scheming to rob tax payers and the rest of the European Union.

The Apple ruling is part of an ongoing effort by the European Commission to hold major American corporations accountable for tax avoidance. The strategic plan is well summarized by a graphic published in the *Wall Street Journal* online (see Figure 3.2).

**Figure 3.2 Investigations of U.S. technology companies by the European Commission**



<sup>205</sup> Davidson, “How Apple Helped Create Ireland’s Economics, Real and Fantastical.”

<sup>206</sup> Sam Schechner, “EU Looks to Rein in Alleged Excesses of U.S. Tech Giants,” *The Wall Street Journal*, August 31 2016.

And while the thought of repaid taxes from technology giants is both just and lucrative, a stricter stance on corporate taxation from the level of the European Commission would likely lead to large withdrawals of inward investment from Ireland, and other member countries. Figure 3.3 shows the profits of U.S. multinational corporations as a percentage of the country's Gross Domestic Product.

**Figure 3.3 Profit as a percentage of host country GDP**



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Figure 3.3 shows that Ireland is not the only Eurozone member with business to lose if the Commission continues to exert pressure on corporate tax policies. Longtime Community members Luxembourg and the Netherlands are also used to significant amounts of inward investment. If the injustice of tax avoidance is to be corrected across all members for the Eurozone, or at the greater level of the European Union, there must be an equally lucrative economic policy to take its place.

It's no surprise that inward foreign direct investment by foreign multinational corporations has been instrumental in Ireland's economic recovery since the 2010 Troika package.<sup>208</sup> Ireland was applauded by press organizations in continental Europe, notably *Le Monde*, for diligently

<sup>207</sup> Greg Ip, "Apple's Tax Avoidance Illustrates Gap Between Law and Economics," *The Wall Street Journal*, September 7 2016.

<sup>208</sup> Khazan, "You Can't Blame Ireland for Apple's Tax-Avoidance Either."

adhering to austerity plans, and moving in a direction of strong economic growth.<sup>209</sup> There are several reasons why Ireland managed its austerity program with more grace than Portugal, Spain or Greece, not the least of which was the infrastructure for inward that relaunched as United States, and other investors recovered. To deny Irish partnerships with foreign investors would significantly inhibit Ireland's ability to contribute as a prosperous member of the Eurozone, and recuperate from future economic shocks.

### ***III. 'Transfer of Skills' and implications for the Irish economy***

It may six years for the appeal on the Apple case to be decided. In the meantime, tax avoidance and outsourcing remain hot-button issues in the Trump administration and in Europe, although corporations themselves have not modified their agendas.<sup>210</sup> For the time being, Ireland is free to continue its 12.5% corporate tax rate, and negotiate exclusive deals with particular investors, albeit under greater scrutiny. If investment by foreign multinational corporations was over-praised as a tool for economic growth in the Celtic Tiger period, it is now not being given enough credit. Having effectively used their corporate tax strategy for the better part of fifty years, Ireland's industries and workforce now have the chance to internalize long earned skills and technologies for a sustainable future.

*Transfer of skills* is a term used in analysis of foreign investment to assess the extent to which the host country will use the capabilities of foreign subsidiaries in their own business ventures. Evidently, inward foreign direct investment is more beneficial to a host country if there is a high transfer of skills. From the perspective of the corporate investor, transfer of skills to the local workforce is also beneficial. A highly-trained workforce in specific technologies promotes

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<sup>209</sup> Eric Albert, "L'Irlande, un modele pour l'Europe en crise?" *Le Monde*, December 21 2012.

<sup>210</sup> Andrew Tangel, "Companies Plow Ahead with Moves to Mexico, Despite Trump's Pressure," *The Wall Street Journal*, February 8 2017.

greater productivity and quality control.<sup>211</sup> Two Irish economists, Patrick Collins and Seamus Grimes argued that a transfer-of-skills transformation was evident in Ireland in an article published in 2008. They cited the shift from manufacturing to services employment within foreign subsidiaries.<sup>212</sup> Figure 3.4 gives a breakdown of distinct levels of work within major technology companies operating in Ireland. Level one represents manufacturing, level two, basic services such as call centers, and level three, high level research and design.

**Figure 3.4 Skill breakdown for major technology subsidiaries in Ireland (2008)**

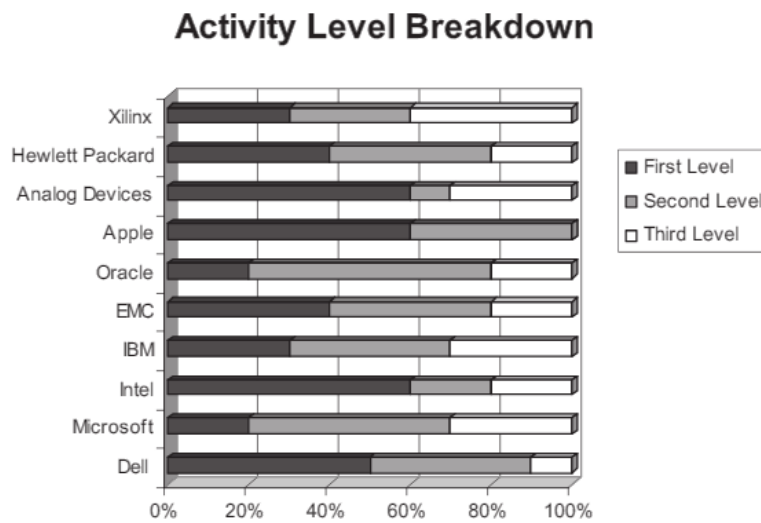


FIGURE 3. ACTIVITY BREAKDOWN.  
Source: Company reports, Datamonitor, company interviews.

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First this graph shows that the greatest percentage of employment in 2008 was comprised of mid-level service positions. At a subset of companies, including IBM, Microsoft, Analog and Xilinx, a sizable portion of Irish employees were engaged in high-value added jobs. This stands

<sup>211</sup> Garrick Blalock and Paul J. Gerler, “Welfare gains from Foreign Direct Investment through technology transfer to local suppliers,” *Journal of International Economics* 74 (2008), 404.

<sup>212</sup> Collins and Grimes, “Ireland’s Foreign-Owned Technology Sector: Evolving Towards Sustainability?” *Growth and Change* 39.3 (2008).

<sup>213</sup> Taken from Collins and Grimes, “Ireland’s Foreign-Owned Technology Sector: Evolving Towards Sustainability?”



in contrast to the 1990s where manufacturing was the dominant emphasis of foreign subsidiaries. The Irish workforce had already internalized knowledge needed for high value-added positions before the financial crisis. Ireland can continue this process to promote its own domestic industries.

Inward investment has helped Ireland become a more efficient and technologically advanced economy through the development of new infrastructure, and transfer of valuable knowledge and skills. Corporate tax incentives offered to foreign companies attracted sources of capital and industry practice that would not have been available to Ireland in the 1970s, 80s and 90s otherwise. This is not necessarily Ireland's present situation. Having benefited from technology transfer for nearly sixty years, the Irish workforce is well versed in "high tech" industries in its own right. Two reports by the Industrial Development Agency emphasized the need for connections between foreign and local firms to promote technology in domestic businesses.<sup>214</sup> While imperfect, Ireland has made significant effort to internalize technology available through inward investment.

As early as the early 1970s, Irish politicians recognized that Ireland's education system needed to meet the demand for skills in advanced technologies.<sup>215</sup> Institutes of Technology were founded as a solution, offering shorter degree programs in specific engineering and business fields.<sup>216</sup> Irish universities received increased funding towards in-demand areas of study beginning in the early eighties. The result was a 40% increase in engineering graduates at four-year universities between 1978 and 1983.<sup>217</sup> Ireland's flagship university, Trinity College Dublin, established undergraduate departments for Microelectronics and Electrical Engineering,

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<sup>214</sup> Referring to the Telesis Report (1982) and the Culliton Report (1992). Ibid, 279.

<sup>215</sup> Barry, "Foreign direct investment and Institutional Co-Evolution in Ireland," 266.

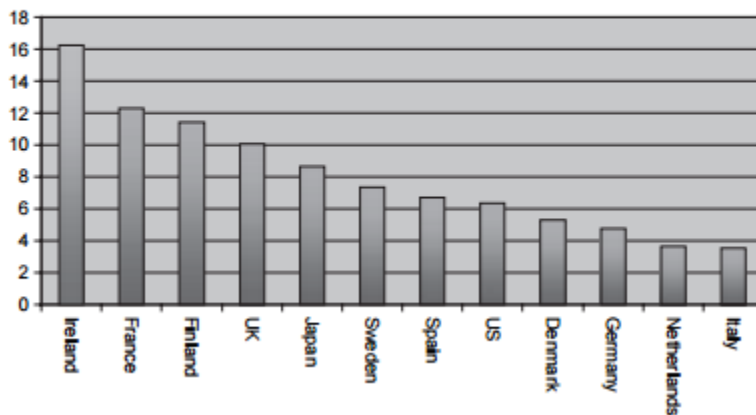
<sup>216</sup> Ibid, 283.

<sup>217</sup> Ibid, 283.

and Mechanical Engineering and Manufacturing in 1980.<sup>218</sup> In the 1990s University of Limerick emerged as a leader in Technology Education degrees for undergraduates, an important area of study for integrating technology into primary and secondary education.<sup>219</sup> Figure 3.4 from Barry’s 2008 paper on Irish institutional development shows Ireland having the highest proportion of science and engineering graduates among comparable countries.

**Figure 3.4 Proportion of science and engineering graduates among comparable countries**

**Figure 6** Science and engineering graduates per 1,000 population aged 20–34.  
**Source:** European Commission: Science and Technology report 2003



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This data was compiled before the banking and sovereign debt crises in Ireland, but it shows that Ireland put in place the policies necessary for a successful transfer of skills process.

It is difficult to calculate the magnitude of the “transfer of skills” effect in the Irish economy because of inward investment by foreign multinational corporations. There is suggestive evidence, however, that the Irish government and workforce have adapted to the needs of an economy dependent on technology and financial services industries. The capabilities of American

<sup>218</sup>“ Mechanical and Manufacturing Engineering in Trinity College,” updated February 14 2017. From <https://www.tcd.ie/mecheng/history/dept/> (accessed April 17 2017).

<sup>219</sup> Leahy and Phelan, “A review of Technology Education in Ireland; a changing technological environment promoting design activity,” 380.

<sup>220</sup> Barry, “Foreign direct investment and Institutional Co-Evolution in Ireland,” 284.

technology corporations, notwithstanding, Ireland offers a skilled workforce, high quality secondary school and university system, and sophisticated service industries. With the help of its membership in the European Union and the Eurozone, the fundamentals of Ireland's economy have evolved over the duration of its corporate tax policy. Ireland's economy depends on foreign direct investment, but not in the same way it did in the 1970s. Changes to Ireland's corporate tax code based on pressure from the European Commission, or the United States government, will not deny Ireland the economic development it has experienced over the last sixty years.

## CONCLUSION

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### STATUS QUO PREVAILS (FOR NOW)

For now, Ireland's strategy for economic development remains tied to its historic roots in the late 1950s. The wider geopolitical climate is less stable, and could send Dublin towards new policy. Last month British Prime Minister Theresa May wrote a letter to Donald Tusk, President of the European Commission, beginning the two-year process for the UK to withdraw from the European Union:

“On 23 June last year, the people of the United Kingdom voted to leave the European Union. As I have said before, that decision was no rejection of values we share as fellow Europeans...the United Kingdom wants the European Union to succeed and prosper... We are leaving the European Union, but we are not leaving Europe – and we want to remain committed partners and allies to our friends across the continent.”<sup>221</sup>

The introductory paragraph echoes the tone of the letter, that of friendship between the UK and Europe. The tone is juxtaposed with May's actual request, that England terminate its forty-four-year membership in the European Community. May writes that “the United Kingdom wants to agree with the European Union a deep and special partnership that takes in both economic and security cooperation,” without acknowledging that the UK is willingly ceding the “special partnership” that already exists.<sup>222</sup>

Membership in the European Union and Eurozone has certainly disentangled Ireland from British influence, but the two countries have never fully separated their economic policies. After “Brexit,” Ireland will be for the first time aligned with Europe, but *not* the UK in terms of

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<sup>221</sup> Theresa May, Prime Minister's Letter to European Council President Donald Tusk, from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/604079/Prime\\_Ministers\\_letter\\_to\\_European\\_Council\\_President\\_Donald\\_Tusk.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/604079/Prime_Ministers_letter_to_European_Council_President_Donald_Tusk.pdf), pg 1.

<sup>222</sup> Ibid, 3.

economic and security policy. This model has played out to a lesser extent since Ireland's accession to the Exchange Rate Mechanism, and Euro, but the UK has always remained a close partner within the European Community structure. Britain's departure will mean increased transportation costs and decreased mobility between the two countries, unless there is a special agreement made based on the countries' shared history. "Brexit," may also be a lucrative economic opportunity, if British companies choose to operate in Ireland to enjoy European Union benefits.

In addition to "Brexit," elections in France and Germany pose a threat to the status quo European Union. France has a reasonable chance of electing Marine Le Pen of the far right National Front party, who has promised that France will exit the European Union and Eurozone if elected. With the first round of the election coming in a matter of days, the French news organizations, like *Le Monde* and *Le Figaro*, are speculating whether one of more center, pro-European candidates, Francois Felon or Emmanuel Macron, are capable of victory. In the worst-case scenario for the European Community, a "Frexit," would cause capital flight from Europe, and undermine the stability of the common currency.<sup>223</sup> Predictions for Germany's political future are not so revolutionary, but the election of Martin Schulz over longtime Chancellor Angela Merkel in September, would be a monumental change of leadership.<sup>224</sup> Other recent leadership changes in Europe have been less dramatic. In 2016, Austria and Spain elected heads of state with pro-European stances, despite challenges from nationalist parties.<sup>225</sup> "Brexit," and

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<sup>223</sup> Matthew J. Goodwin, "What a Le Pen Win Would Look Like," *The New York Times*, March 23 2017.

<sup>224</sup> Alison Smale, "Martin Schulz, Merkel Rival, Wins His Party's Nomination With 100 Percent of the Vote," *The New York Times*, March 29 2017.

<sup>225</sup> Steven Erlanger, "Pillars of the West Shaken by 'Brexit,' but They're Not Crumbling Yet," *The New York Times*, March 29 2017.

the popularity of nationalist platforms in continental Europe, are part of a strong wave of Euroscepticism, but there is little indication so far that the European integration will end soon.

The same can be said for Ireland's corporate tax policy. While there is discontent on the part of the United States government and the European Commission over Ireland's tax arrangements with foreign corporation, no decisive ruling or legislation has been initiated. Despite what seems like a chaotic geopolitical landscape, Ireland will maintain the central pillars of its economic development strategy—membership in the European Community, and corporate tax incentives—for the foreseeable future. It may even maintain the status quo for ten, twenty years to come. The success of Ireland's strategy for economic development rests on its consistency and longevity. If Dublin can keep up the jig, and take advantage of residual effects from "Brexit," 2017 could mark the beginning of another strong period for Ireland's economy.

Ireland's strategy over the last sixty years has provided a model for economic development for small, but relatively advanced countries through international partnership and inward investment. And while Ireland's unique attributes led to its creation, it's possible that it could be successfully replicate in other countries, especially small economies in the European Union. Scotland might prove to be a test case for this hypothesis, if they decide by referendum to separate from the UK, and join the European Union and Eurozone.<sup>226</sup> Scotland, like Ireland has a skilled, English speaking labor force, and a sophisticated education system. If separated from Britain and a member of the European Community, the country would have an opportunity for economic development like Ireland in the 1960s and 70s.

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<sup>226</sup> Scotland's last independence referendum was only three years ago, but because of the disparity of votes to leave the European Union (Scotland being overwhelmingly against), there will be another referendum before Britain completes the EU exit process. Stephen Castle, "Scotland Votes to Demand a Post-'Brexit' Independence Referendum," *The New York Times*, March 28 2017.

Confidence in the Irish model has varied over its duration, from low momentum in the 1970s, to euphoria in the late 1990s and early 2000s, to skepticism after 2010. Application of the model, however, has remained consistent. It has proven to be a durable economic mechanism, despite business cycle fluctuations, and financial crisis. The Irish model for economic development deserves to be recognized as one-of-a-kind, and considered as a strategy for other countries.

## Appendix 1: IRISH LEADERS

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**Ahern, Bertie**, Taoiseach June 1997 to May 2008; Fianna Fail party.

**Cowen, Brian**, Taoiseach May 2008 to March 2011, and Minister of Finance from September 2004 to May 2008; Fianna Fail party.

**FitzGerald, Garret**, Taoiseach July 1981 to March 1987; Fine Gail party.

**Haughey, Charles J.**, Three time Taoiseach serving nonconsecutive terms, December 1979 to June 1981, March 1982 to December 1982, and March 1987 to February 1992; Fianna Fail party.

**Kenny, Edna**, Current Taoiseach since March 2011; Fine Gael party.

**Lemass, Sean**, Taoiseach from June 1959 to November 1966, credited for his leadership during Ireland's transition to an open economy; founding member of the Fianna Fail party.

**McCreevy, Charlie**, Minister of Finance 1997-2004, and [European Commissioner](#) for [Internal Market and Services](#) from 2004–2010; Fianna Fail party.

**Noonan, Michael**, current Minister of Finance since 2011; Fine Gail party.



## Appendix 2: TITLES, ORGANIZATIONS AND INSTITUTIONS

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**Allied Irish Banks (AIB)**, one of the largest banking institutions in Ireland, publicly traded before 2010, but now almost entirely state-owned. Incorporated in the bank guarantee of 2008.

**Anglo Irish Bank (Anglo)**, headquartered in Dublin, opening in 1964 and closing in 2011, after an unsuccessful merger with Irish Nationwide Building Society. Incorporated in the debt guarantee of 2008.

**Bank of Ireland (BoI)**, oldest bank with continuous operation in Ireland, and historically Ireland's premier banking institution. Incorporated in the debt guarantee of 2008.

**Central Bank of Ireland**, Ireland's representative in the European System of Central Banks, and regulator of most Irish financial institutions.

**Dail Eireann**, most commonly referred to as simply 'Dail'; lower house of Irish legislature, the Oireachtas.

**European Central Bank**, central bank for the Eurozone, and administrator of monetary policy for Euro members.

**European Commission**, executive body of the European Union, composed of 28 members, one from each member state and a president, nominated by the European Council and elected to office by European Parliament. The Commission implements the initiatives of the Council and is responsible for seeing policies executed.

**European Council**, charged with defining the objectives of the European Union; comprised of the head of state of each member country, as well as a president and the president of the European Commission.

**European Court of Justice**, adjudicates the application of European Union law; especially important in light of Ireland's controversial corporate tax incentives.

**European Parliament**, legislative body of the European Union, representatives from each member state are directly elected. It depends on proposals from the Commission, but retains veto power over most issues, including who sits on the Commission.<sup>227</sup>

**EU-27**, shorthand for all European Union members.

**Exchange Rate Mechanism (ERM)**, precursor to the single currency; a band of exchange rates intended to limit the variation in relative currency values among prospective Eurozone members.

**OECD**, Organization for Economic Co-operation and Development

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<sup>227</sup> O'Malley, Contemporary Ireland, 196.

**Oireachtas**, Ireland's bicameral legislature comprised of the Dail Eireann (lower house) and Seanad Eireann (upper house).

**PIGS**, Portugal, Ireland, Greece and Spain.

**Seanad Eireann**, upper house of Irish legislature, the Oireachtas.

**Taoiseach**, Prime Minister of Ireland.

**Trinity College Dublin (University of Ireland)**, premier research university in Ireland, and member of the "seven ancient" universities of Britain and Ireland.

**Troika**, a term adopted since the European sovereign debt crises in 2010 to mean the collaboration of the European Commission, the European Central Bank and the International Monetary Fund.

### Appendix 3: POLITICAL PARTIES AND POSITIONS

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**Ireland since the 1980s has regularly elected coalition governments, with the Fianna Fail party remaining dominant for the most part.**<sup>228</sup>

#### **PARTIES:**

**Fianna Fail**, largest political party in Ireland, and usually the dominant party in the Irish government. The party has traditionally supported measures towards closer integration with the European Community. The party has officially supported all ratification referendums since 1973.<sup>229</sup>

**Fine Gail**, longtime active party in Irish government, although never able to capture the majority of the electorate in general election. The party has taken the most aggressive pro-Europe stance, officially supporting ratification of every treaty since succession to the European Economic Community in 1973.<sup>230</sup>

**Irish Labour Party**, consistently captures significant minority vote among general electorate and often serves a junior party in left coalitions. The party opposed the ratification of the Single European Act, but decided to support the final outcome, and adopted its position to align with membership in the European Union.<sup>231</sup>

**Irish Green Party**, minority party characterized by “soft Euroscepticism,” not opposed to European Integration, but with particular elements of social and economic cohesion, in particular, perceived threats to national sovereignty and influence within the Commission.<sup>232</sup>

**Sinn Fein**, left of the Labour Party, priding itself on being the only “All-Ireland” party, incorporating representation from Northern Ireland. The party has traditionally expressed “hard Euroscepticism,” officially opposing accession to the European Economic Community in 1973. The party currently accepts Ireland’s membership in the European Union, but has rejected recent Treaties including, Amsterdam, Nice and Lisbon.<sup>233</sup>

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<sup>228</sup> O’Malley, *Contemporary Ireland*, 3.

<sup>229</sup> Brigid Laffan and Jane O’Mahony, *Ireland and the European Union* from *The European Union Series* ed. Neill Nugent and William E. Paterson (Dublin: Palgrave Macmillan, 2008), 85.

<sup>230</sup> *Ibid.*, 84.

<sup>231</sup> *Ibid.*, 86.

<sup>232</sup> *Ibid.*, 87.

<sup>233</sup> *Ibid.*, 88.

**Appendix 4: REFERENDUM VOTES<sup>234</sup>**

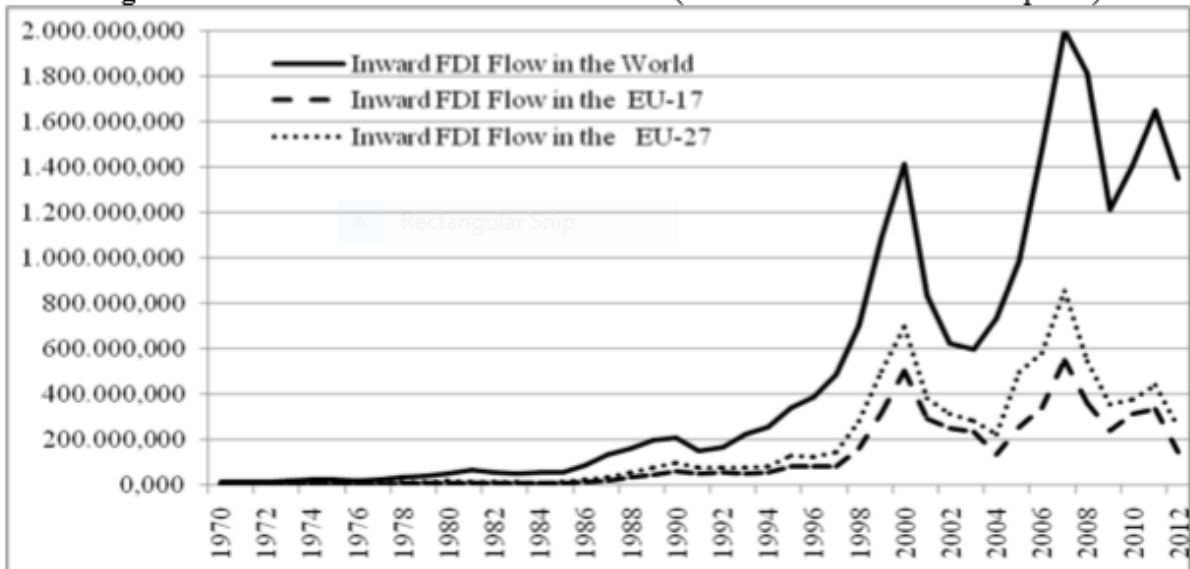
<b>Year</b>	<b>Treaty for Ratification</b>	<b>Percentage “Yes”</b>	<b>Percentage “No”</b>
1972	Accession to the European Economic Community	83	17
1992	Maastricht Treaty	69	31
1998	Amsterdam Treaty	62	38
2001	Nice Treaty	46	54
2002	Nice Treaty (second referendum)	63	37
2008	Lisbon Treaty	46	54

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<sup>234</sup> Data taken from Laffan and O’Mahony, *Ireland and the European Union*, 108.

## Appendix 5: INWARD FOREIGN DIRECT INVESTMENT FLOWS

**Figure 1.** Inward FDI Flows in the World and EU (Million US dollars at current prices)



Source: UNCTAD, FDI Statistics, [http://unctadstat.unctad.org/TableViewer/tableView.aspx? ReportId=88](http://unctadstat.unctad.org/TableViewer/tableView.aspx?ReportId=88)

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<sup>235</sup> From Kilic, Bayar and Arica, "Effects of Currency Unions on Foreign Direct Investment Inflows: The European Economic and Monetary Case," *International Journal of Economics and Financial Issues*. 4.1 (2014), 9.

## Appendix 6: THEORIES OF FOREIGN DIRECT INVESTMENT DETERMINANTS

**Table 1. Summary of Theories of FDI Determinants**

Theory/Theoretical Approach	Determinants
Heckscher-Ohlin Model / MacDougall-Kemp Model	Higher return on investment, lower labor costs, exchange risk
Market imperfections	Ownership benefits (product differentiation), economies of scale, government incentives
Product differentiation	Imperfect competition
Oligopoly markets	Following rivals, responding to competition in domestic market
Product life cycle	Production function characteristics
Behavior theory	Fear of loss of competitive edge, following rivals and increased competition at home
Internalization	Market failures/inefficiencies
	Know-how, market failures
OLI (ownership, location, internalization) paradigm	Benefits of owning productive processes, patents, technology, management skills
	Advantage of locating in protected markets, favorable tax systems, low production and transport costs, lower risk
	Advantage of internalization cutting transaction costs, lowering risk of copying technology, quality control
New trade theory	Market size
	Transport costs
	Barriers to entry
	Factor endowments
Institutional approach	Political variables
	Financial and economic incentives
	Tariffs
	Tax rate

Source: Assunção et al., (2011: 3).

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<sup>236</sup> From Kilic, Bayar and Arica, "Effects of Currency Unions on Foreign Direct Investment Inflows: The European Economic and Monetary Case," *International Journal of Economics and Financial Issues*. 4.1 (2014), 9.

## Appendix 7: INNOVATION STRATEGY AND INTENSITY

Table 1  
Innovation, networking and technology transfer indicators by super-region

	N	Product innovators (% firms)	Innovators only					Innovation intensity (No. per 100)
			Number of product changes no.	Sales of new/improved products (%)	R&D intensity (%)	Technology transfer intensity (%)	Networking intensity (%)	
Scotland	223	52.8	19.4	52.0	4.3	10.5	13.8	0.194
Northern Ireland	257	60.3	11.6	59.2	2.9	12.3	10.7	0.175
Northern England	217	65.2	37.8	54.2	2.6	8.0	12.6	0.351
Midlands and Wales	224	65.5	26.4	49.9	3.1	9.6	9.4	0.653
Southern England	212	61.6	17.2	53.7	6.1	9.5	10.9	0.347
Republic of Ireland	404	67.7	14.4	52.8	3.8	12.0	11.2	0.226
Northern Germany	87	72.3	13.4	46.5	3.2	3.1	10.6	0.094
Northern Rhine	205	61.8	30.6	49.8	3.9	2.8	9.2	0.155
German Mid West	121	71.4	14.0	41.8	2.7	4.0	13.4	0.136
Baden-Wurtemberg	170	73.5	22.6	46.4	2.7	2.9	11.0	0.179
Bavaria	202	62.6	19.9	44.1	4.7	0.7	13.0	0.144
Eastern Germany	399	81.6	32.8	77.7	7.1	6.8	13.5	0.476
<i>Memo Items</i>								
UK	1133	63.4	25.7	52.8	4.0	9.3	11.1	0.429
Ireland	404	67.7	14.4	52.8	3.8	12.0	11.2	0.226
Germany	1186	71.4	23.0	51.5	4.1	3.4	11.7	0.201

Note: variable definitions are given in the data appendix. Figures relate to manufacturing plants with more than 20 employees in 1993. Survey responses are weighted to give regionally representative results.

Source: Product Development Survey.

J.H. Love, S. Roper / Research Policy 30 (2001) 643–661

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<sup>237</sup> From Love and Roper, “Location and network effects on innovation success: evidence for UK, German and Irish manufacturing plants,” *Research Policy* 30 (2001), 648.

## Appendix 8: SMALL STATE STRATEGIES EU-27

*Table 1* Mapping of small states strategies\* (means)

<i>State</i>	<i>Bilateral partnerships to big countries</i>	<i>Institutionalized co-ordination</i>	<i>Contacts with the Commission</i>	<i>Prioritization of issues</i>	<i>Presidency as opportunity structure<sup>a</sup></i>	<i>'Honest brokerage'</i>
AT	1.82	0.00	3.08	3.29	1.60	1.66
BE	2.19	3.33	3.09	2.00	1.66	2.00
BG	0.82	0.00	1.97	2.47	1.64	0.48
CY	0.27	0.00	2.22	2.51	1.20	0.22
CZ	1.03	2.00	1.90	3.26	1.33	0.67
DK	2.64	2.66	3.20	3.29	2.67	3.33
EE	0.25	2.66	2.47	1.90	1.50	0.33
FI	1.16	2.66	2.38	3.24	1.67	1.77
GR	0.82	0.00	2.47	2.50	2.40	0.67
HU	1.33	2.00	2.47	2.86	2.00	0.00
IE	3.66	0.00	3.84	2.57	3.33	2.66
LT	0.96	2.66	1.43	2.86	0.50	0.89
LU	3.28	3.33	2.61	3.24	2.00	2.22
LV	0.27	2.66	2.06	2.90	1.67	0.53
MT	2.46	0.00	1.90	2.80	2.00	0.44
PT	1.29	0.00	2.51	2.69	2.40	1.60
SE	1.61	2.66	2.89	2.71	1.67	2.13
SI	2.31	0.00	2.44	2.57	2.00	2.00
SK	0.08	2.00	2.22	2.86	2.67	0.33

Notes: \* frequency of usage/importance of strategies.

0 = never; 1 = seldom; 2 = occasionally; 3 = frequently; 4 = very frequently.

The variables are based on answers or on combinations of answers to the questionnaire and are coded to a 0–4 measure.

<sup>a</sup>Since not every state has yet held the Presidency and since states can also approach the Presidency in order to make the latter aware of their problems, the question aimed for its importance for pursuing national interests through the Presidency, rather than the way states use the office once they hold it.

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<sup>238</sup> From Panke, “Small states in the European Union: structural disadvantages in EU policy-making and counter strategies,” 805.



## Appendix 9: TECHNOLOGY AFFILIATES IN IRELAND

TABLE 2. TOP 10 TECHNOLOGY AFFILIATES OPERATING IN IRELAND 2005.

	Activity	Date established <sup>a</sup>	€ million turnover 2005 (% of global turnover)	Employment 2005 (% of global employment)	Turnover/employee (€ million)
Dell	PC manufacture, EU applications centre, business process improvement, sales support, treasury, tech support EMEA	1990 (1,0)	8,300 (14.3)	4,300 (5.4)	1.93
Microsoft	Sales and marketing, EU operations centre, product development centre, finance, HR	1985 (1,0)	8,112 (20.4)	1,090 (1.8)	7.44
Intel	Semiconductor manufacture, innovation centre	1989 (0,1)	3,500 (11.6)	3,200 (4)	1.09
IBM	Business design, solutions, server manufacture	1956 (0,0)	2,500 (2.6)	3,700 (0.7)	0.68
EMC	Information storage/management	1987 (1,1)	2,400 (30)	1,400 (7)	1.71
Oracle	EU product development, world product translation, sales and marketing, Oracle university	1997 (1,0)	2,034 (20)	1,067 (2.3)	1.91
Apple	EU operations centre, store support, telesales, tech support, finance, HR	1980 (1,1)	1,975 (11.7)	1,500 (6.5)	1.32
Analog Devices	High performance integrated circuits	1977 (0,1)	1,580 (70)	1,300 (16.8)	1.22
Hewlett Packard	European development centre, manufacture, sales, and service support	1971 (0,0)	1,460 (1.7)	1,660 (1.4)	0.86
Xilinx	R&D centre	1995 (0,0)	774 (9.5)	500 (14.8)	1.55

<sup>a</sup> In brackets we have added two values, 0 representing no, 1 representing yes. The first value reflects whether the Irish affiliate was established within 10 years of the corporation forming, and the second value reflects whether or not the Irish operation was the first outpost in the EU.

Source: *Irish Times* 2007, Datamonitor, Business Source Premier.

<sup>239</sup> From Collins and Grimes, "Ireland's Foreign-Owned Technology Sector: Evolving Towards Sustainability?" 448

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