

**Bond University**

## **DOCTORAL THESIS**

### **Jurisdictional Arbitrage : a Comparative Analysis of the Treatment of Income Arising from Patents in Australia-Irish and U.S.-Irish Jurisdictions**

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*Award date:*  
2015

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**JURISDICTIONAL ARBITRAGE: A COMPARATIVE ANALYSIS  
OF THE TREATMENT OF INCOME ARISING FROM PATENTS  
IN AUSTRALIA-IRISH AND U.S.-IRISH JURISDICTIONS**

A Dissertation Submitted in Partial Fulfillment of the Requirements of  
the Degree of Doctor of Legal Science (SJD)

Submitted by

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October 2014

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## **ABSTRACT**

The underlying scenario of this thesis is the existence and extent of liability to tax on income arising from patent royalties in cross-border transactions. A quantitative method and associated model are developed that compare and contrast the susceptibility of identified legal frameworks, considered in pairs, to jurisdictional arbitrage regarding this income. The jurisdictions of Australia and the United States engaged in cross-border transactions with Ireland are examined. Additional jurisdictions are also examined to showcase “tears” in specific domestic legal fabrics due to international law in the form of bilateral and multilateral treaties regarding unions, specifically regional communities, to which these additional jurisdictions belong. These identifiable “tears” in specific jurisdictions’ domestic legal fabric prove that the principal factor in relocating intellectual property assets to other jurisdictions in order to benefit from jurisdictional arbitrage is not domestic corporate tax rates, as is the generally held position. Novel three dimensional visualization techniques are employed that both compare and contrast the similarities and differences between pairs of jurisdictions in a single operational view. The findings derived from the application of the quantitative method and associated model enable the proactive development and/or modification of both current and future legislation (international treaties, domestic statutes and domestic regulations) based on a quantitative risk/reward analysis. Furthermore, these findings may prescriptively identify jurisdictions that may require treaties to alleviate large, potentially harmful, gaps in jurisdictional domestic tax law regimes.

## DECLARATION

This thesis is submitted to Bond University in partial fulfilment of the requirements of the degree of Doctor of Legal Science.

This thesis represents my own original work towards this research degree and contains no material which has been previously submitted for a degree or diploma at this University or any other institution, except where due acknowledgement is made.

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**Phillip M. Adams, D.Sc., Ph.D.**

## **ACKNOWLEDGEMENTS**

I thank the Faculty of Law at Bond University for all of the stimulating classes, conversations and experiences that culminated in this thesis. Furthermore, I thank all of the faculty members that allowed the flexibility in their classes to investigate personal interest areas within the topical subject matter.

Mary Hiscock and Michelle Markham, my thesis advisors, deserve my utmost respect, gratitude and thanks for allowing me to pursue an interdisciplinary research topic. Many thanks are also due my advisors for truly being advisors and counsellors throughout the research process, in spite of their respective teaching loads and publication commitments.

I dedicate this thesis to my family for allowing me the time and resources to complete it.

**Phillip M. Adams, D.Sc., Ph.D.**

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## List of Acronyms and Abbreviations

<b>AU-IE DTA</b>	DTA Between Australia and Ireland
<b>AUSFTA</b>	Australia-U.S. Free Trade Agreement
<b>BIT</b>	Bilateral Investment Treaty
<b>CCTB</b>	Common Consolidated Tax Base
<b>CFC</b>	Controlled Foreign Corporation
<b>CFR</b>	Codification of Federal Regulations (U.S.)
<b>CoC</b>	Code of Conduct
<b>CP</b>	Comparable Price
<b>CSA</b>	Cost Sharing Agreement
<b>CUP</b>	Comparable Uncontrolled Price
<b>CUT</b>	Comparable Uncontrolled Transaction
<b>DETE</b>	Department of Enterprise, Trade and Employment (Ireland)
<b>DSB</b>	Dispute Settlement Body (WTO)
<b>DSU</b>	Dispute Settlement Understanding (WTO)
<b>DTA</b>	Avoidance of Double Taxation Agreement
<b>DTC</b>	Avoidance of Double Taxation Convention
<b>DTT</b>	Avoidance of Double Taxation Treaty
<b>EC</b>	European Community
<b>EMEA</b>	Europe, Middle East, and Africa
<b>EPO</b>	European Patent Office
<b>EU</b>	European Union
<b>EU JTPF</b>	EU Joint Transfer Pricing Forum
<b>FDI</b>	Foreign Direct Investment
<b>FR</b>	Federal Register (U.S.)
<b>FTA</b>	Free Trade Agreement
<b>GATT</b>	General Agreement on Tariffs and Trade
<b>GE</b>	General Electric Company
<b>GFC</b>	Global Financial Crisis
<b>Heritage</b>	The Heritage Foundation
<b>IBM</b>	International Business Machines Corporation
<b>IE-US DTA</b>	DTA Between Ireland and the United States
<b>IFSC</b>	International Financial Services Centre
<b>IMF</b>	International Monetary Fund
<b>IP</b>	Intellectual Property
<b>IPR</b>	Intellectual Property Rights
<b>IRC</b>	Internal Revenue Code (U.S.)
<b>IRS</b>	Internal Revenue Service (U.S.)
<b>ITI</b>	Irish Taxation Institute
<b>ITO</b>	International Trade Organization
<b>LDC</b>	Least Developed Country
<b>LOB</b>	Limits on Benefits
<b>MNE</b>	Multinational Enterprise

<b>MS-EMEA</b>	Microsoft EMEA Cost Share LLC Subsidiary
<b>MS-HQ</b>	Microsoft Corporation Headquarters
<b>MS-LIC</b>	Microsoft Licensing GP
<b>MS-RIO</b>	Microsoft's Round Island One Subsidiary
<b>MTC</b>	Model Taxation Convention
<b>NIA</b>	National Interest Analysis (Australia)
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>PE</b>	Permanent Establishment
<b>QCSA</b>	Qualified Cost-Sharing Agreement
<b>REC</b>	Regional Economic Community
<b>RPM</b>	Resale Price Method
<b>RTA</b>	Regional Trade Agreement
<b>SEC</b>	Securities and Exchange Commission (U.S.)
<b>TI</b>	Transparency International
<b>TIEA</b>	Tax Information Exchange Agreement
<b>TIFA</b>	Trade and Investment Framework Agreement
<b>TPM</b>	Transfer Pricing Method
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>USC</b>	United States Code
<b>USPTO</b>	United States Patent and Trademark Office
<b>USTR</b>	United States Trade Representative
<b>WID</b>	World Investment Directory
<b>WIPO</b>	World Intellectual Property Organization
<b>World Bank</b>	International Bank for Reconstruction and Development
<b>WTO</b>	World Trade Organization

# CHAPTER 1 – INTRODUCTION

## Background and Initial Justification

This thesis develops a quantitative method<sup>1</sup> and associated model to compare and contrast the susceptibility of identified pairs of legal frameworks to jurisdictional arbitrage arising out of the income from patent royalties in cross-border transactions. The jurisdictions of Australia and the United States ('U.S.') are examined in cross-border royalty transactions with Ireland. Additional jurisdictions are also analyzed to showcase 'tears' in specified domestic legal fabrics. These tears are caused by international law in the form of bilateral and multilateral treaties regarding regional economic communities ('REC's),<sup>2</sup> to which these jurisdictions belong. They provide access to RECs while maintaining the tax benefits of the access point's jurisdiction.<sup>3</sup> For example, the European Commission has stated that: 'the Irish tax code tends to grant benefits from the most favourable treaties to the residents of all countries with which Ireland has a tax treaty.'<sup>4</sup> Therefore, Ireland as a Member State of the European Union ('EU'), a REC, provides market access to all other Member States of the EU while enforcing Irish tax on the income arising from the sale of goods and

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<sup>1</sup> Martyn Hammersley, 'What is Social Research?' in M. Hammersley (ed.), *Principles of Social and Educational Research: Block 1* (Milton Keynes: Open University Press, 1993) 39.

Martyn Hammersley, a Professor of Educational and Social Research at The Open University, defines the quantitative approach as: 'The term "quantitative method" refers in large part to the adoption of the natural science experiment as the model of scientific research, its key features being quantitative measurement of the phenomena studied and systematic control of the theoretical variables influencing those phenomena.'

<sup>2</sup> World Trade Organization (WTO), *Technical Notes* (2011) 244  
<[www.wto.org/english/res\\_e/booksp\\_e/anrep\\_e/wtr11-5\\_e.pdf](http://www.wto.org/english/res_e/booksp_e/anrep_e/wtr11-5_e.pdf)> at 8 July 2012.

WTO Director-General Pascal Lamy on 31 August 2010 said that a regional economic community was a "a community within which there is economic prosperity demonstrated by high living standards of its people with political and social stability; a community within which goods, services, capital and labor move freely across national borders".

<sup>3</sup> Lee E. Teitelbaum, 'An Overview of Law and Social Research' (1985) 35 *Journal of Legal Education* 466.

Lee E. Teitelbaum, former Hugh B. Brown Professor of Law and former Dean at the University of Utah S.J. Quinney College of Law and was one of the U.S.'s leading family law scholars; posited that: 'If laws are intended to produce certain results, questions about whether they do produce the expected results, whether they produce other results, and whether the identifiable results are as consistent with the reason for law as one might have anticipated, are all important to examine.'

<sup>4</sup> *Direct taxation: Commission requests Ireland to end discriminatory rules on tax treatment of patent royalties*, European Commission IP/07/408 case 2005/2427 (Brussels, 23 March 2007) 24  
<<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/408&format=HTML&aged=0&language=en&guiLanguage=en>> at 4 July 2012.

services, including the underlying intellectual property. Intellectual Property ('IP')<sup>5</sup> comprises patents,<sup>6</sup> 'know how', innovation and other forms of intangible property.<sup>7</sup> In this example, Ireland is the jurisdiction (access point) from which goods and services are supplied to the EU – the REC. The result of this process is twofold. Firstly, jurisdictions become a factor in the jurisdictional competition for relocating intellectual property assets such as patents, 'know how', innovation and other forms of intangible property. Secondly, an imbalance in the income tax levied is created within RECs. Such imbalances caused the European Commission to issue a reasoned opinion under Article 226 of the *Treaty establishing the European Economic Community* ('*EEC Treaty*'),<sup>8</sup> formally requesting Ireland to change its tax law provision by which patent royalties are tax exempt only if research leading to the patent was carried out in Ireland. Justification for the Commission's opinion that Irish tax treatment of patent royalties was a violation of Article 226 of the *EC Treaty* and a discriminatory practice was provided.<sup>9</sup> Ireland's tax treatment of patent royalties is often referred to as a 'harmful tax practice'<sup>10</sup> or simply 'tax poaching.'<sup>11</sup>

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<sup>5</sup> OECD, *Glossary of Tax Terms* (2013) [Intellectual Property] <[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. '**Intellectual Property** – Literary, dramatic, musical, artistic and scientific works are intellectual property which is protected by copyright, patent, registered design, trade mark, etc.'

<sup>6</sup> A patent is a grant of a property right, between a state and its inventor(s) for any device, substance, method or process, which is new, inventive and useful.

<sup>7</sup> OECD, *Glossary of Tax Terms* (2013) [Intangible Property] <[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. '**Intangible Property** – Property which has no physical existence but which has a value based on a legal right of the owner, e.g., goodwill, patent, trade mark, copyright, software, inventions, designs, i.e. all manner of intellectual property. Intangible property is usually transferred by way of a licensing agreement, and payments for the intangible are made in the form of royalties.'

<sup>8</sup> *Treaty Establishing the European Economic Community*, signed 25 March 1957, 294 UNTS (entered into force 1 January 1958) Article 226. The European Economic Community ('EEC') was renamed the European Community ('EC') with the establishment of the European Union through the *Treaty of European Union*, signed 7 February 1992, 1759 UNTS (entered into force 1 November 1993).

<sup>9</sup> *Direct taxation: Commission requests Ireland to end discriminatory rules on tax treatment of patent royalties*, above n 4, 24.

'Under Irish legislation (Section 243 of the Taxes Consolidation Act 1997) tax exemption of received patent royalties is granted only if the research leading to the patent was carried out in Ireland.

The Commission considers this provision contrary to Articles 43, 48 and 49 of the EC Treaty (freedom of establishment and free movement of services) and the corresponding articles of the EEA Agreement.

This provision dissuades Irish companies and individuals from contracting out research to institutions established elsewhere in the EU or in the EEA, since the income from any resulting patents would not be exempt, contrary to the rules which apply to domestic patents. Such legislation also dissuades Irish undertakings and individuals from setting up their research centres in other Member States, thus infringing their freedom of establishment.'

<sup>10</sup> See generally, <[http://www.oecd.org/newsearch/0,3766,en\\_2649\\_201185\\_1\\_1\\_1\\_1\\_1,00.html?q=%22harmful+tax+p](http://www.oecd.org/newsearch/0,3766,en_2649_201185_1_1_1_1_1,00.html?q=%22harmful+tax+p)

The violation of Article 226 of the *EC Treaty* by Ireland referred to above specifically identifies patent royalties as included in ‘these discriminatory rules on Irish tax treatment.’ The European Commission’s position on this matter is well taken given the fact that ‘[p]atents have become an appropriate measure of stocks of knowledge.’<sup>12</sup> The Hon. Mark Vaile, former Australian Minister for Trade and former Deputy Prime Minister of Australia, emphasized the importance of a knowledge economy by stating that ‘the contribution of knowledge-based industries to GDP is 48% for Australia.’<sup>13</sup> He continues, ‘more than ever before, innovation and technological change are at the core of economic activity and one of among the most important drivers of economic growth.’<sup>14</sup> These statements were made in 2000. Today, the importance of a knowledge economy is even more pronounced. The U.S. similarly values a knowledge-based economy and has spent the last three decades transforming itself from a manufacturing-based economy into a knowledge economy. This transformation was driven by innovation and intellectual property. As documented in Australia’s National Interest Analysis (‘NIA’)<sup>15</sup> of the Australia-U.S. Free Trade Agreement (‘AUSFTA’), ‘*It [the US] is the world’s largest trading nation, and most important source of technological innovation*’.<sup>16</sup> The Organization for Economic Co-operation and Development (‘OECD’),<sup>17</sup> is an international organization founded in 1961 comprising 34 mostly Western European countries and other industrial countries<sup>18</sup> to discuss and to attempt to coordinate economic and

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ractice%22&sa=Search&cx=012432601748511391518%3Axzeadub0b0a&cof=FORID%3A11&ie=UTF-8> at 5 July 2012.

<sup>11</sup> See generally, <<http://www.publications.parliament.uk/pa/ld199899/ldselect/ldcom/92/9204.htm>> at 5 July 2012.

<sup>12</sup> Walter W. Powell and Kaisa Snellman, ‘The Knowledge Economy’ (2004) 30 *Annual Review of Sociology* 199, 215.

<sup>13</sup> The Hon. Mark Vaile, ‘Australia and the Knowledge Economy’ (Speech delivered at The Economist Intelligence Unit, Canberra, 31 October 2000) 1 <[http://www.trademinister.gov.au/speeches/2000/001031\\_eiu.html](http://www.trademinister.gov.au/speeches/2000/001031_eiu.html)> at 4 July 2012.

<sup>14</sup> *Ibid* 4.

<sup>15</sup> *Australia-US Free Trade Agreement (AUSFTA)* [2004] ATNIA 5 <<http://www.austlii.edu.au/au/other/dfat/nia/2004/5.html>>.

<sup>16</sup> *Ibid*.

<sup>17</sup> See generally, <[www.oecd.org](http://www.oecd.org)>.

<sup>18</sup> OECD, *Members and Partners* (2013) <[http://www.oecd.org/document/25/0,3746,en\\_36734052\\_36761800\\_36999961\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/25/0,3746,en_36734052_36761800_36999961_1_1_1_1,00.html)> at 5 July 2013.

social policies.<sup>19</sup> On 26 June 2012 the OECD echoed Australia's sentiment concerning the U.S. in the following statement: '[t]he United States should do more to foster innovation and provide more equitable access to high-quality education in order to maintain its status as the world's most vibrant and productive economy.'<sup>20</sup>

As indicated above, tears in the legal fabric of a country may cause patents to be located and/or relocated to other jurisdictions. Recalling the impact knowledge-based industries have on economies, patents, as a measure of stocks in a country's knowledge within a knowledge economy, being located and/or relocated to other jurisdictions may dramatically affect an economy, as indicated below.<sup>21</sup>

*'Base erosion constitutes a serious risk to tax revenues, tax sovereignty and tax fairness for OECD member countries and non-members alike. While there are many ways in which domestic tax bases can be eroded, **a significant source of base erosion is profit shifting**. Whilst further work on the data related to base erosion and profit shifting (BEPS) is important and necessary, there is no question that BEPS is a pressing and current issue for **a number of jurisdictions**.'*<sup>22</sup> *'While there is a tax compliance aspect, ... the international common principles drawn from national experiences to share tax jurisdiction may not have kept pace with the **changing business environment**. Domestic rules for **international taxation** and internationally agreed standards are still grounded in an economic environment characterised by a lower degree of economic integration **across borders**, rather than today's environment of global taxpayers, characterised by the increasing importance of **intellectual property** as a value-driver'.*<sup>23</sup> [Emphasis Added]

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<sup>19</sup> OECD, *Glossary of Tax Terms* (2013) [OECD] <[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. The OECD is a multilateral organization comprised of 34 countries, which are mostly Western European countries and other industrialized countries including US and Japan. Founded in 1961, the OECD provides a forum for representatives of countries to discuss and attempt to coordinate economic and social policies. It has an especially significant role in international tax matters.

<sup>20</sup> OECD, *The United States needs to foster education and innovation to keep its cutting edge* (2012) <[http://www.oecd.org/document/59/0,3746,en\\_21571361\\_44315115\\_50653435\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/59/0,3746,en_21571361_44315115_50653435_1_1_1_1,00.html)> at 5 July 2012.

<sup>21</sup> OECD, *Addressing Base Erosion and Profit Shifting* (2013) OECD Publishing, 15-16 <<http://dx.doi.org/10.1787/9789264192744-en>> at 10 September 2013. '[T]he unweighted average of taxes on corporate income as a percentage of total taxation in OECD countries was 8.8% in 1965, dropped to 7.6% in 1975 and then consistently increased over the years until 2007, when the reported average ratio was 10.6%. Starting from 2008, likely due to the economic downturn [Global Financial Crisis], the ratio declined to 10% in 2008 and 8.4% in 2009; subsequently it increased to 8.6% in 2010.'

<sup>22</sup> *Ibid* 5.

<sup>23</sup> *Ibid*.

When patents are located and/or relocated to other jurisdictions, not only are the patents involved, but substantial portions of the ‘know how’ and innovation pertaining to the patents. The loss of this ‘know how’ and innovation to another jurisdiction is commonly referred to as ‘brain drain.’<sup>24</sup> According to large MNEs, ‘[w]ithin the current business climate, there is a voracious demand to aid with the development of ideas.’<sup>25</sup> Furthermore, ‘this demand includes the ability to track such ideas as they move from conception into well-rounded invention disclosures and beyond.’<sup>26</sup> The IBM Corporation<sup>27</sup> finds such intangible property so valuable that it developed a system to track, log and monitor inventors, scientists, engineers, users and others thoughts and ideas – knowledge and innovation. The system also provides ‘a time line of an idea brainstorming session which may lead to an idea to be abandoned before submission or the idea's growth may lead to a [sic] invention disclosure and or a patentable invention.’<sup>28</sup> Assuming an idea leads to a patentable invention, then the patentable invention may lead to a marketable product. Simplistically, a business model may consist of three steps: (1) idea to patent, (2) patent to product, and (3) product to market.

The simplified business model presented above provides a framework suggesting a number of issues that are dealt with in this thesis. First, the value of a product must be known before a jurisdiction may levy a tax on it. Second, the taxation of a product is jurisdiction specific, as indicated in the above Irish example, i.e., Irish tax treatment of patent royalties. Therefore, (1) the jurisdiction of the idea(s) leading to the patent, (2) the jurisdiction of the patent allowing the manufacture of the product, (3) the

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<sup>24</sup> Robert O. Blake, Jr., ‘U.S.-India Higher Education Summit: Closing Remarks’ (Speech delivered at Georgetown University, Washington D.C., 13 October 2011) <[http://www.trademinister.gov.au/speeches/2000/001031\\_eiu.html](http://www.trademinister.gov.au/speeches/2000/001031_eiu.html)> at 4 July 2012.

Robert O. Black, Jr. is the U.S. Assistant Secretary, Bureau of South and Central Asian Affairs. Arne Duncan is the U.S. Secretary, Bureau of South and Central Asian Affairs. Regarding brain drain Secretary Arne Duncan stated: ‘Here in the U.S. skeptics of international collaboration warned that the large number of Indian engineering and science students and the proliferation of Indian-born entrepreneurs are actually threats to U.S. workers and American competitiveness. And some Indian leaders similarly view America’s institutions of higher education as a source of **brain drain**. Despite India’s serious shortage of colleges, universities and vocational training institutes, a number of elected officials have promoted regulations that prevent or limit the development of India-based campuses of leading U.S. institutions of higher education.’ [Emphasis Added]

<sup>25</sup> U.S., *Patent No. 8,041,696* (2011) The United States Patent and Trademark Office, column 5, lines 25-36.

<sup>26</sup> Ibid.

<sup>27</sup> See generally, <[www.ibm.com](http://www.ibm.com)> at 5 July 2012.

<sup>28</sup> *Patent No. 8,041,696* above n 26, column 8, lines 13-18.

jurisdiction of the manufacture of the product, and (4) the jurisdiction of the sale of the product become critical factors in the computation of the overall tax levied on the product. There are 196 countries in the world,<sup>29</sup> including Taiwan. However, the U.S. does not include Taiwan due to its ‘One China’ policy that considers Taiwan as a part of China and not as an independent state.<sup>30</sup> Therefore, considering that there are either 195 or 196 countries in the world,<sup>31</sup> the selection of the jurisdiction for each of the above four roles in bringing a product to market becomes extremely difficult, especially when attempting to maximize profits. Finally, it is evident that between steps 1 and 3 a transition is made from dealing with intangible property, e.g. ideas and patents, to tangible property – products. This transition from intangible property to tangible property complicates how products are taxed. Some believe that transfer pricing<sup>32</sup> laws and regulations resolve this issue. The example provided in Chapter 2 is evidence that transfer pricing laws and regulations alone are currently not capable of fully addressing this matter.

## Related Works

As previously mentioned, the current business climate has a voracious appetite for new ideas, knowledge and innovation driven by government mandates. U.S. President Barack Obama referenced the word “innovate” in its various forms no less than 11 times and the word “technology” no less than 9 times during his 2011 State of the Union address.<sup>33</sup> A similar, but smaller, number of references were made in his

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<sup>29</sup> U.S., *Independent States in The World* (2012) The United States Department of State <<http://www.state.gov/s/inr/rls/4250.htm>> at 6 July 2012.

<sup>30</sup> Anthony Yuen, Interview with U.S. Secretary of State Hillary Rodham Clinton, (Washington D.C., 10 May 2011) <<http://www.state.gov/secretary/rm/2011/05/162979.htm>> at 6 July 2012. **‘SECRETARY CLINTON:** ... we are committed to a one China policy ... our position has always been based on the three communiqués and the Taiwan Relations Act, and it has not changed and it will not change.’

<sup>31</sup> U.S., *Independent States in The World* (2012) The United States Department of State <<http://www.state.gov/s/inr/rls/4250.htm>> at 6 July 2012.

<sup>32</sup> OECD, *Glossary of Tax Terms* (2013) [Transfer Pricing] <[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. **‘Transfer Pricing** – A transfer price is the price charged by a company for goods, services or intangible property to a subsidiary or other related company. Abusive transfer pricing occurs when income and expenses are improperly allocated for the purpose of reducing taxable income.’

<sup>33</sup> U.S. President Barack Obama, ‘State of the Union 2011: Winning the Future’ (Speech delivered at The White House, Washington DC, 25 January 2011) <<http://www.whitehouse.gov/state-of-the-union-2011>> and <<http://www.whitehouse.gov/the-press-office/2011/01/25/remarks-president-state-union-address>> at 7 July 2012.

2012 State of the Union address.<sup>34</sup> This appetite encouraged business, and related support industries, to increase their pace in developing new ideas, knowledge, innovation and new technologies. Specifically, in the three disciplines - law, economics and business, the number of innovation and knowledge-based economy related studies and models have increased. However, the literature concerning multidisciplinary models comprising all three of these disciplines is limited. A further reduction in the available literature is due to the transnational patent focus of the model in this thesis. A review of the limited number of available published research that relates to this thesis is provided below.

Trappey, Trappey and Wu of the National Chiao Tung University and the National Tsing Hua University in Taiwan developed a business model that extracts patent concepts from groups of patents and patent claims to identify key innovations within the group of patents, and predict future key innovations.<sup>35</sup> This model emphasizes the importance business places on the development and management of new ideas that drive future innovation. Although this model has limited applicability to the current research, it emphasizes the importance of such research.

Armstrong and Green of Monash University in Australia developed a business and economics model to assess the efficacy of competitor-oriented objectives on market share.<sup>36</sup> The model finds that '[d]espite evidence from diverse laboratory and field studies demonstrating that competitor-oriented objectives harm performance, the myth of market share lives on among business leaders who prefer to follow their gut instincts.'<sup>37</sup> In a related study, Armstrong and Green investigated business and economics methods that predict demand in various situations – demand forecasting.<sup>38</sup>

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<sup>34</sup> U.S. President Barack Obama, 'State of the Union 2012: An America Built To Last' (Speech delivered at The White House, Washington DC, 24 January 2012) <<http://www.whitehouse.gov/state-of-the-union-2012>> and <<http://www.whitehouse.gov/the-press-office/2012/01/24/remarks-president-state-union-address>> at 7 July 2012.

<sup>35</sup> Charles V. Trappey, Amy J.C. Trappey and Chun-Yi Wu, 'Clustering Patents Using Non-Exhaustive Overlaps' (2010) 19(2) *Journal of System Science and System Engineering* 162.

<sup>36</sup> J. Scott Armstrong and Keston C. Green, 'Competitor-oriented Objectives: The Myth of Market Share' (Working Paper 17/05, Monash University, 2005) <<http://www.buseco.monash.edu.au/ebs/pubs/wpapers/2005/17-05.php>> at 10 July 2012.

<sup>37</sup> *Ibid* 16.

<sup>38</sup> J. Scott Armstrong and Keston C. Green, 'Demand Forecasting: Evidence-based Methods' (Working Paper 24/05, Monash University, 2005) <<http://www.buseco.monash.edu.au/ebs/pubs/wpapers/2005/24-05.php>> at 10 July 2012.

Both investigations by Armstrong and Green aid this research by presenting business models that focus on the market – market share, market demand, and market expansion. These business models are dramatically different from the law and economics models of the remaining investigators.

John M. Golden, Professor of Law at the University of Texas at Austin, developed a business and legal model to investigate the relationship between innovation dynamics and patents.<sup>39</sup> In particular, Golden’s model focuses on technological progress and what accelerates and decelerates such progress. Golden describes this in the following manner: ‘a model for innovative progress in which the rate of progress is determined by a combination of accelerant “pushes” and decelerant “drags.”’<sup>40</sup> The objective of the Golden’s model is to determine whether patents are an accelerant or decelerant to innovative progress given “the recognized tension between patents’ capacities to stimulate and to slow technological progress”.<sup>41</sup>

Alan Devlin of Latham & Watkins LLP<sup>42</sup> developed a legal model ‘by which to construe the interaction between the patent and antitrust laws ... it posits that competition rules operate as a stochastic regulator of exclusionary patent rights.’<sup>43</sup> The Devlin model is one-dimensional in the sense that it only addresses the discipline of law.

Andrew W. Torrance, Professor of Law at the University of Kansas, and Bill Tomlinson, Associate Professor of Informatics at the University of California at Irvine, developed a business and legal model embodied as a game, the “Patent Game.”<sup>44</sup> The model simulates ‘the behaviour of inventors and competitors experimentally under conditions approximating patent and non-patent systems.’<sup>45</sup> Results are used to evaluate the hypothesis that patents promote innovation. The

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<sup>39</sup> John M. Golden, ‘Innovation Dynamics, Patents, and Dynamic-Elasticity Tests for the Promotion of Progress’ (2010) 24 (1 Fall) *Harvard Journal of Law & Technology* 48.

<sup>40</sup> Ibid 59.

<sup>41</sup> Ibid 48.

<sup>42</sup> See generally, <www.lw.com> at 7 July 2012.

<sup>43</sup> Alan Devlin, ‘The Stochastic Relationship Between Patents and Antitrust’ (2008) 5(1) *Journal of Competition Law & Economics* 75-122.

<sup>44</sup> Andrew W. Torrance and Bill Tomlinson, ‘Patents and the Progress of Useful Arts’ (2009) X *The Columbia Science and Technology Law Review* 130.

<sup>45</sup> Ibid.

focus of the Torrance and Tomlinson model on patent systems versus no patent systems limits the applicability of this model to the current investigation.

James Bessen of Boston University School of Law developed an economics and legal model to predict the value of patents through observing patent renewal rates.<sup>46</sup> In particular, Bessen posits the ‘notion of patent value corresponds to the “reward” theory of patents – patent rents [royalties] are the reward.’<sup>47</sup> In other words, ‘[p]atentees derive rents from their patents only so long as those patents remain in force. If the expected stream of rents is not larger than the fees required to keep the patent in force, patent owners will let the patent expire.’<sup>48</sup> Although Bessen’s model is partially correct, it does not account for an often-used U.S. tax reduction scheme. A multinational enterprise (‘MNE’)<sup>49</sup> sells a patent rather than letting it expire, but includes a license to some of the MNE’s other patents at no extra cost. This allows the transaction to be classified as a sale and in the U.S. benefits by having the transaction taxed at 15% rather than a nominal 35%.<sup>50</sup>

Bessen and Maskin of Massachusetts Institute of Technology describe two economic and legal models that represent (1) a traditional view of patents promoting innovation, referred to as a “static model”, and (2) a proposed view of patents inhibiting innovation, referred to as a “dynamic model.”<sup>51</sup> The models developed by Bessen and Maskin have limited applicability to this thesis, but are included for completeness.

Bessen and Meurer of Boston University School of Law describe an economics and legal model to help ‘understand what is driving the increase in litigation and what effect this has on firm incentives.’<sup>52</sup> Firms are randomly selected as either plaintiffs

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<sup>46</sup> James Bessen, ‘The Value of U.S. Patents by Owner and Patent Characteristics’ (Working Paper No. 06-46, Boston University School of Law Working Paper Series – Law and Economics, 2006).

<sup>47</sup> Ibid 4.

<sup>48</sup> Ibid 5.

<sup>49</sup> OECD, *Glossary of Tax Terms* (2013) [MNE]  
<[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. ‘MNE – Abbreviation for multinational enterprise.’

<sup>50</sup> 26 U.S.C. § 1235.

<sup>51</sup> James Bessen and Eric Maskin, ‘Sequential Innovation, Patents and Imitation’ (Working Paper No. 00-01, Massachusetts Institute of Technology Department of Economics Working Paper Series, 2000) 1.

<sup>52</sup> James Bessen and Michael J. Meurer, ‘The Patent Litigation Explosion’ (Working Paper No. 05-18, Boston University School of Law Working Paper Series – Law and Economics, 2005) 1.

or defendants in the same industry. The patent litigation model accounts for firm size, patent portfolio size and origin, as well as settlement, of disputes. In another economics and legal model by the same authors, a model of patent litigation costs is developed.<sup>53</sup> Empirical data from three sources: “Derwent’s Litalert database, firm financial data from Compustat, and CRSP data on securities prices”<sup>54</sup> is used in the development of the model. The model suggests that ‘alleged infringers lose about half a percentage point of their stock market value upon being sued for patent infringement.’<sup>55</sup> The Bessen and Meurer models are multidisciplinary, but are limited to domestic patent litigation in the U.S.

Hall (University of California at Berkeley), Thoma (University of Camerino, Camerino and CESPRI, Bocconi University) and Torrasi (University of Bologna) developed an economics and legal model measuring the private returns to investment in innovation or knowledge assets. Results from the model indicate that, although some commentators consider ‘software and business methods patents on average are of poor quality’, these patents are considerably more valuable than ordinary patents. Interestingly, this was ‘especially if they are taken out [filed] in the U.S.’<sup>56</sup> The Hall, Thoma and Torrasi model is the most comprehensive and detailed that approximates the objectives of this research. However, the principal focus of this model does not account for the jurisdictional nature of patents within RECs nor the patent royalties derived from such. The following models focus more precisely on the jurisdictional nature of patents and the royalties derived from such.

Griffith, Miller and O’Connell of The Institute For Fiscal Studies in the UK developed an economics and legal model to determine the effects the introduction of a patent box<sup>57</sup> would have within the United Kingdom. In particular, what effect the

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<sup>53</sup> James Bessen and Michael J. Meurer, ‘The Private Costs of Patent Litigation’ (Working Paper No. 07-08, Boston University School of Law Working Paper Series – Law and Economics, 2008).

<sup>54</sup> Ibid 5.

<sup>55</sup> Ibid 4.

<sup>56</sup> Bronwyn H. Hall, Grid Thoma and Salvatore Torrasi, ‘THE MARKET VALUE OF PATENTS AND R&D: EVIDENCE FROM EUROPEAN FIRMS’ (Working Paper 13426, NATIONAL BUREAU OF ECONOMIC RESEARCH, 2007) 1 <<http://www.nber.org/papers/w13426>>.

<sup>57</sup> UK, ‘Part IIB: The taxation of innovation and intellectual property – Corporate Tax Reform: delivering a more competitive system’ (2010) HM Treasury, 47 <[http://www.hm-treasury.gov.uk/d/corporate\\_tax\\_reform\\_part2b\\_innovation\\_and\\_intellectual\\_property.pdf](http://www.hm-treasury.gov.uk/d/corporate_tax_reform_part2b_innovation_and_intellectual_property.pdf)>. A Patent Box is defined as ‘a preferential regime for profits arising from patents’.

reduction in taxation of patent royalties within the United Kingdom would have on the location of patents, and their associated royalty stream.<sup>58</sup> The model utilized data from the European Patent Office ('EPO')<sup>59</sup> PATSTAT database containing all patent application filings and Bureau van Dijk's AMADEUS<sup>60</sup> database containing comprehensive information on around 19 million companies across Europe.<sup>61</sup> Analysis is limited to 'European parent firms and their European and US subsidiaries that apply for patents.'<sup>62</sup> The European parent firms represent fourteen European countries. The Griffith, Miller and O'Connell model does not account for the effects of regional trade agreements ('RTA's')<sup>63</sup> and implicitly accepts the benefits derived from all European parent firms being located in Member States of the European Community ('EC') and/or EU. A similar economics and legal model developed by Griffith, Miller and O'Connell simulates the effect of patent boxes on corporate taxes and intellectual property.<sup>64</sup> A more recent economics and legal model by Griffith and Miller demonstrates a relationship between corporate taxes and the location of innovative activity.<sup>65</sup> These latter two models are principally based on findings from the original model, previously discussed.<sup>66</sup> The Griffith, et al. models are multidisciplinary, but are limited to results and characteristics of fourteen European countries, all located within the EU and governed by the RTA of the EU.

Due to the complexity and nature of the current multidisciplinary research a model is proposed in the following paragraphs to accomplish the objectives of this research.

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<sup>58</sup> Rachel Griffith, Helen Miller and Martin O'Connell, 'The location of intellectual property and corporate taxes' (Working Paper, Institute for Fiscal Studies, 2010) <<http://www.eea-eseem.com/EEA/2010/prog/getpdf.asp?pid=1506&pdf=/files/papers/EEA/2010/1506/Griffith%20Miller%20and%20OConnell%202010.pdf&ei=hwr5T9WWFai6iQfDuM3uBg&usg=AFQjCNGMeXZtf0TeZ0uT1xFX2YnJyc2wyA&cad=rja>> at 7 July 2012.

<sup>59</sup> See generally, <[www.epo.org](http://www.epo.org)> at 7 July 2012.

<sup>60</sup> See generally, <<http://www.bvdinfo.com/Products/Company-Information/International/Amadeus>> at 7 July 2012.

<sup>61</sup> Griffith, above n 58, 11.

<sup>62</sup> Ibid.

<sup>63</sup> See generally, <[http://www.wto.org/english/tratop\\_e/region\\_e/region\\_e.htm](http://www.wto.org/english/tratop_e/region_e/region_e.htm)> at 7 July 2012.

<sup>64</sup> Rachel Griffith, Helen Miller and Martin O'Connell, 'Corporate taxes and intellectual property: simulating the effects of Patent Boxes' (IFS Briefing Note 112, Institute for Fiscal Studies, 2010).

<sup>65</sup> Rachel Griffith and Helen Miller, 'Corporate taxes and the location of innovative activity' (Presentation delivered at the International Tax Policy Forum, American Enterprise Institute, January 2012). <<http://www.ifs.org.uk/publications/5992>> at 7 July 2012.

<sup>66</sup> Griffith, above n 58.

## Hypothesis

Assuming a taxable event<sup>67</sup> consisting of patent portfolio royalty income<sup>68</sup> in the amount of A originates from source jurisdiction S, when A is repatriated to the legal owner of the patent portfolio in jurisdiction D then the tax liability in jurisdiction D is a simple tax calculation based on jurisdiction D's domestic tax law. If, however, a taxable event consisting of patent portfolio royalty income in the amount of A originates from source jurisdiction S, and only a percentage of the amount,  $(p * A)$ , is repatriated to the legal owner of the patent portfolio in jurisdiction D then the tax liability in jurisdiction D for that percentage of the amount is also a simple tax calculation based on jurisdiction D's domestic tax law. However, the location of the remaining  $(100\% - p)$  percentage of the original source amount A is indeterminate. Identification of potential jurisdictions providing favourable sites for some portion of the original sourcing amount A and having treaty obligations with the source jurisdiction S reduces the indeterminism in the treatment of royalty income from patents in cross-border transactions. This thesis will show that:

*It is important, even imperative, to have a model derived from sound legal, economic and business principles to determine the “force of attraction”<sup>69</sup> of Ireland in the treatment of income from patent royalties regarding cross-border transactions with the U.S. and Australia.*

This thesis concludes that it is beneficial to have such a model given the disparities between jurisdictions' domestic laws, the rapid pace of globalization, MNE's voracious appetite for patents, the increase in the number of bilateral treaties and the international demand for guidance on best practices.

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<sup>67</sup> OECD, *Glossary of Tax Terms* (2013) [Taxable Event] <[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. ‘**Taxable Event** – Term used to define an occurrence which affects the liability of a person to tax.’

<sup>68</sup> OECD, *Glossary of Tax Terms* (2013) [Royalties] <[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. ‘**Royalties** – Payments of any kind received as consideration for the use of, or the right to use intellectual property, such as a copyright, patent, trade mark, design or model, plan, secret formula or process.’

<sup>69</sup> The “force of attraction” is defined as the sum of all positive reasons, minus the sum of all negative reasons, provided by a jurisdiction to MNEs within that jurisdiction.

## Significance

This thesis fills a gap in the literature and partially addresses a need identified by the OECD in its 5-6 September 2013 report to the G20 leaders in St. Petersburg, Russia.<sup>70</sup> This is accomplished by fusing critical features of three specific disciplines, as previously identified by the OECD as major contributors to BEPS,<sup>71</sup> and focusing that fusion on the timely and necessary topic of the treatment of patent royalties in cross-border transactions. The gap in the literature is visually depicted in Table 1, below.

Model	Law	Economics	Business	Patents	Royalties	US	IE	AU	REC
(1) Trappey, Trappey and Wu			X	X		X			
(2) Armstrong and Green		X	X					X	
(3) Armstrong and Green		X	X					X	
(4) Golden	X		X	X		X			
(5) Devlin	X			X		X			
(6) Torrance and Tomlinson	X		X	X	X	X			
(7) Bessen	X	X		X	X	X			
(8) Bessen and Maskin	X	X		X	X	X			
(9) Bessen and Meurer	X	X		X		X			
(10) Bessen and Meurer	X	X		X		X			
(11) Hall, Thoma and Torrasi	X	X		X	X	X	X		
(12) Griffith, Miller and O’Connell	X	X		X	X	X	X		
(13) Griffith, Miller and O’Connell	X	X		X	X	X	X		
(14) Griffith and Miller	X	X		X		X			
<b>Proposed Model – Chapter 10</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>

**Table 1: Comparison of Topical Matter from Related Works’ Models.**

Table 1 depicts each of the related models from the literature and the topical matter the specific model addresses. For example, the Hall, Thoma and Torrasi model is based on fundamental principles from law and economics while accounting for patent and patent royalty attributes from the U.S. and Ireland. The table is barely half populated with only 66 out of 126 cells marked. None of the models found in the literature account for all model characteristics in the table of the proposed model. The

<sup>70</sup> OECD, *OECD Secretary – General Report To The G20 Leaders* (2013) OECD Publishing, Annex I, 52 <[www.oecd.org/ctp/SG-report-G20-Leaders-StPetersburg.pdf](http://www.oecd.org/ctp/SG-report-G20-Leaders-StPetersburg.pdf)> at 10 September 2013. ‘There is a need to consider innovative ways to implement the measures resulting from the work on the BEPS Action Plan.’ [Emphasis Removed]

<sup>71</sup> *Addressing Base Erosion and Profit Shifting*, above n 21.

clear lack of models in the literature that address the effects of the treatment of patent royalties in jurisdictions that participate in RECs is significant and sufficient justification for the present study.

Other significant aspects of this thesis are as follows. First, this thesis dispels the commonly accepted notion that corporate tax rates are the principal factor in relocating intellectual property assets to other jurisdictions. Second, this thesis develops a model capable of computing the force of attraction between jurisdictions regarding patent holdings, and concludes that many heretofore *ad hoc* processes and procedures may now be quantified. Third, this thesis uses novel three dimensional visualization techniques to both compare and contrast the similarities and differences between pairs of jurisdictions in a single operational view. Fourth, this thesis quantifies the jurisdictional force or attraction between two jurisdictions, which is sorely missing in the OECD's recent publications regarding BEPS. Finally, based on the quantified jurisdictional force of attraction between jurisdictions suggestions and recommendations allow proactive development and/or modification of both current and future legislation including international treaties, domestic statutes and domestic regulations.

## Method

The method is a quantitative method, as previously defined, with 'its key features being quantitative measurement of the phenomena studied and systematic control of the theoretical variables influencing those phenomena.'<sup>72</sup> Three types of legal research, as identified in the Pearce Report,<sup>73</sup> are employed in this thesis. First, the early chapters use theoretical research 'which fosters a more complete understanding of the conceptual basis of the legal principles and of the combined effects of a range of rules and procedures which touch on a particular area of activity.'<sup>74</sup> Second,

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<sup>72</sup> Martyn Hammersley, above n 1, 39.

<sup>73</sup> Submission of Australian Law Deans (April 1986 to the CTEC Assessment Committee for the Discipline of Law published in Dennis Pearce, Enid Campbell and Don Harding, *Australian Law Schools: A Discipline Assessment for the Commonwealth Tertiary Education Commission*, vol. III (Canberra: Australian Government Publishing Service, 1987) vol. 2, para. 9.15 (Pearce Committee Report). 'When one uses the term 'research', as a key aspect of 'scholarship' the former term must accordingly be interpreted widely enough to cover a whole range of **investigative, analytical, critical, theoretical** and/or synthesising intellectual activity by academic lawyers.' [Emphasis Added]

<sup>74</sup> D Pearce, E Campbell and D Harding, *Australian Law Schools: A Discipline Assessment for the Commonwealth Tertiary Education Commission* (Canberra: AGPS, 1987) 311.

analytical research, e.g., quantitative measurement of the phenomena, is used in understanding existing domestic and international rules and regulations in the development of a model capable of identifying the effects of these rules and regulations on multiple jurisdictions. Third, critical research is used in an examination of the findings from the model culminating in proposals and recommendations. These proposals and recommendations are the results of the scholarly research found herein. This scholarly research is a higher order of research activity, which relies heavily on theoretical, analytical (empirical), and critical research, as defined in the Pearce Report.<sup>75</sup> The theoretical, analytical and critical research aspects of the method are discussed more fully below.

### **The Method: Theoretical Research Aspects**

Referring back to the aspects of theoretical research ‘which fosters a more complete understanding of the conceptual basis of the legal principles and of the combined effects of a range of rules and procedures which touch on a particular area of activity.’<sup>76</sup> The ‘particular area of activity’ in this thesis is defined as the treatment of income from patent royalties in cross-border transactions. The ‘conceptual basis of legal principles’ and the ‘range of the rules and procedures’ touching on the treatment of income from patent royalties in cross-border transactions is depicted in Figure 1 below.

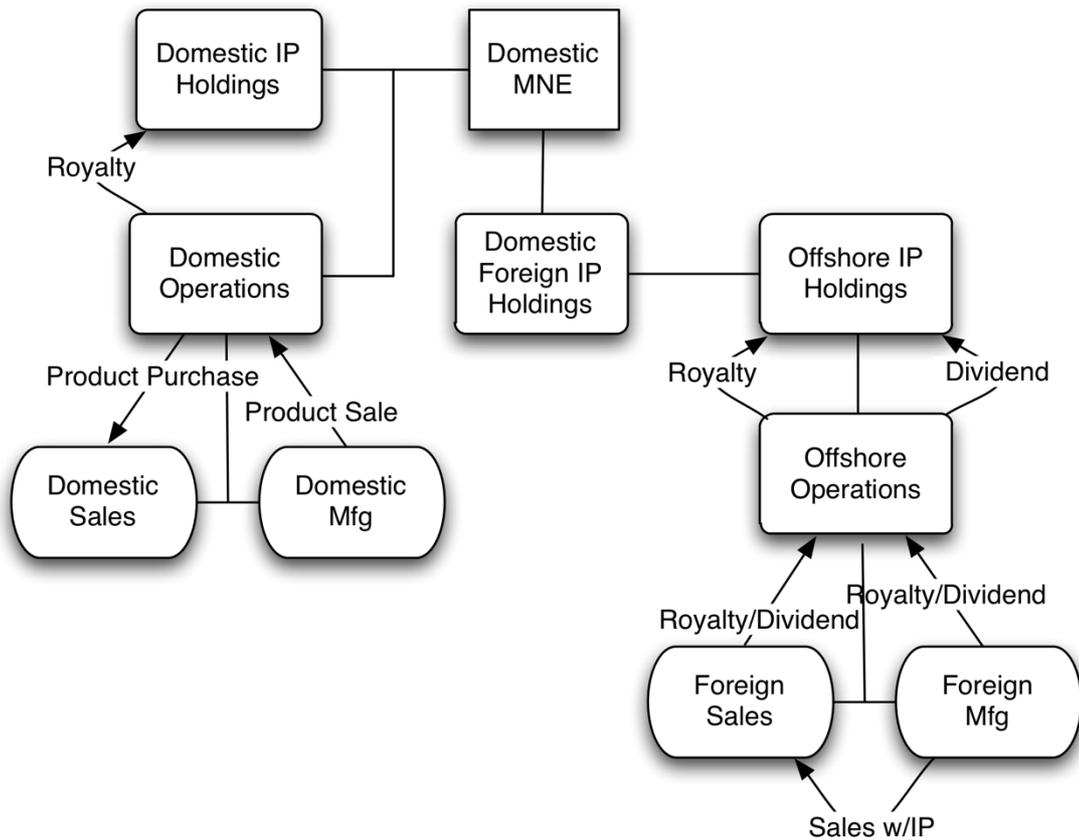
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<sup>75</sup> Ibid.

<sup>76</sup> Ibid.



‘[U]nderstanding the conceptual basis of the legal principles and of the combined effects of a range of rules and procedures’<sup>79</sup> requires the application of these legal principles, rules and procedures. Figure 2, below, depicts a realistic MNE structure, similar to the examples provided by the OECD,<sup>80</sup> designed to take advantage of the jurisdictional conflict within the legal landscape of Figure 1 regarding the treatment of patent royalty income in cross-border transactions.



**Figure 2: Realistic MNE Structure.**

Figure 2 requires some explanation. A source of potential confusion arises from the two boxes labeled ‘Domestic MNE’ and ‘Domestic Foreign IP Holdings.’ The unintended consequence of labeling these two boxes in this fashion is the creation of two oxymorons. In brief, the first of these two boxes indicates that an MNE is located/headquartered in a specific domestic jurisdiction, but with offshore operations. The second of these two boxes indicates that the MNE’s IP is owned

<sup>79</sup> Pearce, above n 74.

<sup>80</sup> *Addressing Base Erosion and Profit Shifting*, above n 21, Annex C, 73-81.

and/or located in a domestic jurisdiction, but is licensed and/or used in offshore operations.

Figure 2 also depicts at least four potential royalty income taxable events, five potentially different jurisdictions and at least five potential destinations for some percentage of the original source amount stemming from each of the potential taxable events. The body of literature contains volumes of empirical and anecdotal data regarding complex, global corporate and tax structures<sup>81</sup> (MNEs, technology, taxation, and the like) and a limited number of models attempting to address specific aspects of such scenarios.<sup>82</sup> Based on this and the MNE's structure and the volume of legal principles, rules and regulations, as depicted in Figure 1, that must be applied to each entity (box) depicted in Figure 2 the theoretical research aspects of the method are quite complex.

### **The Method: Analytical Research Aspects**

Lloyd Edgar Ohlin, an American sociologist and criminologist who taught at Harvard Law School, Columbia University, and the University of Chicago during his legal career; noted that legal professionals 'are most interested in discussions relating to solution of social problems and the grounds for choosing among public policy alternatives'<sup>83</sup> rather than 'the complications of research design and the detailed development of proof for different hypothetical propositions'<sup>84</sup> associated with quantitative methods. Notwithstanding the previous sentence and the fact that '[t]he amount of time one needs to invest to do [empirical] research is enormous compared to the amount of time one invests in writing traditional law review articles',<sup>85</sup> the research method employed is a quantitative method based on the quantitative measurement of empirical data. In particular, the analytical research or quantitative

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<sup>81</sup> University of Vienna, *Activity Report* (2009) <[www2.wu.ac.at/taxlaw/ActivityReport/Taetigkeitsbericht\\_200809.pdf](http://www2.wu.ac.at/taxlaw/ActivityReport/Taetigkeitsbericht_200809.pdf)> at 15 October 2011.

<sup>82</sup> Griffith et al., above n 58.

<sup>83</sup> Lloyd E. Ohlin, 'Partnership with Social Sciences' (1970-71) 23 *Journal of Legal Education* 206.

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

<sup>85</sup> Julius G. Getman, 'Contributions of Empirical Data to Legal Research' (1985) 35 *Journal of Legal Education* 493.

Julius G. Getman is a Professor of Law at the University of Texas School of Law and a preeminent scholar in the field of labor law, where he pioneered empirical studies and continues to do extensive field work.

measurement aspects of this thesis go beyond the conceptualization ‘of the legal principles and of the combined effects of a range of rules and procedures which touch on a particular area of activity.’<sup>86</sup> The analytical aspects of this thesis quantify the affect of the aforementioned legal principles, rules and procedures in the form of metrics that govern the development and operation of a model capable of identifying the effects of MNE structure and these rules and regulations within multiple jurisdictions.

A classical, non-discipline specific, fifteenth century comparative analysis approach<sup>87</sup> is employed in this investigation to compare and contrast the legal principles, rules and procedures, as specified in Figure 1. The selected analytical method, as previously mentioned, entails the following three steps: (1) identify the objects of comparison (*a* and *b*) – Australia, Ireland and the U.S., (2) identify the set of common properties (T) or metrics derived from patent law, treaties, taxation law, business and economic data, and (3) create a list of similarities and dissimilarities with respect to (1) and (2), and (4) analyze the results. This is substantially similar to the five-point approach of Harvard’s Kerry Walk that includes: (1) Frame of Reference, (2) Grounds for Comparison, (3) Thesis, (4) Organizational Scheme and (5) Linking.<sup>88</sup> The most difficult aspect of the selected analytical method of comparative analysis is identifying and obtaining the set of common properties (T), or metrics, from the specified disciplines (patent law, treaties, taxation law, business and economics) for each of the three jurisdictions under study. Conceptually, the analytical aspects of this method may be reduced to subtraction. Subtraction in its simplest form obtains the difference between two items. In essence, subtraction provides the means to obtain the desired metrics for the model in this thesis through the resulting differences between the three jurisdictions’ legal, economic and business information. Once metrics are identified and obtained (in a quantitative form) then the model may be used to produce results that may be compared and contrasted, as discussed in the critical research section below.

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<sup>86</sup> D Pearce et al., above n 74, 311.

<sup>87</sup> Nikolaus de Kues (1401-64), *De docta ignorantia, liber I, capitulum I, II* (§§ 2 f, 31 f).

<sup>88</sup> Kerry Walk, *How to Write a Comparative Analysis* (1998) Harvard University, Faculty of Arts and Sciences – Writing Center <<http://www.fas.harvard.edu/~wricntr/documents/CompAnalysis.html>> at 15 October 2011.

The analytical research aspects of the method employed are similar to comparative analyses performed in comparative and computational linguistics. One commentator<sup>89</sup> suggested that of all the disciplines engaged in comparative analysis, '[t]he first place, however, must be given to comparative linguistics, both for its extraordinary success and because grammar has often been understood as an intellectual model for the status of law's doctrines.'<sup>90</sup> Other commentators not only agreed that 'grammar has often been understood as an intellectual model for the status of law's doctrines'<sup>91</sup> but also developed this notion even further. Three Stanford University researchers suggested that '[i]n a simplified model of the legal rule lifecycle, there are four phases: 1) ideation, 2) encoding, 3) interpretation, and 4) application.'<sup>92</sup> Two English researchers indicated that 'the long term goals [of] artificial intelligence and law has been to identify, extract, and formulate conditional or normative rules from legal source material.'<sup>93</sup> Robert Kowalski, another researcher endeavouring to automate a portion of the comparative analysis process, drew a connection between legal legislation and logic programs, as indicated below.

The characteristic feature of the language of legislation is that it uses natural language to express general rules, in order to regulate human affairs. To be effective for this purpose, it needs to be more precise than ordinary language and, as much as possible, it needs to be understood by different people in the same way. In this respect legislation can be viewed as programs expressed in human language to be executed by humans rather than by computers.<sup>94</sup>

The above references support the need for, what comparative legal scholars refer to as, the use of a more mechanical approach to the method of comparative analysis than

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<sup>89</sup> Mathias Reimann and Reinhard Zimmermann (eds), *The Oxford Handbook of Comparative Law* (2008) 320.

<sup>90</sup> Maximilian Herberger, *Dogmatik. Zur Geschichte von Begriff und Methode in Medizin und Jursiprudenz* (1981), 37 f, 74 ff, 119, 257 f; Zenon Bankowski, D. Neil MacCormick, Robert S. Summers, and Jerzy Wroblewski, 'On Method and Methodology', in D. Neil MacCormick and Robert S. Summers (eds), *Interpreting Statutes* (1991), 9, 20.

<sup>91</sup> Ibid.

<sup>92</sup> Harry Surden, Michael Genesereth and Bret Logue, 'Managing Representational Complexity in Computational Law' (2007) 2 <[codex.stanford.edu/cal/ICAILProposedPaper.pdf](http://codex.stanford.edu/cal/ICAILProposedPaper.pdf)> at 15 October 2011.

<sup>93</sup> Adam Wyner and Wim Peters, 'On Rule Extraction from Regulations' (Paper at JURIX 2011 - The 24th International Conference on Legal Knowledge and Information Systems, Vienna, Austria, 14-16 December 2011) 1 <<http://wyner.info/research/Papers/WynerPetersJURIX2011.pdf>> at 15 October 2011.

<sup>94</sup> Robert A. Kowalski, 'Legislation as Logic Programs' (1992) 1 <[www.doc.ic.ac.uk/~rak/papers/law.html](http://www.doc.ic.ac.uk/~rak/papers/law.html)> at 15 October 2011.

the functional method from comparative law, at least, for some research endeavours. These references should not be construed as an effort to turn this thesis into a mathematical treatise – absolutely not and for good reason. Reportedly in January 1983 Simon Mitton, director of the Institute of Astronomy at Cambridge, reviewed a proposed chapter intended for *A Brief History of Time* by Steven Hawking.<sup>95</sup> Mitton informed Hawking that “[i]t’s still far to technical ... Look at it this way, Steve – every equation will halve your sales.”<sup>96</sup> The intent of the selected analytical aspects of the method and ultimately the derived model is not to reduce the readership to zero, but rather to account for, as of yet unidentified variables and relationships that may prove significant in the treatment of income from patent royalties in cross-border transactions.

### **The Method: Critical Research Aspects**

The critical research aspects of this thesis involve a critical examination of the findings from the model results culminating in recommendations regarding the current study and proposals for future investigations. The simplest form of critical examination, i.e., comparison of the results, is used. Interpretation of model results may be problematic, however, ‘lawyers may assume that common sense normally suffices for satisfactory comparisons.’<sup>97</sup> Justification for such an approach is centuries old and ‘[a]s a scientific method, comparison has a long history and has been used in most academic disciplines.’<sup>98</sup> In the fifteenth century Bishop Cusanus argued ‘that all research is done through comparison and by setting comparative relations;’<sup>99</sup> and in subsequent centuries comparison was also seen as a universal method.’<sup>100</sup> Comparative analysis is the exploration of similarities and dissimilarities of objects (animate and inanimate), ideas and phenomenon. Nils Jansen,<sup>101</sup> a visiting Professor of Law at Duke Law School, suggests it is a two-step process. ‘The comparatist must first understand and describe the foreign phenomenon before

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<sup>95</sup> Stephen Hawking, *A Brief History of Time* (1988).

<sup>96</sup> Bernard Ryan, Jr. and Stephen Hawking, *Physicist and Educator* (2005) 56.

<sup>97</sup> Mathias, above n 89, 308.

<sup>98</sup> *Ibid* 318.

<sup>99</sup> Nikolaus de Kues, above n 87.

<sup>100</sup> Mathias, above n 89, 318.

<sup>101</sup> See generally, <<http://www.law.duke.edu/fac/jansen/>> at 7 July 2012.

proceeding to formulate a system of similarities and differences which can serve as a basis for further analysis.’<sup>102</sup> A more formalistic definition is provided below.

Comparison is the construction of relations of similarity or dissimilarity between different matters of fact. However, a statement that two persons *a* and *b* ‘are similar’ is hardly a meaningful proposition; such statements normally mean only that they *look* similar, that they share a certain property, or that they behave similarly. Thus, properly comparative propositions in their simplest form draw a triadic relation between two objects and a certain quality, the *tertium comparationis*. ‘S *ab* T’ signifies that *a* and *b* are similar with regard to T, which is a common property of *a* and *b*. The similarity of *a* and *b* is due to their sharing the property T. Likewise, ‘D *ab* T’ states that *a* and *b* are dissimilar with regard to T: whereas *a* or *b* is T, the other is not.<sup>103</sup>

The above quotation suggests that the comparative analysis required to support the hypothesis be performed by: (1) identifying the objects of comparison (*a* and *b*) – model results from Australia, Ireland and the U.S., (2) identifying the set of common properties (T) – forces of attraction in a 3-space of law, economics and business, (3) create a list of similarities and dissimilarities with respect to (1) and (2), and (4) analyze the results in a similar fashion to that found in the analytical aspects section of this thesis. These steps in the critical examination of the model results are aided by the comparative results being graphically displayed in the 3-space previously mentioned while representing the forces of attraction between the jurisdictions under study. Not surprisingly, ‘lawyers have always been aware of the fact that comparison may entail the necessity of developing suitable instruments for neutrally describing the legal systems [jurisdictions] compared.’<sup>104</sup> In this regard, the model of Chapter 10 and its results displayed as previously mentioned provide a suitable choice for the critical research aspects of this thesis.

## Outline

Chapter 1, introduces a jurisdictional conflict related to the treatment of cross-border patent royalty income, the phenomenon, and a plan for understanding, analyzing and

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<sup>102</sup> Mathias, above n 89, 306.

<sup>103</sup> Ibid 310.

<sup>104</sup> Ulrich Drobniq, ‘Methodenfragen der Rechtsvergleichung im Lichte der “International Encyclopedia of Comparative Law”’, in *Ius Privatum Gentium: Festschrift für Max Rheinstein* (vol 1, 1969), 221, 228.

comparing this phenomenon in various and differing jurisdictional environments. Chapter 2 continues the discussion of the phenomenon introduced in this chapter. A more detailed examination of the phenomenon is presented in Chapter 2. Chapters 3 through 7 discuss various aspects of Figure 1, which circumscribe the legal environment addressed in this thesis. More importantly, Chapters 3 through 7 present information that employed later as discipline specific metrics required by the model developed in Chapter 10. Chapters 3 through 5 present and discuss the international components, while Chapters 6 and 7 present the domestic components depicted in the legal landscape of Figure 1.

More specifically, Chapter 3 discusses the international organizations depicted in Figure 1 and their associated patent related involvement and initiatives. Chapter 4 introduces and discusses the international treaties depicted in Figure 1 and their relationship to patents. Chapter 5 introduces the Model Taxation Conventions ('MTC's')<sup>105</sup> – OECD, UN, and US – depicted in Figure 1 and discusses the relationship of specific MTCs with respect to Australia, Ireland and the U.S. Chapter 6 discusses the domestic patent laws of Australia, Ireland and the U.S., as depicted in Figure 1. Chapter 7 presents an overview of the domestic tax laws of Australia, Ireland and/or the U.S. regarding patent royalties and cross-border transactions, as depicted in Figure 1. The volume of tax statutes in each of these three jurisdictions precludes an in depth analysis of any one particular statute or group of statutes. The overview of domestic tax laws is solely meant to facilitate the understanding of the structural aspects of jurisdictional arbitrage, as presented in Chapter 9. The example of jurisdictional arbitrage presented in Chapter 9 is of a U.S. MNE and therefore the overview of domestic tax law is biased towards that of the U.S. Chapter 8 discusses business strategies regarding patents and patented products generally and the economics of globalization more specifically. Chapter 9 distils the previous chapters' content into a generalized model for MNE structure capable of simulating jurisdictional arbitrage. Two examples are subsequently presented based on that model. The generalized model presented in Chapter 9 is not the same as the model

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<sup>105</sup> OECD, *Glossary of Tax Terms* (2013) [Model Taxation Conventions] <[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. '**Model Taxation Conventions (TREATIES)** – A model tax treaty is designed to streamline and achieve uniformity in the allocation of taxing right between countries in cross-border situations. Model tax treaties developed by OECD and UN are widely used and a number of countries have their own model treaties.'

developed in Chapter 10. The generalized model of Chapter 9 is a model of a corporate structure consistent with jurisdictional arbitrage.

The final portion of this thesis comprises Chapters 10 through 12. Chapter 10 utilizes the information, the empirical data, presented in the preceding chapters to articulate a model capable of identifying pairwise jurisdictional characteristics regarding patent royalty income. The tripartite model, in essence, identifies the forces of attraction and repulsion pairwise between jurisdictions based on legal, economic and business metrics regarding patent royalty income. Chapter 11 presents and discusses the results obtained by employing the model of Chapter 10 with the jurisdiction specific metrics from Australia, Ireland and the U.S. Metrics from a South Pacific island, American Samoa, are added to the model and the results explored in relationship to Australia, Ireland and the U.S. for model validation purposes. Chapter 12 summarizes the research, its findings, and identifies specific areas that may benefit from the application of these findings, while articulating the need for future research in specific related disciplines.

## **Summary**

In this chapter a problem or phenomenon was presented, the hypothesis of this thesis proffered, a method was selected for the development of a model capable of identifying legal frameworks that are susceptible to jurisdictional arbitrage regarding the income from patent royalties in cross-border transactions, as indicated in the following four steps. First, jurisdictions already besieged by jurisdictional arbitrage are identified, e.g., Australia and the U.S. Second, empirical data from the identified jurisdictions is analyzed and compared. Third, results of the analysis and comparison are extrapolated to other jurisdictions. Finally, findings from this study suggest use in a prescriptive manner to proactively address the potential risks and/or rewards indicated by these findings through both current and future legislation (international treaties, domestic statutes and domestic regulations).

In brief, the following list summarizes the contents of this chapter.

- Identification of a unique and worldwide patent related phenomenon that erodes domestic tax bases<sup>106</sup>
- Selected a limited number of jurisdictions for inclusion in this study that exhibit the following characteristics:
  - Provide ample and easily accessible empirical data
  - Maintain a common legislative and statutory language
  - Share common legal principles grounded in common law
  - Enjoy a common legal system genesis
- Defined clear limits and boundaries to the study
- Developed a concise hypothesis suggesting that the complexity of the problem demands a model be developed that accounts for these complexities and enabling a better understanding of the phenomenon within the selected jurisdictions
- Selected a comparative analysis method dating back to the fifteenth century
- Discussed the details of the selected methodology
- Described the structure, organization and content of the remaining chapters

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<sup>106</sup> *Addressing Base Erosion and Profit Shifting*, above n 21.

## CHAPTER 2 – EXAMINATION OF THE PROBLEM

The introductory chapter provided an overview of a global issue or phenomenon regarding patent related activities – jurisdictional arbitrage. This chapter builds upon that information by providing specific detail and history of that phenomenon, including a discussion of the most publicized example of this phenomenon – Ireland.

### Background and Justification

General Electric Company ('GE'),<sup>107</sup> a U.S. MNE,<sup>108</sup> 'earned \$14.2 billion in profits in 2010,'<sup>109</sup> yet paid nothing in U.S. tax. In fact, GE received 'a \$3.2 billion tax benefit.'<sup>110</sup> How was that possible? The U.S. arguably has the most voluminous and most complex tax regime<sup>111</sup> on the planet and yet was unable to obtain a single cent in taxes from GE beginning in 2010. This sparked public outrage within the U.S.<sup>112</sup> for two reasons. First, Jeffrey Immelt, CEO of GE, 'whom Obama in January named to head a new White House panel aimed at driving jobs growth'.<sup>113</sup> This was controversial because GE was so successful at avoiding U.S. taxes. Second, the U.S. was awash in debt,<sup>114</sup> which was exacerbated by President Obama's GFC stimulus

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<sup>107</sup> See generally, <<http://www.ge.com/>> at 15 April 2011.

<sup>108</sup> The entities involved in multi-national transactions are usually governments or companies. Therefore, the acronym "MNC" is used to denote Multi-National Company. However, with regards to patents that may be held by a variety of legal entities and are jurisdiction specific, the use of the term MNC may be inaccurate and misleading. It is for this reason that the jurisdiction neutral term Multi-National Enterprise (denoted by MNE) is used throughout this document. Excellent explanation

<sup>109</sup> Jake Tapper – ABC News, 'General Electric Paid No Federal Taxes in 2010', The White House, 25 March 2011 (Jake Tapper) <<http://abcnews.go.com/Politics/general-electric-paid-federal-taxes-2010/story?id=13224558>> at 7 April 2011.

<sup>110</sup> Ibid.

<sup>111</sup> Bradford L. Ferguson, Frederic W. Hickman & Donald C. Lubick, Reexamining the Nature and Role of Tax Legislative History in Light of the Changing Realities of the Process (1989) 67 *Taxes* 804, 806. 'The Internal Revenue Code is the most lengthy, most complex, most internally interrelated statute on the books today.'

<sup>112</sup> Brian Montopoli – CBS News, 'Associated Press falls for "Yes Men"-linked GE hoax', Politics, 13 April 2011 (Brian Montopoli) <[http://www.cbsnews.com/8301-503544\\_162-20053523-503544.html](http://www.cbsnews.com/8301-503544_162-20053523-503544.html)> at April 18, 2011. 'General Electric Company (GE) was the target of a hoax saying GE would return GE's tax refund to the U.S. government. The news of this announcement sent GE stock lower in trading until the announcement was determined to be a hoax. Further information is available at most major news outlets on the Internet, including Associated Press.'

<sup>113</sup> Scott Malone – Reuters, 'GE target of hoax saying it will return tax refund', 13 April 2011 (Scott Malone).

<sup>114</sup> See generally, <<http://www.treasurydirect.gov/NP/BPDLLogin?application=np>> at 15 November 2011.

spending,<sup>115</sup> and looming unilateral tax increase. In fact, immediately after the 2012 U.S. presidential elections the unilateral tax increase became effective the first day of President Obama's first day of his new term, 1 January 2013. Microsoft Corporation,<sup>116</sup> another U.S. MNE, performs its entire software product licensing (software product sales) for Europe, Middle East, and Africa ('EMEA')<sup>117</sup> from Ireland, not the U.S. Microsoft's restructuring, which included Ireland as the focal point for EMEA licensing and distribution activities, successfully reduced Microsoft's U.S. tax liability by nearly 50%.<sup>118</sup> James Hardie Australia Pty Ltd,<sup>119</sup> an Australian MNE with revenue of A\$1.55 billion per year,<sup>120</sup> moved its company headquarters first to the Netherlands<sup>121</sup> and then to Ireland.<sup>122</sup> A spokesperson for the James Hardie company made clear the restructuring and headquarter move was tax motivated.<sup>123</sup>

### Corporate Commonality

What do these three companies have in common? More importantly, what did they do? 'GE is an advanced **technology**, services and finance company taking on the world's toughest challenges. Dedicated to innovation ... GE operates in more than 100 countries ...'<sup>124</sup> [Emphasis Added] Microsoft Corporation and its employees 'are committed to ... customers and partners and have a passion for **technology** ... take on big challenges,' and hold themselves 'accountable to our customers, shareholders,

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<sup>115</sup> See generally, <<http://www.recovery.gov/Pages/default.aspx>> at 15 November 2011.

<sup>116</sup> See generally, <<http://www.microsoft.com/en-us/default.aspx>> at 15 April 2011.

<sup>117</sup> *EMEA Press Centre* (2011) Microsoft Corporation <<http://www.microsoft.com/presspass/emea/presscentre/>> at 7 April 2011.

<sup>118</sup> Glenn R. Simpson, 'Irish unit lets Microsoft cut taxes in U.S., Europe' *Wall Street Journal Online* (US) 7 November 2005 <<http://www.post-gazette.com/pg/pp/05311/602213.stm>> at 10 April 2010. 'Microsoft routes the license sales through Ireland and Round Island pays a total of just under \$17 million in taxes to about 20 other governments'. Microsoft delivers its Windows products to European customers straight from Ireland, and the profits go straight back to Ireland. Since most of the profits from Microsoft programs are in the form of copyright licensing fees, "it is likely that low or nil taxes are payable in the other EU states," says John Ward, a tax professor at the University of Ulster in Belfast, Northern Ireland.'

<sup>119</sup> See generally, <<http://jameshardie.com.au/main/about.html>> at 7 April 2011. James Hardie Australia Pty Ltd ABN12084635558.

<sup>120</sup> *Ibid.*

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

<sup>122</sup> John Mulligan, 'James Hardie confirms relocation to Ireland' *Irish Independent* (Ireland) 25 June 2009 <<http://www.independent.ie/business/irish/james-hardie-confirms-relocation-to-ireland-1789172.html>> at 15 April 2011.

<sup>123</sup> *Ibid.*

<sup>124</sup> See generally, <<http://www.ge.com/>> at 15 April 2011.

partners, and employees by honoring ... commitments, providing results, and striving for the highest quality.’<sup>125</sup> [Emphasis Added] ‘James Hardie expanded its operations to become a world-leading, specialised, high-**technology** manufacturer of a wide range of fibre cement building materials.’<sup>126</sup> [Emphasis Added]

The above three MNEs are all technology-based. This point is further evidenced by the following facts. GE was ranked number eight (8) in the ‘All Technologies Report’ of March 2011 published by the U.S. Patent and Trademark Office (‘U.S. PTO’) with 22,505 U.S. patents.<sup>127</sup> Microsoft Corporation was ranked number sixteen (16) in the same report issued by the U.S. PTO with 15,309 U.S. patents.<sup>128</sup> James Hardie Technology Limited was not ranked in the same report issued by the U.S. PTO because the report only listed companies with 1,000 or more U.S. patents.<sup>129</sup> James Hardie Technology Limited, James Hardie International Finance B.V. and James Hardie Research Pty Limited received 128 U.S. patents – 54 are owned by James Hardie’s Australian operation (James Hardie Research PTY Limited), 34 are owned by James Hardie’s Netherland operation (James Hardie International Finance B.V.), and 23 are owned by James Hardie’s Irish operation (James Hardie Technology Limited).<sup>130</sup> Furthermore, GE was ranked as one of the ‘Largest home-based TNCs’ in the United Nations Conference on Trade and Development (‘UNCTAD’)<sup>131</sup> World Investment Directory (‘WID’)<sup>132</sup> Country Profile for the U.S., where TNCs is an acronym for Transnational Corporations.<sup>133</sup> Microsoft Ireland Operations Ltd was ranked as one of the ‘Largest affiliates of foreign TNCs in the host economy’ in the UNCTAD WID Country Profile for

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<sup>125</sup> See generally, <<http://www.microsoft.com/about/en/us/default.aspx>> at 15 April 2011.

<sup>126</sup> See generally, <<http://jameshardie.com.au/main/about.html>> at 15 April 2011.

<sup>127</sup> United States Patent and Trademark Office (‘U.S. PTO’), ‘All Technologies Report’ (2011) B-1 <[http://www.uspto.gov/web/offices/ac/ido/oeip/taf/all\\_tech.pdf](http://www.uspto.gov/web/offices/ac/ido/oeip/taf/all_tech.pdf)> at 18 April 2011.

<sup>128</sup> Ibid B-2.

<sup>129</sup> Ibid. ‘**Part B** is a ranked listing of national and international organizations (i.e., corporations, universities, government agencies) that have received 1000 or more U.S. utility patents since 1986.’

<sup>130</sup> See generally, <<http://www.uspto.gov>> at 18 April 2011. A patent search using the term “Hardie” provided the results documented in the text.

<sup>131</sup> See generally, <<http://www.unctad.org>> at 15 October 2011.

<sup>132</sup> See generally, <<http://www.unctad.org/Templates/Page.asp?intItemID=3204&lang=1>> at 15 October 2011.

<sup>133</sup> UN, *UNCTAD WID Country Profile: UNITED STATES* (2011) United Nations Conference on Trade And Development <[http://unctad.org/Sections/dite\\_dir/docs/wir11\\_fs\\_us\\_en.pdf](http://unctad.org/Sections/dite_dir/docs/wir11_fs_us_en.pdf)> at 15 November 2011.

Ireland<sup>134</sup> and Microsoft Ireland Operations Ltd was ranked as one of the ‘Largest foreign affiliates of home-based TNCs’ in the UNCTAD WID Country Profile for the U.S.<sup>135</sup> There can be no question that GE, Microsoft and the James Hardie company are powerhouses in their own respective realms of technology. Furthermore, each maintains a substantial patent portfolio, which leads to the following question – what happened to the royalty income of 2010 from GE’s U.S. patent portfolio (over 20,000 U.S. patents)? A litany of associated questions, similar to the following list of questions, exists regarding MNEs’ use of patents in their tax reduction schemes.

1. What type of patents above are involved in these schemes – are these U.S. patents only?
2. What role, if any, do Irish patents play in these schemes?
3. What role, if any, do international affiliates of MNEs play in these schemes?
4. What role, if any, does jurisdiction play in these schemes?
5. What role, if any, do RTAs and unions play in these schemes?

More specifically, what does Ireland have to do with technology related MNEs, in particular GE, Microsoft and the James Hardie company? The answers to these questions are embodied in the following sections.

### **Corporate Motivation**

On 4 October 2011 U.S. Senator Michael Shumway “Mike” Lee from Utah proposed an amendment, SA 691, to senate bill S 1619 that would reduce the nominal tax rate for foreign earnings from 35 percent to 5 percent, as follows:

(a) REPATRIATION SUBJECT TO 5 PERCENT TAX RATE.—  
Subsection (a)(1) of section 965 of the Internal Revenue Code of 1986 is amended by striking “85 percent” and inserting “85.7 percent”.<sup>136</sup>

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<sup>134</sup> UN, *UNCTAD WID Country Profile: IRELAND* (2011) United Nations Conference on Trade And Development <[http://unctad.org/Sections/dite\\_dir/docs/wir11\\_fs\\_ie\\_en.pdf](http://unctad.org/Sections/dite_dir/docs/wir11_fs_ie_en.pdf)> at 15 November 2011.

<sup>135</sup> United Nations Conference on Trade And Development, above n 131.

<sup>136</sup> 155 *Congressional Record* S6109 (2011) U.S. Senate <<http://www.gpo.gov/fdsys/pkg/CREC-2011-10-04/pdf/CREC-2011-10-04-pt1-PgS6096.pdf>> at 15 October 2011.

#### **SEC. \_\_\_\_ . MODIFICATION AND PERMANENT EXTENSION OF THE INCENTIVES TO REINVEST FOREIGN EARNINGS IN THE UNITED STATES.**

- (a) REPATRIATION SUBJECT TO 5 PERCENT TAX RATE.—Subsection (a)(1) of section 965 of the Internal Revenue Code of 1986 is amended by striking “85 percent” and inserting “85.7 percent”.
- (b) PERMANENT EXTENSION TO ELECT REPATRIATION.—Subsection (f) of section 965 of the Internal Revenue Code of 1986 is amended to read as follows:  
“(f) ELECTION.—The taxpayer may elect to apply this section to any taxable year only if made on or before the due date (including extensions) for filing the return of tax for such taxable year.”.
- (c) REPATRIATION INCLUDES CURRENT AND ACCUMULATED FOREIGN EARNINGS.—  
(1) IN GENERAL.—Paragraph (1) of section 965(b) of the Internal Revenue Code of 1986 is amended to read as follows:

Senator Lee reintroduced his amendment as a bill entitled the *Rebuilding America Act*.<sup>137</sup> Senator Lee’s bill attempted to encourage MNEs to repatriate some, if not all, of the foreign earnings maintained offshore. Similar bills have been introduced, but none have made it out of committee and into law. The magnitude of U.S. MNEs’ foreign earnings that remains overseas, and more importantly untaxed by the U.S. government, is substantial. Reportedly, ‘[c]ompanies based in the United States have increased their holdings offshore to more than \$1.5 trillion.’<sup>138</sup> In fact, ‘Apple has \$12 billion waiting offshore, Google has \$17 billion and Microsoft, \$29 billion.’<sup>139</sup> These three companies along with GE, Microsoft, the James Hardie company and others derive a significant amount of their revenue from patent royalties. Similarly, a substantial portion of the foreign earnings previously discussed is due to patent royalties. Furthermore, it is no secret that without repatriating these foreign earnings MNEs significantly reduce their U.S. tax liability. Senator Lee’s bill attempts to mitigate this situation by reducing the U.S. tax liability on foreign earnings from 35% to 5%, which would encourage MNEs to repatriate foreign earnings. The net result is

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“(1) IN GENERAL.—The amount of dividends taken into account under subsection (a) shall not exceed the sum of the current and accumulated earnings and profits described in section 959(c)(3) for the year a deduction is claimed under subsection (a), without diminution by reason of any distributions made during the election year, for all controlled foreign corporations of the United States shareholder.”

(2) CONFORMING AMENDMENTS.—

(A) Section 965(b) of such Code is amended by striking paragraphs (2) and (4) and by redesignating paragraph (3) as paragraph (2).

(B) Section 965(c) of such Code is amended by striking paragraphs (1) and (2) and by redesignating paragraphs (3), (4), and (5) as paragraphs (1), (2), and (3), respectively.

(C) Paragraph (3) of section 965(c) of such Code, as redesignated by subparagraph (B), is amended to read as follows:

“(3) CONTROLLED GROUPS.—All United States shareholders which are members of an affiliated group filing a consolidated return under section 1501 shall be treated as one United States shareholder.”

(d) CLERICAL AMENDMENTS.—

(1) The heading for section 965 of the Internal Revenue Code of 1986 is amended by striking “TEMPORARY”.

(2) The table of sections for subpart F of part III of subchapter N of chapter 1 of such Code is amended by striking “Temporary dividends” and inserting “Dividends”.

(e) EFFECTIVE DATE.—The amendments made by this section shall apply to taxable years ending after the date of the enactment of this Act.

<sup>137</sup> *Rebuilding America Act*, Senate Bill S. 1837 (112<sup>th</sup> Congressional Record). The bill was introduced and referred to committee on 11 November 2011. The purpose of the bill was to amend the Internal Revenue Code to reduce the tax rate on current and accumulated foreign earnings of U.S. corporations reinvested in the United States from 35% to 5% and make such lower rate permanent. Unfortunately, it subsequently died in committee.

<sup>138</sup> David Kocieniewski, ‘Companies Push for Tax Break on Foreign Cash’, *The New York Times* (New York City) 19 June 2011 <[http://www.nytimes.com/2011/06/20/business/20tax.html?\\_r=1&\\_r](http://www.nytimes.com/2011/06/20/business/20tax.html?_r=1&_r)> at 4 July 2011.

<sup>139</sup> *Ibid.*

expected to be an injection of over a trillion dollars into the sagging U.S. economy – more than the total bailout amount for the ill-fated U.S. financial sector.<sup>140</sup>

The venerable Learned Hand, a judge for the U.S. Court of Appeals for the Second Circuit, stated in 1947 that ‘there is nothing sinister in so arranging one’s affairs as to keep taxes as low as possible’.<sup>141</sup> It would appear from various commentators’ articles that the complex structuring of MNEs (GE, Microsoft, the James Hardie company, and others) is all about corporate tax rates, not technology (patent portfolios) nor customer base. Assuming Hand knew the success of the complex structuring of MNEs (GE, Microsoft, the James Hardie company, and others), would Hand’s sentiments be the same? Whether or not MNEs adhere to Hand’s admonition, a quick review of Ireland’s corporate tax rate of 12.5%<sup>142</sup> indicates it is not the lowest corporate tax rate of the 193 Member States of the United Nations (‘UN’),<sup>143</sup> nor that of the 34 Member States of the Organisation for Economic Co-operation and Development (‘OECD’).<sup>144</sup> The Isle of Man, for instance, has a corporate tax rate of 0% ‘except income received by licensed banks from deposit-taking business and income from land and property in the Isle of Man, both of which are taxed at a rate of 10%.’<sup>145</sup> In both alternatives, the corporate tax rate in the Isle of Man is lower than that of Ireland’s corporate tax rate. Bearing this in mind, if Microsoft viewed Microsoft’s business needs strictly through a corporate tax looking-glass, then Microsoft would choose the Isle of Man over Ireland for Microsoft’s product sales

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<sup>140</sup> *Emergency Economic Stabilization Act of 2008*, Pub. L. 110-343, 122 Stat. 3765 (3 October 2008).

<sup>141</sup> Kathryn Griffith, *Judge Learned Hand and the Federal Judiciary* (1973) 26.

<sup>142</sup> *Taxes Consolidation Act 1997*, c 2, s 21 (‘TCA 1997’) <<http://www.irishstatutebook.ie/1997/en/act/pub/0039/index.html>> at 15 November 2011; Irish Revenue, ‘Corporation Tax: General Background - Dividends and Portfolio Investors’ (2013) <<http://www.revenue.ie/en/about/foi/s16/income-tax-capital-gains-tax-corporation-tax/part-02/02-02-01.pdf?download=true>> at 21 March 2013; Irish Revenue, ‘The charge to and rates of Corporation Tax’ (2013) <<http://www.revenue.ie/en/about/foi/s16/income-tax-capital-gains-tax-corporation-tax/part-02/02-02-02.pdf?download=true>> at 21 March 2013. The TCA 1997 is the base act regarding Irish taxation. This act is amended through various other acts such as the Finance Act of various years, as indicated in the third citation in this footnote. The Irish revenue service describes in the second and third references in this footnote how TCA 1997 is implemented. See generally, <<http://www.taxrates.cc/html/ireland-tax-rates.html>> at 7 November 2012.

<sup>143</sup> See generally, <<http://www.un.org/en/>> and <<http://www.un.org/en/members/index.shtml>> at 15 November 2011.

<sup>144</sup> See generally, <<http://www.oecd.org/>> and <[http://www.oecd.org/document/25/0,3746,en\\_36734052\\_36761800\\_36999961\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/25/0,3746,en_36734052_36761800_36999961_1_1_1_1,00.html)> at 15 November 2011.

<sup>145</sup> See generally, Isle of Man Corporate Tax Rate <<http://www.taxrates.cc/html/isle-of-man-tax-rates.html>> at 7 January 2013.

and distribution to EMEA. It may well be that Microsoft's reason for selecting Ireland as Microsoft's base for EMEA product sales and distribution incorporates less obvious parameters and requirements, such as market access, regional community accords and a level of compatibility between Microsoft's intended business activities and the State, the jurisdiction of the intended product sales.<sup>146</sup>

### **Corporate Strategy**

How do MNEs benefit from cross-border transactions? More importantly, how do trillions of dollars get waylaid in other jurisdictions without repatriation?

MNEs are ultimately responsible to the MNEs' shareholders. Cross-border transactions must relate, at least in part, to increased MNE profitability. Since the MNEs previously mentioned are technology based and have considerable patent portfolios, it is safe to assume that income received from these MNEs' patent portfolios is involved. The answers to the following three questions are required before continuing. First, do all jurisdictions provide patent laws that both grant and protect patents? Second, how do patent owners receive income from owned patents? Third, is a single patent enforceable in multiple jurisdictions?

**Jurisdictional Patent Laws:** Not all jurisdictions provide patent laws. However, the establishment of the World Trade Organization ('WTO') provided the foundation for a set of common intellectual property rights within WTO Member States.<sup>147</sup> In particular, the *Agreement on Trade-Related Aspects of Intellectual Property Rights* ('TRIPS Agreement') was adopted.<sup>148</sup> Article 27(1) of the *TRIPS Agreement* indicates that WTO Member States must provide that 'patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application.'<sup>149</sup> Furthermore this article provides that 'patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology

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<sup>146</sup> See generally, <[http://www.finfacts.ie/irishfinancenews/article\\_1025604.shtml](http://www.finfacts.ie/irishfinancenews/article_1025604.shtml)>.

<sup>147</sup> *Marrakesh Agreement Establishing the World Trade Organization*, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) ('WTO Charter').

<sup>148</sup> *Agreement on Trade-Related Aspects of Intellectual Property Rights in Marrakesh Agreement Establishing the World Trade Organization*, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) annex 1C, ('TRIPS Agreement') <[http://www.wto.org/english/tratop\\_e/trips\\_e/t\\_agm3c\\_e.htm#5](http://www.wto.org/english/tratop_e/trips_e/t_agm3c_e.htm#5)> at 4 July 2011.

<sup>149</sup> *TRIPS Agreement*, above n 148, Part II Section 5 Article 27.1.

and whether products are imported or locally produced.’<sup>150</sup> Indeed, WTO Member States must ensure the multi-jurisdictional aspects of patent rights that are the source of royalty income. In addition, Article 28 of the same agreement describes the exclusive rights of the owner of a patent in paragraph 1(a), e.g., “where the subject matter of a patent is a product, to prevent third parties not having the owner's consent from the acts of: making, using, offering for sale, selling, or importing ... that product.”<sup>151</sup> And, ‘where the subject matter of a patent is a process,’ Article 28(1)(b) intends “to prevent third parties not having the owner's consent from the act of using the process, and from the acts of: using, offering for sale, selling, or importing for these purposes at least the product obtained directly by that process.”<sup>152</sup>

**Patent Ownership and Associated Royalties:** Royalty payments are the typical source of income from owned patents. Royalties traditionally refer to two types of payments: (1) payments for a physical substance, i.e., materials mined, and (2) payments for intangibles, such as the use of rights derived from intellectual property, e.g., patents. Specifically, royalties ‘seem to fall under two heads, namely the payments which the grantees of monopolies such as patents and copyrights receive under licences’<sup>153</sup> and ‘payments which the owner of the soil obtains in respect of the taking of some special thing forming part of it or attached to it which he suffers to be taken.’<sup>154</sup> ‘In the case of monopolies and the like the essential idea seems to be payment for each thing produced or sold or each performance or exhibition in pursuance of the licence.’<sup>155</sup> It is interesting to note that the notion of royalties for intangibles from intellectual property rights is a relatively new concept. It was not until the 1928 Draft No. 1c of the League of Nations that such royalties were taxable, under the category of ‘other income,’ by the residence state.<sup>156</sup> Prior to this draft, economists had difficulty regarding the intangible personality of such royalties, not knowing exactly how to classify them.<sup>157</sup> Finally, in 1931 the League of Nations

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<sup>150</sup> Ibid.

<sup>151</sup> *TRIPS Agreement*, above n 148, Part II Section 5 Article 28.1(a).

<sup>152</sup> *TRIPS Agreement*, above n 148, Part II Section 5 Article 28.1(b).

<sup>153</sup> *Stanton v FCT* (1955) 92 CLR 630, 641-642.

<sup>154</sup> Ibid.

<sup>155</sup> Ibid.

<sup>156</sup> League of Nations 1928 Report, Article 8, Draft 1c.

<sup>157</sup> League of Nations 1923 Report, 34.

added a royalty category that recognized the problem of a lack of a permanent establishment ('PE') in the source state. In other words, a company's patented products were sold in the source state without any permanent structure, building or establishment. Therefore, the League of Nations 1931 draft indicates that in such situations the income from patent rights is taxable by the residence state, exclusively.<sup>158</sup>

Australia codifies the definition of royalties in section 6(1AA)(1) of the *Income Tax Assessment Act 1936* (Cth)<sup>159</sup> ('ITAA 1936'). '[R]oyalty or royalties' includes any amount paid or credited, however described or computed, and whether the payment or credit is periodical or not, to the extent to which it is paid or credited'<sup>160</sup> for the following six categories of items and/or services. The first category is 'the use of, or the right to use, any copyright, patent, design or model, plan, secret formula or process, trademark, or other like property or right'.<sup>161</sup> The second category is 'the use of, or the right to use, any industrial, commercial or scientific equipment'.<sup>162</sup> And, the third category is 'the supply of scientific, technical, industrial or commercial knowledge or information'.<sup>163</sup> These three categories are directly related to patent licenses and the use thereof. There are, however, three other categories in which payment or credit constitutes a royalty. These other three categories are typically less patent related and more abstract, as indicated by the fourth category.

the supply of any assistance that is ancillary and subsidiary to, and is furnished as a means of enabling the application or enjoyment of, any such property or right as is mentioned in paragraph (a), any such equipment as is mentioned in paragraph (b) or any such knowledge or information as is mentioned in paragraph (c);

(da) the reception of, or the right to receive, visual images or sounds, or both, transmitted to the public by:

(i) satellite; or

(ii) cable, optic fibre or similar technology;

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<sup>158</sup> Richard L. Doernberg and Luc Hinnekens, *Electronic commerce and international taxation* (1999) 16-17.

<sup>159</sup> *ITAA 1936* (Cth) s 6(1AA)(1).

<sup>160</sup> *ITAA 1936* (Cth) s 6(1AA)(1).

<sup>161</sup> *ITAA 1936* (Cth) s 6(1AA)(1)(a).

<sup>162</sup> *ITAA 1936* (Cth) s 6(1AA)(1)(b).

<sup>163</sup> *ITAA 1936* (Cth) s 6(1AA)(1)(c).

(db) the use in connection with television broadcasting or radio broadcasting, or the right to use in connection with television broadcasting or radio broadcasting, visual images or sounds, or both, transmitted by:

(i) satellite; or

(ii) cable, optic fibre or similar technology;

(dc) the use of, or the right to use, some or all of the part of the spectrum (within the meaning of the Radio communications Act 1992 ) specified in a spectrum licence issued under that Act<sup>164</sup>

Payment or credit received through category four, as indicated above, is more copyright related than patent related. This is also true of category five wherein payment or credit for ‘the use of, or the right to use: (i) motion picture films; (ii) films or video tapes for use in connexion with television; or (iii) tapes for use in connexion with radio broadcasting’<sup>165</sup> constitutes a royalty. The final subsection of section 6(1AA)(1) of the *ITAA 1936*, s 6(1AA)(1)(f), is arguably a ‘catch all’ section meant to cover any conceivable activity regarding the previous five categories that are not explicitly present, as indicated below.

(f) a total or partial forbearance in respect of:

(i) the use of, or the granting of the right to use, any such property or right as is mentioned in paragraph (a) or any such equipment as is mentioned in paragraph (b);

(ii) the supply of any such knowledge or information as is mentioned in paragraph (c) or of any such assistance as is mentioned in paragraph (d);

(iia) the reception of, or the granting of the right to receive, any such visual images or sounds as are mentioned in paragraph (da);

(iib) the use of, or the granting of the right to use, any such visual images or sounds as are mentioned in paragraph (db);

(iic) the use of, or the granting of the right to use, some or all of such part of the spectrum specified in a spectrum licence as is mentioned in paragraph (dc); or

(iii) the use of, or the granting of the right to use, any such property as is mentioned in paragraph (e).<sup>166</sup>

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<sup>164</sup> *ITAA 1936* (Cth) s 6(1AA)(1)(d). References to paragraph a, b, or c refer to the first three categories in the text.

<sup>165</sup> *ITAA 1936* (Cth) s 6(1AA)(1)(e).

<sup>166</sup> *ITAA 1936* (Cth) s 6(1AA)(1)(f).

Therefore, under s 6(1AA)(1)(a) royalties are due for ‘the use of, or the right to use, any ... patent’.<sup>167</sup> Section 6(1AA)(1)(b) indicates that royalties are due for ‘the use of, or the right to use, any industrial, commercial or scientific equipment’ that may be covered by such patents and/or intellectual property.<sup>168</sup> Similarly, under s 6(1AA)(1)(c) royalties are due for ‘the supply of scientific, technical, industrial or commercial knowledge or information’ that may be covered by such patents and/or intellectual property.<sup>169</sup> Finally, under s 6(1AA)(1)(d) royalties are due for ‘the supply of any assistance that is ancillary and subsidiary to, and is furnished as a means of enabling the application or enjoyment of, any such property or right ... , any such equipment ... or any such knowledge or information ...’ as taxable compensation.<sup>170</sup>

The definition of royalties related to intangibles broadened considerably from a mere nuisance in the 1928 Draft No. 1c of the League of Nations to an ever expanding definition that now encompasses technical information, know how and assistance. A more detailed discussion of this topic is presented in Chapter 7.

**Patent Protection in Multiple Jurisdictions:** Patents are jurisdiction specific and generally are enforceable only in the jurisdiction that grants the patent. However, the *Paris Convention for the Protection of Industrial Property* of 1884 (*‘Paris Convention’*),<sup>171</sup> the *Patent Cooperation Treaty* of 1970 (*‘PCT’*),<sup>172</sup> the *TRIPS Agreement* of 1995 (*‘TRIPS’*)<sup>173</sup> and the *Patent Law Treaty* of 2000 (*‘PLT’*)<sup>174</sup> all reduce the complexity of obtaining similar patent rights in multiple jurisdictions. Furthermore, ‘[a]fter decades of stalemate, 25 of the EU’s 27 member states reached

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<sup>167</sup> *ITAA 1936* (Cth) s 6(1AA)(1)(a).

<sup>168</sup> *ITAA 1936* (Cth) s 6(1AA)(1)(b).

<sup>169</sup> *ITAA 1936* (Cth) s 6(1AA)(1)(c).

<sup>170</sup> *ITAA 1936* (Cth) s 6(1AA)(1)(d).

<sup>171</sup> *Paris Convention for the Protection of Industrial Property*, opened for signature 20 March 1883, 828 UNTS 305 (entered into force 26 April 1970) (*‘Paris Convention’*) <<http://www.wipo.int/treaties/en/ip/paris/>> at 11 November 2011.

<sup>172</sup> *Patent Cooperation Treaty (1970)* (entered into force 1970) (*‘PCT’*) <<http://www.wipo.int/treaties/en/registration/pct/>> at 4 July 2011.

<sup>173</sup> *TRIPS Agreement*, above n 148.

<sup>174</sup> *Patent Law Treaty (2000)* (entered into force 28 April 2005) (*‘PLT’*) <<http://www.wipo.int/treaties/en/ip/plt/>> at 4 July 2011.

agreement in 2012 on the introduction of a unitary patent and Unified Patent Court.<sup>175</sup>

Understanding the international limitations of patents, one wonders how do MNEs benefit from cross-border transactions? More specifically, how do MNEs account for all of the combinations of multi-jurisdictional patent royalty income between the MNEs' jurisdictional entities? In particular, how can the treatment of patent royalty income derived from cross-border transactions for each patent holding entity of an MNE be determined when so many possible combinations, variables and unanswered questions exist?

It should now be apparent that the income from an MNE's patent portfolios does not emanate from the same single source and arrive at the same single destination – the MNE's world headquarters. The multi-jurisdictional structure of an MNE coupled with the jurisdiction-specific nature of both patents and taxation provide a level of complexity beyond a simple mental calculation, which supports the hypothesis of Chapter 1 that a model and quantitative method are required.

## **Terminology**

A detailed study requires the consistent use and definition of phrases and terms, i.e., terminology. At a minimum, this research depends on the consistent definition and use of the following terms: royalties (as previously discussed), patents, arbitrage and jurisdiction. Each of these terms has a meaning specific to this thesis. More importantly, each of these terms is grounded in one or more of three disciplines (law, economics or business). For example, the term 'patent' is predominantly a legal term. On the other hand, the term 'arbitrage' straddles both business and law. The term 'jurisdiction' is associated with all three disciplines. Each term owing to each of the three disciplines makes the possibility of misunderstanding greater with discipline-specific definitions for each term. Therefore, a brief discussion of each of these three terms is presented below in the context in which the term is used herein.

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<sup>175</sup> European Patent Office ('EPO'), *Highlights of 2012 – Green Light For The Unitary Patent* (2012) <<http://www.epo.org/about-us/annual-reports-statistics/annual-report/2012/highlights/unitary-patent.html>> at 13 December 2012.

## Patents

A patent is a grant of a property right, between a state and its inventor(s). These property rights constitute a marketable asset that may be licensed, sold or traded. The following statement from the U.S. PTO's website illustrates this point:

A patent for an invention is the grant of a property right to the inventor, issued by the United States Patent and Trademark Office. Generally, the term of a new patent is 20 years from the date on which the application for the patent was filed in the United States ... U.S. patent grants are effective only within the United States, U.S. territories, and U.S. possessions. ...

The right conferred by the patent grant is, in the language of the statute and of the grant itself, "the right to exclude others from making, using, offering for sale, or selling" the invention in the United States or "importing" the invention into the United States. What is granted is not the right to make, use, offer for sale, sell or import, but the right to exclude others from making, using, offering for sale, selling or importing the invention. Once a patent is issued, the patentee must enforce the patent without aid of the USPTO.<sup>176</sup>

A similar statement is found on the Australian Patent Office's website, as provided below:

A patent is a right granted for any device, substance, method or process, which is new, inventive and useful.

A patent is legally enforceable and gives the owner the exclusive right to commercially exploit the invention for the life of the patent. This is not automatic, you have to apply for a patent. All applications for patents are examined to ensure they meet the necessary legal requirements for granting a patent.

Patents give effective protection if you have invented new technology that will lead to a product, composition or process with significant long-term commercial gain.<sup>177</sup>

As expected, the Irish Patents Office website provides similar information to that found on the U.S. PTO's website and the Australian Patent Office's website, as follows:

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<sup>176</sup> U.S., *General Information Concerning Patents* (2011) United States Patent and Trademark Office <<http://www.uspto.gov/web/offices/pac/doc/general/index.html#patent>> at 22 June 2009.

<sup>177</sup> Australia, *What is a patent?* (2011) IP Australia <<http://www.ipaustralia.gov.au/ip/patents.shtml>> at 7 April 2011.

A patent confers upon its holder, for a limited period, the right to exclude others from exploiting (making, using, selling, importing) the patented invention, except with the consent of the owner of the patent.

A patent is a form of 'industrial property', which can be assigned, transferred, licensed or used by the owner.

Patents are territorial, in effect e.g. an Irish patent is only valid in Ireland.<sup>178</sup>

In the three excerpts above, there is a right granted, 'an exclusive right to commercially exploit the invention for the life of the patent.'<sup>179</sup> The rights granted by a patent are valuable and marketable. The issuing agencies believe the invention 'will lead to a product, composition or process with significant long-term commercial gain.'<sup>180</sup> Furthermore, the rights granted may be 'assigned, transferred, licensed or used by the owner.'<sup>181</sup>

Patents, as stated above, are territorial<sup>182</sup> – 'U.S. patent grants are effective only within the United States, U.S. territories, and U.S. possessions.'<sup>183</sup> The law governing patents, 'the statute and of the grant itself,'<sup>184</sup> is embedded in domestic law, but is derived from, and protected as a domestic body of law by international law, e.g., the *TRIPS Agreement*<sup>185</sup> and the *Paris Convention*.<sup>186</sup> It is important to note that patents play a dual role regarding assets and asset protection. Firstly, a patent considered in isolation is an asset of a class of assets referred to as intangible property.<sup>187</sup> Secondly, patents 'exclude others from making, using, offering for sale, or selling'<sup>188</sup> products that incorporate and/or derive benefit from the patents. In

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<sup>178</sup> Ireland, *What is a patent?* (2011) Patents Office <<http://www.patentsoffice.ie/en/patents.aspx>> at 7 April 2011.

<sup>179</sup> Ibid.

<sup>180</sup> IP Australia, above n 177.

<sup>181</sup> Patents Office, above n 178.

<sup>182</sup> Ibid.

<sup>183</sup> United States Patent and Trademark Office, above n 176.

<sup>184</sup> Ibid.

<sup>185</sup> *TRIPS Agreement*, above n 148.

<sup>186</sup> *Paris Convention*, above n 171.

<sup>187</sup> Michelle Markham, *The Transfer Pricing of Intangibles* Kluwer Law International (2005) 38.

<sup>188</sup> United States Patent and Trademark Office, above n 176.

other words, a patent and products derived from a patent are assets – one intangible property and the other tangible property.

## Arbitrage

Arbitrage is defined as, ‘the simultaneous buying and selling of securities, currency, or commodities in different markets or in derivative forms in order to take advantage of differing prices for the same asset.’<sup>189</sup> Another definition of arbitrage is, ‘[t]rading in currencies, commodities or securities between two or more markets to take profitable advantage of any differences in the prices quoted.’<sup>190</sup> These definitions are better illustrated by the language used in the Australian *Corporations Act 2001* (Cth) as indicated below.

”[A]rbitrage transaction” means a purchase or sale of securities effected in the ordinary course of trading on a stock market together with an offsetting sale or purchase of those securities effected at the same time, or at as nearly the same time as practicable, in the ordinary course of trading on another stock market for the purpose of obtaining a profit from the difference between the prices of those securities in the 2 stock markets.<sup>191</sup>

Although the above citation is limited to share (stock) markets, viewing arbitrage through transactional eyes makes clear the benefit of engaging in arbitrage – profit derived from the price differential between 2 markets.<sup>192</sup> As expected, such definitions are typically related to the financial community. However, tax arbitrage may be defined as ‘profit shifting between high and low-tax countries,’<sup>193</sup> as Michelle Markham, a legal scholar at Bond University, notes. Reframing Markham’s definition in a patent specific manner, ‘patent shifting between high and low-tax countries,’ provides an acceptable first definition of patent arbitrage. ‘Patent shifting between patent-unfriendly and patent-friendly jurisdictions,’ provides another possible definition regarding patents and an arbitrage transaction occurring between different jurisdictions. A combination of the two definitions may accurately provide the motivation for, and the mechanics of, the subject matter of this research.

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<sup>189</sup> Apple Computer Inc., Online Dictionary – Version 2.0.2 (51.4) 2005-2007.

<sup>190</sup> Butterworths, *Concise Australian Legal Dictionary* (2<sup>nd</sup> ed, 2003) 29.

<sup>191</sup> *Corporations Act 2001* (Cth) s 9.

<sup>192</sup> *Corporations Act 2001* (Cth) s 846(3)(b).

<sup>193</sup> Michelle Markham, above n 187, 10.

Specifically, an arbitrage transaction requires an asset, which is the focal point of the transaction. It is, therefore, proper to consider whether patents are assets capable of fulfilling the requisite structure and above definitions for arbitrage transactions. Arbitrage transactions require ‘purchase or sale of’<sup>194</sup> assets ‘between two or more markets to take profitable advantage of any differences in the prices quoted.’<sup>195</sup> An Australian case, *Arnotts Ltd v Trade Practices Commission*<sup>196</sup> provides an excellent discussion on market definition. The following excerpt from *Arnotts Ltd v Trade Practices Commission*<sup>197</sup> indicates that the definition of market is broad enough to cover the ‘purchase or sale of’<sup>198</sup> patents and patented products, as indicated below.

... it is impossible to provide an absolute definition of "market". As was observed by Professor Maureen Brunt in her article, "Market Definition Issues in Australian and New Zealand Trade Practices Litigation" (1990) 18 Australian Business Law Review 86 at 126:

"It must be constantly borne in mind that market definition is but a tool to facilitate a proper orientation for the analysis of market power and competitive processes - and should be taken only a sufficient distance to achieve the legal decision. There may be more than one relevant market for a particular case in the sense of markets that would attract liability."<sup>199</sup>

Although ‘it is impossible to provide an absolute definition of “market”,’ it is important to remember that markets typically emerge from business activities; leaving the legal community to subsequently provide concise and proper definitions for such. Thus, the definition of “market” is elastic and allows business to pioneer uncharted waters. Quoting Justice Deane’s comments regarding “market” in *Queensland Wire Industries Pty Limited v The Broken Hill Company Proprietary Limited*,<sup>200</sup> a market should ‘be understood in the sense of an area of potential close competition in particular goods and/or services and their substitutes.’<sup>201</sup>

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<sup>194</sup> *Corporations Act* (2001) s 9.

<sup>195</sup> Butterworths, above n 190, 29.

<sup>196</sup> *Arnotts Ltd v Trade Practices Commission* (1990) 24 FCR 313; 97 ALR 555.

<sup>197</sup> *Ibid.*

<sup>198</sup> *Corporations Act* (2001) s 9.

<sup>199</sup> *Arnotts Ltd v Trade Practices Commission*, above n 196, 48.

<sup>200</sup> *Queensland Wire Industries Pty Limited v The Broken Hill Company Proprietary Limited* [1989] HCA 6; (1989) 167 CLR 177.

<sup>201</sup> *Arnotts Ltd v Trade Practices Commission*, above n 196, 49.

Having established that (1) patents, and patented products, are assets, (2) the definition of market is broad enough to include both patents and patented products, and (3) patents are territorial (jurisdiction specific) thus creating multiple markets; then it follows that patent arbitrage transactions may occur. The only remaining qualification to the previous statement depends on the definition of jurisdiction, which is provided in the next section.

## **Jurisdiction**

Arbitrage requires two or more markets to be able to benefit from a price differential between them. Patents, as previously stated, are jurisdiction specific and only have effect within the jurisdiction issuing the patent. Therefore, a patent arbitrage transaction occurs between jurisdictions. Jurisdiction, thus, becomes the focal point of this paper. A concise and unambiguous definition of jurisdiction is required, and provided below.<sup>202</sup>

The scope of the court's power to examine and determine the facts, interpret and apply the law, make orders and declare judgment. Jurisdiction may be limited by geographic area, the type of parties who appear, the type of relief that can be sought, and the point to be decided. The powers of courts of limited jurisdiction are generally defined by statute. Where jurisdiction is questioned, jurisdiction connotes the statutory limits imposed upon the court to hear and determine issues together with general principles requiring a clear case to be made out: *Walker v Hussmann Australia Pty Ltd.*<sup>203</sup>

To reiterate, patents are a grant of rights from a state or sovereign nation (a legal jurisdiction) under that state's or sovereign nation's domestic law. Therefore, the above definition's use of '[t]he scope of the court's power'<sup>204</sup> is limited, with regard to patents, to the territorial boundaries of the state or sovereign nation granting the rights, e.g., domestic law. This is not meant to refute the definition previously provided, it is simply meant to restrict the meaning of jurisdiction when used in the context of a patent arbitrage transaction. There will, however, be further discussions regarding superset and subset jurisdictions and associated issues.

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<sup>202</sup> Butterworths, above n 190, 251.

<sup>203</sup> *Walker v Hussmann Australia Pty Ltd* (1991) 24 NSWLR 451; 381 IR 180.

<sup>204</sup> *Ibid.*

The principal jurisdictions in this investigation are Australia, Ireland and the U.S. In brief, patents and patented products have markets in these three jurisdictions that provide the legal frameworks for analysis and comparison in this study. It is through these legal frameworks that a rather bizarre global phenomenon emerged – patent arbitrage regarding patent related activities or preferably, jurisdictional arbitrage.

As an example, consider an MNE owning (holding) patents for the same invention in jurisdictions A and B.<sup>205</sup> The MNE desires to provide patent protected products (patented products), ‘the same asset’, to jurisdiction C. Furthermore, assume the price of the patented product from jurisdiction A to jurisdiction C is greater than the price of the patented product from jurisdiction B to jurisdiction C. Assuming this price differential is due to the domestic laws in jurisdictions A, B and C, then a potential jurisdictional arbitrage event exists. More specifically, for the purpose of relating this example to this thesis, let jurisdiction A represent Australia or the U.S., let jurisdiction B represent Ireland and let jurisdiction C represent any Member State of the EU. Utilizing these specific jurisdictions and the assumptions made in this example then a potential arbitrage event exists between Australia and Ireland for patented products sold to Member States of the EU. The same potential arbitrage event exists between the U.S. and Ireland. In order to better understand this example it is necessary to determine what makes Ireland, most specifically Irish law, conducive to these potential arbitrage events.

### **Irish Initiatives**

Prior to the Global Financial Crisis (‘GFC’)<sup>206</sup> Ireland was at the heart of a different global phenomenon – the Celtic Tiger.<sup>207</sup> The Celtic Tiger refers to Ireland’s ‘rags to riches’ economy during the 1980s through 2007. It is too soon to determine whether

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<sup>205</sup> Enforcing the same patent in multiple jurisdictions is a legal fiction since patents are jurisdiction specific. However, it is possible to submit the same patent (patent application for the same invention) in multiple jurisdictions. Each jurisdiction treats the patent application independent from the same patent application in other jurisdictions. Assuming each of the separate and independent jurisdictions issue a patent from the filed patent application(s), the patented invention may claim patent protection in each of the issuing jurisdictions. Therefore, the same patent does not exist in each jurisdiction, but the same patent protection for the patented invention does exist in each jurisdiction granting a patent from the filed patent application(s).

<sup>206</sup> See generally, <[www.worldbank.org](http://www.worldbank.org)> and <[www.imf.org](http://www.imf.org)>.

<sup>207</sup> ‘Ireland Shines’, *The Economist* (US) 15 May 1997, 1 <<http://www.economist.com/node/149333>> at 12 January 2013.

recent Irish patent law reforms,<sup>208</sup> as a result of the GFC, are detrimental to Ireland. Some commentators, however, have commented that the latest data from Ireland regarding skills,<sup>209</sup> competitiveness<sup>210</sup> and job creation<sup>211</sup> since the GFC is promising – 12,000 new private sector jobs created in 2012. With regards to the Celtic Tiger, at least one model in the literature regarding the elasticity of tax rates on the location of patents is well positioned to verify their model through empirical data gathered throughout the coming years.<sup>212</sup> During the past two decades numerous articles and studies document the meteoric economic rise in the Irish economy.<sup>213</sup> Many commentators suggest Ireland’s economic good fortune was only due to what many members of the EU refer to as harmful tax competition.<sup>214</sup> The results provided in Chapter 11 indicate that this is a misconception held by most concerning the meteoric economic rise in the Irish economy. However, domestic taxation is one of the major forces attracting MNEs to Ireland. At present, the number of U.S. MNEs in Ireland exceeds 600.<sup>215</sup> These firms directly employ approximately 100,000 employees and

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<sup>208</sup> Due to the financial crisis in Ireland, as a result of the large holdings by Irish banks of sub-prime mortgage-backed securities, both the EU and the IMF demanded that Ireland eliminate the exclusion of taxes on patent royalties.

<sup>209</sup> Expert Group on Future Skills Needs, *Key Skills for Enterprise to Trade Internationally* (22 June 2011) Forfas <<http://www.forfas.ie/publication/search.jsp?ft=/publications/2012/Title,9547,en.php>> at 25 March 2013.

<sup>210</sup> National Competitiveness Council, *Ireland’s Competitiveness Scorecard 2012* (19 July 2012) Forfas <<http://www.forfas.ie/publication/search.jsp?ft=/publications/2012/Title,9503,en.php>> at 25 March 2013.

<sup>211</sup> Under The Direction of An Taoiseach, *Action Plan for Jobs 2013* (22 February 2013) Forfas <<http://www.forfas.ie/publication/search.jsp?ft=/publications/2013/Title,10333,en.php>> at 25 March 2013. An Taoiseach, Enda Kenny, T.D., is the equivalent of the Prime Minister or President of Ireland. In the forward, Enda Kenny indicated that ‘[i]n the past year [2012], jobs in the private sector increased by 12,000 which compares well to the 250,000 lost in the three years before this Government took office.’

<sup>212</sup> Rachel Griffith, Helen Miller and Martin O’Connell, ‘The location of intellectual property and corporate taxes’ (Paper presented at the European Economic Association – 25<sup>th</sup> Annual Meeting, Glasgow, 23-26 August 2010) <<http://www.eea-esem.com/files/papers/EEA/2010/1506/Griffith%20Miller%20and%20OConnell%202010.pdf>> at 7 April 2011. Alternatively, the paper may be obtained from the Economic and Social Research Council’s (ESRC) website in the UK <<http://www.esrc.ac.uk/my-esrc/grants/RES-000-22-4268/outputs/ConferencePaper/Read/eddf5f6f-fb2f-44e0-8853-5f9219a842d1>>.

<sup>213</sup> *The Economist*, above n 207.

<sup>214</sup> Silvia Giannini, ‘Tax competition, income tax coordination and fiscal sovereignty in the EU’ (Speech delivered at the 1<sup>st</sup> Euroframe Conference on Economic Policy Issues in the European Union, University Paris Dauphine, 4 June 2004) Slide 2.1.

<sup>215</sup> U.S., *2012 Investment Climate Statement: Ireland* (June 2012) U.S. Department of State – Bureau of Economic and Business Affairs <<http://www.state.gov/e/eb/rls/othr/ics/2012/191168.htm>> at 28 March 2013. The Investment Climate Statement reports have indicated virtually the same number of U.S. MNEs in Ireland for at least the past five years.

provide supporting jobs for another 250,000 employees within Ireland.<sup>216</sup> Glenn R. Simpson from the Wall Street Journal indicates that among these U.S. MNEs are well-known U.S. companies, such as: Pfizer Incorporated, Google Incorporated, Oracle Corporation, International Business Machines ('IBM') Corporation, Lucent Technologies Incorporated, Intel Corporation, Apple Computer Incorporated, Dell Incorporated, Gateway Incorporated and the Hewlett-Packard Company. All of these are predominantly technology firms and have an established Irish presence to take advantage of Ireland's tax scheme.<sup>217</sup>

Ireland has been enormously successful in attracting foreign corporations and the associated Foreign Direct Investment ('FDI'), as indicated in the following quotation.

Ireland and Luxembourg are both low-tax countries where disproportionate amounts of corporate income are earned, and, in 2002, Ireland received 3.8% of GDP and Luxembourg received 6.2% of GDP in corporate tax revenues; both are well above the OECD average revenue share of 2.9%.<sup>218</sup>

In 2009, Benjamin Friedman, a leading American political economist and Harvard professor, stated in a Brookings Institute paper that 'Ireland's jump from twenty-fourth to ninth place in the world income rankings' was noteworthy and bore further investigation.<sup>219</sup> Siemens Chairman, Dr. Heinrich von Pierer, put it another way: '[w]e can all learn something from the way in which Ireland has created an opportune business environment, progress has been spectacular'.<sup>220</sup> One final measure of Ireland's success, in this regard, comes from the U.S. Department of State. It stated, '[i]n 2005, investment stock in Ireland, a country of 4 million, was worth USD 61.6 billion, roughly 6 percent of the U.S. total for the EU and more than double the U.S.

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<sup>216</sup> Ibid.

<sup>217</sup> Glenn R. Simpson, above n 118.

<sup>218</sup> *A change in US corporate tax system would not be good news for Ireland* (24 July 2007) Finfacts Ireland <[http://www.finfacts.com/irelandbusinessnews/publish/printer\\_10003995.shtml](http://www.finfacts.com/irelandbusinessnews/publish/printer_10003995.shtml)> at 9 August 2009.

<sup>219</sup> Olivier Blanchard and Barry Bosworth, '[Catching up with the Leaders: The Irish Hare]. Comments and Discussion' (2002) <<http://links.jstor.org/sici?sici=0007-2303%282002%292002%3A1%3C58%3A%5BUWTLT%3E2.0.CO%3B2-C>> at 9 August 2009.

<sup>220</sup> *Intellectual Property (IP) Licensing* (2007) Industrial Development Agency – Ireland ('IDA Ireland') <<http://www.idaireland.com/home/index.aspx?id=67>> at 9 August 2009.

total for China and India combined (USD 25.3 billion).<sup>221</sup> The worldwide financial crisis requires such seemingly positive trends to be re-evaluated under current conditions. Early indications, however, suggest that Ireland is on a trajectory to achieve: (1) 105,000 new jobs, (2) 640 investments, (3) 50% of investments located in Dublin or Cork, (4) 20% of originating from high-growth emerging markets, and (5) annual expenditures on research, development and innovation exceeding 1.7 billion euros.<sup>222</sup> A large portion of these five items has already occurred with the remainder to be achieved by the end of 2014.<sup>223</sup>

The impact of this phenomenon on the U.S., with or without regards to the GFC, is not quantifiable. It is easy to state figures and numbers, trends and statistics, but the real impact to the U.S. is in lost intellectual property. Ireland's tax scheme specifically targets the transfer of intellectual property assets and the Irish development of derivative works from those assets.<sup>224</sup> The Irish exemption from income for what are termed 'qualifying patents' effectively provides Ireland with the means to drain intellectual property from the U.S., and other developed countries, for next to nothing. The term 'qualifying patent' is defined in the following fashion. 'A qualifying patent is a patent in respect of which the research, planning, processing, experimenting, testing, devising, designing, developing or other similar activity leading to an invention was carried out in Ireland.'<sup>225</sup> In brief, the impact on the U.S., and other developed countries, is a combination of 'brain-drain'<sup>226</sup> and significant tax base poaching that adds up to tens of billions each year.<sup>227</sup>

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<sup>221</sup> U.S. Department of State – Bureau of Economic and Business Affairs, above n 215.

<sup>222</sup> *Horizon 2020 – IDA Ireland Strategy* (2 March 2010) IDA Ireland <<http://www.idaireland.com/news-media/publications/library-publications/ida-ireland-publications/IDA-Ireland-Strategy-2020.pdf>> at 25 March 2013; *Ambitious FDI strategy increases focus on job creation from services sector, emerging markets, 'Tomorrow's Twitter'* (2 March 2010) IDA Ireland <<http://www.idaireland.com/news-media/press-releases/tanaiste-launches-ida-ire/index.xml>> at 25 March 2013.

<sup>223</sup> *Forfás Annual Report 2011* (16 July 2012) Forfás - Expert Group on Future Skills Needs <<http://www.forfas.ie/publication/search.jsp?ft=/publications/2012/Title,9496,en.php>> at 25 March 2013.

<sup>224</sup> *Finance Act 1973* ('FA 1973') s 34(1). See also, *Q1 2013 Key Marketplace Messages* (January 2013) IDA Ireland <[http://www.idaireland.com/news-media/publications/library-publications/ida-ireland-publications/Key\\_Facts\\_Jan\\_2013.pdf](http://www.idaireland.com/news-media/publications/library-publications/ida-ireland-publications/Key_Facts_Jan_2013.pdf)> at 10 March 2013.

<sup>225</sup> *Ibid.*

<sup>226</sup> Robert O. Blake, Jr., above n 24.

<sup>227</sup> *Addressing Base Erosion and Profit Shifting*, above n 21.

The impact on Australia is equally acute. The World Intellectual Property Organization ('WIPO') reports, *WIPO Patent Report*,<sup>228</sup> of 2007-2012 indicate a near constant relationship between (1) the number of U.S. patent applications and the number of Australian patent applications, (2) the number of U.S. patents and the number of Australian patents, and (3) the number of U.S. patents designating Ireland for nationalization, and (4) the number of Australian patents designating Ireland for nationalization. In general, an 8% ratio exists between the U.S. and Australia. Assuming that patents are precursors to products and products require manufacturing by companies, then it is reasonable to assume that the 8% U.S.-Australia ratio also holds true with respect to the number of Australian companies established in Ireland. In other words, if the U.S. has over 600 MNEs established in Ireland then it follows that Australia has 8% of that number or 48 MNEs established in Ireland.<sup>229</sup> It also follows that Australia has similar 'brain-drain' and tax loss.<sup>230</sup> Current estimates place the annual flow of U.S. MNEs' untaxed earnings to Ireland alone at over 10 billion U.S. dollars.<sup>231</sup> Utilizing the 8% ratio between the U.S. and Australia suggests that the annual flow of AU MNEs' untaxed earnings to Ireland is nearly 1 billion AUD dollars.

### **Effects of the Irish Initiatives**

The GFC changed the world forever. Ireland was almost swept away in the wake of the financial effects of the GFC.<sup>232</sup> The International Monetary Fund ('IMF')<sup>233</sup> and the EU helped pull Ireland back from the brink of bankruptcy by providing necessary loans in exchange for various Irish concessions.<sup>234</sup> Amongst these concessions were

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<sup>228</sup> WIPO, *2012 WIPO IP Facts and Figures* (2012) Economics and Statistics Division  
<[http://www.wipo.int/export/sites/www/freepublications/en/statistics/943/wipo\\_pub\\_943\\_2012.pdf](http://www.wipo.int/export/sites/www/freepublications/en/statistics/943/wipo_pub_943_2012.pdf)> at 15 October 2013.

<sup>229</sup> Ibid. The actual number of Australian MNEs established in Ireland as of 2005 was 44. Similar information indicating the current number of Australian MNEs established in Ireland is not yet available.

<sup>230</sup> *Addressing Base Erosion and Profit Shifting*, above n 21, 5.

<sup>231</sup> U.S. Department of State – Bureau of Economic and Business Affairs, above n 215.

<sup>232</sup> *IMF Survey: IMF Approves €22.5 Billion Loan For Ireland* (2010) International Monetary Fund  
<<http://www.imf.org/external/pubs/ft/survey/so/2010/CAR121610A.htm>> at 15 November 2011.

<sup>233</sup> See generally, <<http://www.imf.org/external/index.htm>> at 15 November 2011.

<sup>234</sup> IMF, *Irish Country Report of December 2010*, Report no. 10/366 (2010) International Monetary Fund  
<<http://www.revenue.ie/en/about/publications/comprehensive-expenditure-review.pdf>> at 15 November 2011.

changes to Ireland's tax and finance laws. In particular, Financial Resolution No. 33 modified income tax and corporate tax in the following manner.

(1) THAT section 234 of the Taxes Consolidation Act 1997 (No. 39 of 1997) be amended, as respects income from qualifying patent (within the meaning of that section) which is paid to a person on or after 24 November 2010, by inserting the following after subsection (8):

“(9) This section shall not apply to income from a qualifying patent which is paid to a person on or after 24 November 2010.”<sup>235</sup>

The significance and impact of the above changes have yet to be observed and/or quantified, although early indications suggest these changes have little effect on the force of attraction that Ireland has on foreign MNEs. Therefore, the remainder of this chapter utilizes available data collected prior to the enactment of the above changes. The data assists in determining the impact of lowering corporate tax rates on patent related activities, such as location and/or relocation of patent portfolios. The actual magnitude of the force of attraction to offshore jurisdictions providing attractive tax rates to U.S. MNEs and AU MNEs is not really known.<sup>236</sup> Rough estimates of the magnitude of the force of attraction between the U.S. and Ireland, however, are calculable from the following data points. Kenneth Dam, a senior fellow of the Brookings Institution and Max Pam Professor Emeritus of American and Foreign Law at the University of Chicago, indicated that the IBM Corporation obtains \$1.6 billion every year from royalties of their patents.<sup>237</sup> The effective US corporate tax rate, as indicated by Scott A. Hodge and Chris Atkins of the Tax Foundation, is 39.3%.<sup>238</sup> In a similar article,<sup>239</sup> they indicated that due to Japan's corporate tax rate reduction policy Japan's corporate tax rate was only 0.2% higher than the U.S. corporate tax

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<sup>235</sup> Ireland, *Summary of 2011 Budget Measures Policy Changes* (2010) Department of Finance - Department of Public Expenditure and Reform: The Budget <<http://www.budget.gov.ie/budgets/2011/Documents/Summary%20of%20Measures%20Combined.pdf>> at 7 April 2011.

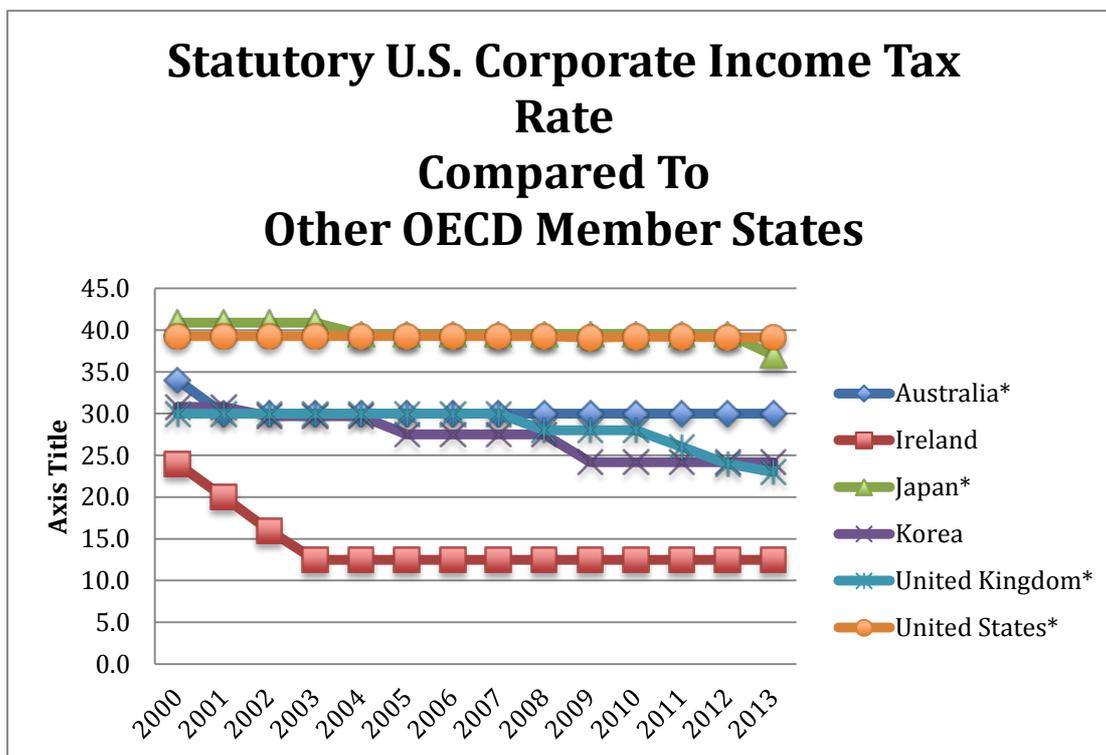
<sup>236</sup> One of the principal purposes of the model developed in chapter 10 is to quantify the magnitude of the force of attraction between two jurisdictions.

<sup>237</sup> Ben Klemens, Interview of *Software and Law* panellist Kenneth Dam (The Brookings Institution, Washington, DC, December 7, 2005).

<sup>238</sup> Scott A. Hodge and Chris Atkins, *U.S. Lagging Behind OECD Corporate Tax Trends* (5 May 2006) Tax Foundation <<http://taxfoundation.org/article/us-lagging-behind-oecd-corporate-tax-trends>> at 13 March 2013.

<sup>239</sup> Scott A. Hodge and Chris Atkins, *U.S. Still Lagging Behind OECD Corporate Tax Trends* (24 July 2007) Tax Foundation <<http://taxfoundation.org/article/us-still-lagging-behind-oecd-corporate-tax-trends>> at 13 March 2013.

rate. As of the first of April 2011, the U.S. ranks highest for corporate tax,<sup>240</sup> while the average OECD member's corporate tax rate is 25.4%.<sup>241</sup> Ireland provides the lowest OECD member corporate tax rate of 12.5%.<sup>242</sup> An interesting trend in downward moving corporate tax rates, including the nearly flat U.S. corporate tax rate, is indicated in Figure 3 below.



**Figure 3: Downward Trend in Corporate Taxes.**<sup>243</sup>

Utilizing the above data,<sup>244</sup> the total annual tax from the IBM Corporation for royalties alone is approximately \$393 million (USD). Assuming that the U.S.'s fortune 500 corporations all generate approximately \$100 billion (USD) in annual royalties, then the net loss in tax to the U.S. Treasury Department could be as high as \$50 billion (USD) annually. This assumes that these companies transfer their intellectual property holdings offshore and do not repatriate any of the potentially taxable income derived from the companies' intellectual property holdings.

<sup>240</sup> Scott A. Hodge, *Countdown to #1: 2011 Marks 20th Year That U.S. Corporate Tax Rate Is Higher than OECD Average* (8 March 2011) Tax Foundation – Fiscal Fact No. 261 <<http://taxfoundation.org/sites/taxfoundation.org/files/docs/ff261.pdf>> at 7 March 2013.

<sup>241</sup> *Addressing Base Erosion and Profit Shifting*, above n 21, 5.

<sup>242</sup> *Ibid.*

<sup>243</sup> *Ibid.*

<sup>244</sup> *Ibid.*

Corporations within the U.S. pay a minimum corporate tax rate of 35%.<sup>245</sup> Revenues from intellectual property are considered income in the U.S. and are taxed at corporate tax rates<sup>246</sup> without regard to the holding period of the underlying asset, i.e., long or short-term capital gains. This is in stark contrast to gains obtained from shares held. Such gains may benefit from a reduced tax rate associated with a longer-term holding period of the underlying shares, as used to be the case for royalties.<sup>247</sup> In addition, most U.S. corporations also pay U.S. state taxes.<sup>248</sup> The U.S. corporate tax rate is one of the highest, arguably the highest, corporate tax rates among members of the OECD.<sup>249</sup> The existing corporate tax rate differential between the U.S. and other countries lures large U.S. MNEs to lower corporate tax jurisdictions.<sup>250</sup> U.S. MNEs either establish a presence in these lower corporate tax jurisdictions or already have an established presence there.<sup>251</sup> In years past, U.S. MNEs relocated and/or established manufacturing plants in tax-friendly jurisdictions.<sup>252</sup> More recently, U.S. MNEs prefer to relocate their intellectual property, or intangible property in tax parlance, to lower tax jurisdictions in addition to their manufacturing plants.<sup>253</sup> Such moves allow U.S. MNEs to save literally billions of dollars in U.S. tax.<sup>254</sup> Not only do these relocations save U.S. MNEs tax dollars, they also allow U.S. MNEs to consolidate their IP in a single location and license their IP from that location. Intuitively, all royalties paid with respect to these licenses benefit from the reduced tax rates available in that jurisdiction.<sup>255</sup> What about the taxes paid to the

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<sup>245</sup> 26 U.S.C. §§ 1(a) – (e) and § 1(i)(2).

<sup>246</sup> 26 U.S.C. § 1(i)(2).

<sup>247</sup> Pub. L. 100-647, title I, Sec. 1003(b)(1), Nov. 10, 1988, 102 Stat. 3382. This law repealed the tax benefit of long-term capital gains regarding royalties available through Pub. L. 99-514, Sec. 302(c).

<sup>248</sup> *United States Multistate Tax Compact* (1967) <<http://www.mtc.gov/About.aspx?id=78>> at 9 August 2010.

<sup>249</sup> Scott A. Hodge and Chris Atkins, above n 238.

<sup>250</sup> Glenn R. Simpson, above n 118.

<sup>251</sup> *Ibid.*

<sup>252</sup> *Microsoft Corporation (Petitioner) v. Commissioner of Internal Revenue (Respondent)*, United States Tax Court, T.C. Memo. 1998-54 (1998) <<http://www.ustaxcourt.gov/InOpHistoric/MicroSof.Tcm.Wpd.pdf>> at 1 August 2010.

<sup>253</sup> Alex Berenson, 'Tax Break Used by Drug Makers Failed to Add Jobs' *New York Times* (New York) 24 July 2007.

<sup>254</sup> *Ibid.*

<sup>255</sup> OECD, *The Articles of the Model Tax Convention on Income and on Capital*, OECD Publications (15 July 2005) Article 12

U.S. by the U.S. MNEs for the royalties obtained in the foreign jurisdiction? Typically, these are minimal or non-existent due to Avoidance of Double Taxation Treaties or Conventions ('DTA',<sup>256</sup> 'DTT' or 'DTC'),<sup>257</sup> Free Trade Agreement ('FTA')<sup>258</sup> or other agreement and/or treaty between the U.S. and foreign jurisdictions. The mechanics of these agreements and/or treaties are described in Chapter 5.

A number of major U.S. companies have moved their intellectual property portfolios, or a portion thereof, offshore. The most publicized of these U.S. companies is the Microsoft Corporation. Pfizer Incorporated, Google Incorporated, Oracle Corporation, IBM Corporation, Lucent Technologies Incorporated, Intel Corporation, Apple Computer Incorporated, Dell Incorporated, Gateway Incorporated and the Hewlett-Packard Company are just a few of the multi-national powerhouses that have also moved at least a portion of their patent portfolios offshore.<sup>259</sup> The James Hardie company is one of the major, and most publicized, Australian companies that relocated to Ireland.<sup>260</sup>

Recent reports of these companies, especially biotechnology and pharmaceutical concerns, indicate that they were successful in 'avoiding about \$90 billion in [U.S.] taxes.'<sup>261</sup> 'Last year, for example Eli Lilly, the sixth-largest American drug maker, paid less than 6 percent of its profits of \$3.4 billion to the United States government'.<sup>262</sup> Amgen, a large American biotechnology concern, reported profits last year of \$4 billion (US) with 80% of their sales in the U.S.<sup>263</sup> Yet, Amgen paid a

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<[http://www.oecd.org/document/37/0,3343,en\\_2649\\_201185\\_1913957\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/37/0,3343,en_2649_201185_1913957_1_1_1_1,00.html)> at 1 August 2010.

<sup>256</sup> OECD, *Glossary of Tax Terms* (2013) [Double Tax Agreement] <[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. An agreement between two (or more) countries for the avoidance of double taxation. A tax treaty may be titled a Convention, Treaty or Agreement.

<sup>257</sup> See generally, *Bilateral Trade Agreements* (2010) Office of the United States Trade Representative <[http://www.ustr.gov/Trade\\_Agreements/Bilateral/Section\\_Index.html](http://www.ustr.gov/Trade_Agreements/Bilateral/Section_Index.html)> at 7 August 2010.

<sup>258</sup> See generally, *Free Trade Agreements* (2010) Office of the United States Trade Representative <<http://www.ustr.gov/trade-agreements/free-trade-agreements>> at 7 August 2010.

<sup>259</sup> Ibid.

<sup>260</sup> John Mulligan, above n 122.

<sup>261</sup> Alex Berenson, above n 253.

<sup>262</sup> Ibid.

<sup>263</sup> Ibid.

mere 22% in U.S. federal tax.<sup>264</sup> Merck, on the other hand, lost a three-year tax evasion battle against the U.S. Internal Revenue Service ('U.S. IRS' or simply 'IRS') in February 2007.<sup>265</sup> It was reported that '[t]he settlement is the second-largest ever for the IRS. The largest reported settlement for the U.S. IRS was with the British pharmaceutical company GlaxoSmithKline settling for \$3.4 billion.'<sup>266</sup> Merck's tax evasion case centered about Merck's profit shifting of patent royalties from high to low tax jurisdictions. 'Merck & Co. for years held offshore accounts in Bermuda to hold patents for two of its drugs [Zocor and Mevacor], and then used the royalties from these patents as tax deductions in the United States.'<sup>267</sup> Amazingly, Merck did not expect this settlement to affect its profitability.<sup>268</sup>

Merck, like many other U.S. MNEs, exploited the transfer pricing rules of intangible property. 'Under the rules of transfer pricing, if a company moves patents or other so-called intangibles from its United States division to a foreign subsidiary, the foreign unit is supposed to pay the American division a fair-market price.'<sup>269</sup>

Transfer pricing is used to transfer goods between different divisions within a company, particularly between divisions in different countries. According to Peter Rost, former marketing director at pharmaceutical companies Pharmacia and Pfizer, this practice is used to move profits from Sweden to countries with lower taxes.<sup>270</sup>

As seen above, the abuse occurs when companies improperly determine values of patents and other intangible assets upon which tax assessments are made. It is difficult to determine whether the internally created value of patents within a company, or group of related companies, is equitable when viewed from outside the company. As mentioned previously, during the last decade significant changes were made to the

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<sup>264</sup> Ibid.

<sup>265</sup> M. T. Whitney, 'Merck set up offshore accounts to avoid U.S. taxes; settles with IRS for \$2.3 billion' *News Target* (US) 26 February 2007 <<http://www.newstarget.com/z021645.html>> at 9 August 2010.

<sup>266</sup> Ibid.

<sup>267</sup> Ibid.

<sup>268</sup> Ibid.

<sup>269</sup> Alex Berenson, above n 261.

<sup>270</sup> Finfacts, above n 218.

U.S. Internal Revenue Code ('U.S. IRC' or simply 'IRC') with respect to this very issue, e.g., 26 C.F.R. §1.482-1 through 26 C.F.R. §1.482-9.<sup>271</sup>

In an effort to emphasize the importance of IP, and the associated laws and regulations governing it, in today's business world, some estimate 'that intangible assets now account for around two-thirds of stock market value, although it is nearly impossible to measure them directly.'<sup>272</sup> This enforces the view that we live in an information society. Companies, therefore, derive significant value from the knowledge they possess. In particular, '[p]atents are a primary policy tool for creating new knowledge'.<sup>273</sup> In the past, this corporate knowledge was about material (physical) items and processes. During the past few decades, patents have expanded to include software and business methods, i.e., intangibles. 'Patents have become intangible rights in intangible knowledge about intangibles'.<sup>274</sup> Patents have become amorphous, e.g., intangibles protecting intangibles. This view of patents, today, makes their function within a corporation difficult to quantify and their corporate value even more difficult to assess. Within the environment of large corporate tax rate differentials (35% in the U.S. and 12.5% in Ireland), an increased corporate reliance and value placed on corporate intangible assets, a difficult (near impossible) system of intangible valuation, and ease of inter-jurisdictional intangible transfers; it is evident why MNEs are attracted to Ireland.

Furthermore, a recent study of tax and investment data from 19 OECD countries during the years 1983 through 1998 indicates that a 1% reduction in average corporate tax yields a 6% increase in U.S. investment in the host country.<sup>275</sup> The U.S. now ranks highest for corporate tax within OECD members.<sup>276</sup> Ireland, on the other hand,

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<sup>271</sup> 26 U.S.C. § 482 (2005) *Methods to Determine Taxable Income in Connection With a Cost Sharing Arrangement*.

<sup>272</sup> Brian Kahin, 'Through the Lens of Intangibles' *Patents, Innovation and Economic Performance – OECD Conference on IPR* (2004) <<http://www.oecd.org/dataoecd/3/52/12040079.pdf>> at 9 August 2010.

<sup>273</sup> *Ibid.*

<sup>274</sup> *Ibid.*

<sup>275</sup> Michael Devereux and Ben Lockwood, *Taxes and the size of the foreign-owned capital stock: which tax rates matter?* (April 2006) Institute For Fiscal Studies (UK) 19 <[http://www.ifs.org.uk/conferences/etpf\\_lockwood.pdf](http://www.ifs.org.uk/conferences/etpf_lockwood.pdf)> at 23 March 2013.

<sup>276</sup> Scott A. Hodge, above n 240.

provides the lowest corporate tax rate within the OECD members.<sup>277</sup> Ireland has been extremely aggressive in managing its corporate tax structure, especially concerning tax on intangible assets. A recent Irish Taxation Institute ('ITI') report entitled, 'Irish Tax Law as a Competitive Advantage', began with the following sentence, '[t]he purpose of this report is to identify a number of areas where Irish tax legislation contains provisions which may affect Ireland's international competitive position and to suggest solutions to these issues'.<sup>278</sup> Further emphasis was placed on Ireland's need to have a competitive international tax strategy as a means of economic growth in a letter from the president of the Irish Taxation Institute to the Minister of the Department of Finance – '... it is imperative for our social and economic well being that we remain competitive if we are to continue the economic progress we have made so far and enhance our capacity to grow in the medium term.'<sup>279</sup> Philip Brennan, former president of the ITI, made it clear that Ireland's economy was tightly bound to the internationally competitive nature of its tax structure.<sup>280</sup>

In brief, major U.S. MNEs are faced with a minimum of 35% tax on royalties from their patent and copyright portfolios.<sup>281</sup> U.S. investment in Ireland grows 6% for every 1% of average corporate tax reduction it offers major U.S. MNEs.<sup>282</sup> Prior to December 2010, Ireland exempted qualifying patent royalties from its tax structure,<sup>283</sup> effectively providing MNEs with a nominal 35% differential (from 35% to 0%) on federal royalty tax liabilities in the U.S. Considering the recent changes to Irish law the tax differential (from 35% to 12.5%) is 22.5%. Similar tax differential savings are available to Australian MNEs locating in Ireland, as indicated by the relocation of the James Hardie company. Numerous major MNEs responded with enormous

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<sup>277</sup> Scott A. Hodge and Chris Atkins, above n 238.

<sup>278</sup> 'Irish Tax Law as a Competitive Advantage' *The Irish Times* (Ireland) 12 October 2005 <[www.irishtimes.com/focus/budget2006/submissions/irtaxation.pdf](http://www.irishtimes.com/focus/budget2006/submissions/irtaxation.pdf)>.

<sup>279</sup> Ibid.

<sup>280</sup> Ibid.

<sup>281</sup> Glenn R. Simpson, above n 118.

<sup>282</sup> Michael Devereux and Ben Lockwood, above n 275.

<sup>283</sup> Irish Taxation Institute, above n 278.

investment funds that transformed Ireland into one of the richest European countries, virtually overnight.<sup>284</sup>

Before leaving the topic of U.S. MNEs, it is noteworthy to mention that Pfizer was one of the first U.S. MNEs to establish itself in Ireland in the late 1960s. ‘In 1969 John A. Mulcahy, a wealthy American from Ireland, used his one-third holding in Pfizer Inc. to persuade the U.S. drug company to set up a citric acid plant in Cork, according to a Harvard Business School case study.’<sup>285</sup> Eli Lilly ‘has an Irish plant at Dunderrow, near Kinsale, County Cork’.<sup>286</sup> Likewise, Amgen ‘plans to open a big plant in East Cork by 2011.’<sup>287</sup> A nexus between Ireland and U.S. MNEs’ IP portfolios obviously exists. In fact, ‘[m]ore than € billion in Irish corporate tax revenues – about 40% of the total Irish tax revenues – may relate to movement of profits made in other overseas locations into Ireland, to take advantage of the corporate tax rate of 12.5%.’<sup>288</sup> Both Australian and U.S. MNEs’ attraction to Ireland in the past (pre-GFC) was so great that the remainder of this paper emphasizes Ireland as part of the jurisdictional pairing with both Australia and the U.S. This does not imply that Ireland is the only attractive tax jurisdiction on the planet with favourable laws that attract MNEs – quite the contrary.<sup>289</sup> It is, however, the source of voluminous related data used for statistical data purposes in producing the results found in Chapter 11.

Unfortunately, through the effects of the GFC Ireland’s economic prosperity evaporated quicker than it arrived, principally due to U.S. toxic debt instruments held by Irish banks, and not Ireland’s IP policy.<sup>290</sup> Even so, the economic model created by Ireland provides textbook opportunities for the creation of comparative analysis.

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<sup>284</sup> *US Multinationals Overseas Profits: Ireland’s patent income tax-exemption may fund over 5% of Irish Government annual spending in 2006* (21 November 2005) Finfacts Ireland <[http://www.finfacts.com/irelandbusinessnews/publish/printer\\_10003995.shtml](http://www.finfacts.com/irelandbusinessnews/publish/printer_10003995.shtml)> at 9 August 2010.

<sup>285</sup> Glenn R. Simpson, above n 118.

<sup>286</sup> Finfacts, above n 218.

<sup>287</sup> *Ibid.*

<sup>288</sup> *Ibid.*

<sup>289</sup> ‘Companies accused of cheating tax system’ *The Local* (Sweden) 30 July 2007 <<http://www.thelocal.se/8036/20070730/>> at 9 August 2010.

<sup>290</sup> ‘Charlemagne: Celtic Metamorphosis - Is Ireland a model of adjustment through austerity?’ *The Economist* (US) 12 January 2013, 46 <<http://www.economist.com/news/europe/21569437-ireland-model-adjustment-through-austerity-celtic-metamorphosis>> at 12 March 2013.

Therefore, a brief history of Ireland's domestic law responsible for Ireland's pre-GFC economic prosperity is presented below with a more complete discussion provided in Chapters 6 and 7.

### **Irish Domestic Law**

The Department of Finance, in 1958, published an indictment on the economy and politics of Ireland entitled, *Economic Development*.<sup>291</sup> This publication went so far as to declare that the Irish population had been reduced to a 'mood of despondency about the country's future.'<sup>292</sup> In large part, the population's despondency was due to a lack of suitable jobs and the general lack of prosperity in Ireland. This, along with other factors, forced the government to address their internal problem. In 1973, a scheme was introduced to attract research and technical development to Ireland.<sup>293</sup> The Irish tax laws were amended to support this new tax regime. 'The regime applies to income from a patented invention where the research and development work giving rise to the patented invention is carried out in Ireland.'<sup>294</sup> The tax benefits related to the scheme were simple. 'Royalty income covered by the scheme is exempt from tax.'<sup>295</sup>

Later, Irish Tax Laws became even more foreign corporation tax-friendly through the sections related to the International Financial Services Centre ('IFSC') in Dublin. The following six benefits provided to foreign MNEs locating and/or relocating to Ireland are among this legislation's original benefits.

1. Corporate Income Tax Rate of 10% (usually 32%),
2. Ten-year exemption from local property taxes,
3. Centre leases of ten-years or more provided double deduction of rental expenses,
4. Owner-occupied new buildings within the centre provided 100% write-off in the first year of building costs,

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<sup>291</sup> Ireland, *Economic Development*, Department of Finance (1958).

<sup>292</sup> Ibid 4.

<sup>293</sup> EU, *Code of Conduct Group (Business Taxation)*, ECOFIN Council - Nr: 4901/99 (29 November 1999) ('*ECOFIN CoC*') 56-57.

<sup>294</sup> Ibid.

<sup>295</sup> *ibid.*

5. Lessors of new buildings within the centre provided 54% write-off in the first year of building costs and the balance written-off at 4% per annum, and
6. New equipment write-off of 100% in the first year.<sup>296</sup>

In 1987, the EU ‘Commission approved the IFSC under the State Aid rules, taking account of the serious socio-economic situation in the area.’<sup>297</sup> This was predicated on the closing of the IFSC scheme to new projects, phasing-out of the 10% corporate tax rate by 2002 and a quota on the number of new projects able to be included within the IFSC scheme in the near-term.<sup>298</sup> As discussed in *Irish Tax Law as a Competitive Advantage*, in 1999, the Department of the Taoiseach declared in a Strategy Report that:

In the longer term, the tax environment for the [financial services] industry will be monitored closely and adjusted as necessary to ensure its competitive position with the EU is maintained while recognizing that Ireland’s tax regime must satisfy our EU, international and domestic commitments.<sup>299</sup>

From the above quotation it is evident that Ireland was aware of its treaty obligations, but apparently believed it could uphold those obligations while ‘ensuring its competitive position with the EU.’ This resulted in Ireland’s subsequent tax policy, which lasted until 7 December 2010 when Ireland was forced to enact new laws due to the results of the GFC.<sup>300</sup> Ireland’s pre-GFC tax policy began on 1 January 2003 Ireland by adjusting upwards its 10% corporate tax rate.<sup>301</sup> Rather than restoring its former 32% corporate tax rate, Ireland instituted a 12.5% corporate tax rate.<sup>302</sup> A 2004 quotation justifying the 12.5% corporate tax rate stated, ‘our low corporation tax rate has been significant, but the global trend is towards lower corporation tax rates. Ireland’s competitive advantage in this regard is being eroded.’<sup>303</sup> Ireland has been accused of competing in the “race to the bottom” in an effort to attract FDI.

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<sup>296</sup> *ECOFIN CoC*, above n 293, 35.

<sup>297</sup> *Ibid* 36.

<sup>298</sup> *Ibid*.

<sup>299</sup> Irish Taxation Institute, above n 278, 6.

<sup>300</sup> Department of Finance - Department of Public Expenditure and Reform: The Budget, n 235.

<sup>301</sup> *Guide To Tax In Ireland 2006* (2006) IDA Ireland <<http://www.idaireland.com>> at 9 August 2010, 2.

<sup>302</sup> *Ibid*.

<sup>303</sup> Irish Taxation Institute, above n 278, 4.

Ireland's Department of Enterprise, Trade and Employment ('DETE') issued a document, *Trading for Economic and Social Development*, in June of 2005.<sup>304</sup> In it, further justification for Ireland's pre-GFC tax scheme is found, e.g., '[a] general principle of our approach to the WTO is that, ... we greatly depend on the existence of a liberal global trading environment.'<sup>305</sup> Such careful association with the WTO and liberal use of the term 'small domestic economy' arguably provided foreign MNEs and others with a sense of Ireland's complete compliance with the WTO. Further enumeration of desirable characteristics of trade with other countries apparently justified Ireland's focus on 'the importance of competitiveness issues and advances the diffusion of technology and investment.'<sup>306</sup>

Ireland's competitiveness apparently conflicted with the basic tenets of both the EU and the WTO, which was made obvious on 7 December 2010 in the concessions Ireland made to its domestic law.<sup>307</sup> The concessions demanded of Ireland by the EU and the IMF in exchange for loans to buttress Ireland's failing banks consisted of eliminating preferential tax rates for qualifying patents. Within the EU, the European Commission had already issued, concerning Ireland, a reasoned opinion under Article 226 of the *EC Treaty*<sup>308</sup> for discriminatory rules on tax treatment of patent royalties.<sup>309</sup> Furthermore, Ireland's attractiveness (tax scheme) is, and remains, dependent upon various tax treaties to which it is a signatory, as indicated in the following statement, 'the Irish tax code tends to grant benefits from the most favourable treaties to the residents of all countries with which Ireland has a tax treaty.'<sup>310</sup> Sections 153, 172D, 198, 246, 452, 130(2B), 626B, 64, 845A and Schedule 24 of the Irish direct tax code are examples of such treatment.<sup>311</sup>

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<sup>304</sup> Ibid 6.

<sup>305</sup> Ibid 7.

<sup>306</sup> Ibid 7.

<sup>307</sup> Department of Finance - Department of Public Expenditure and Reform: The Budget, above n 235.

<sup>308</sup> *Treaty Establishing the European Community*, opened for signature 7 February 1992, [1992] OJ C 224/6 (entered into force 1 November 1993) ('*EC Treaty*'), Article 226.

<sup>309</sup> *Direct taxation: Commission requests Ireland to end discriminatory rules on tax treatment of patent royalties*, above n 4.

<sup>310</sup> Ibid 24.

<sup>311</sup> Ibid 24-27.

## Summary

The introductory chapter provided a skeletal view of a global issue or phenomenon regarding patent related activities – jurisdictional arbitrage.<sup>312</sup> This chapter built upon that information by providing specific detail and history of that phenomenon, including the most publicized example of this phenomenon – Ireland. The following chapters provide discipline specific detail (law, economics, and business) providing the basis for the critical interactions between the three disciplines that made this phenomenon possible and potentially preventable in the future. Thus, the body of information presented in the first and second chapters is systematically built upon in ever more detail.

The highlights of this chapter are listed below.

- Introduction and definition of commonly used terms throughout this thesis, including royalties, patents, arbitrage and jurisdiction
- Identification, scope, magnitude and definition of the phenomenon, including major MNEs involved
- Quantification of the effects of the phenomenon
- Overview of Irish law involved in creating the force of attraction between jurisdictions that promote this phenomenon – jurisdictional arbitrage

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<sup>312</sup> The OECD refers to a portion of this phenomenon as tax base erosion and profit shifting (BEPS).

## **CHAPTER 3 – INTERNATIONAL LAW AND INTERNATIONAL ORGANIZATIONS**

The aim of this chapter is to provide a brief introduction to the international treaties and international organizations pertinent to this research. A brief discussion of four specific international organizations is presented, including the organizations' roles in this research. The four organizations are the: (1) UN, (2) WIPO, (3) WTO, and (4) OECD. These four major international organizations annually produce large quantities of data ranging from the number of patents issued within each jurisdiction to the per capita income of each jurisdiction. The data from each of these four major international organizations, including treaties managed by these organizations that are pertinent to this research, constitutes the bulk of the empirical data examined and analyzed in this thesis.

### **Introduction**

International law and international organizations play an ever increasing role in society by providing the international legal landscape that is the foundation of this research. The remaining chapters address this legal landscape, as it pertains to the laws governing the jurisdictions studied. This chapter, as mentioned above, is a brief introduction to the treaties and international organizations of interest in this thesis. The study of any one of these treaties or international organizations, when properly performed, produces volumes of material and consumes lifetimes of effort. Simply stated, such an effort is far beyond the scope of this thesis. Notwithstanding the magnitude of such studies, it does not obviate the need to introduce and understand the role of each of the treaties and international organizations related to this research. Therefore, it is the objective of this chapter to (1) introduce the treaties and the international organizations, (2) discuss the purpose of the introduced treaties and international organizations, and (3) define the relationship the treaties and international organizations have in this research, as indicated by Figure 4 below.

Domestic law and International law work in concert to provide the environment for cross-border business transactions – MNEs' operating environment. The legal environment enabling cross-border transactions allows MNEs to focus on business

strategy, not international public law. MNEs ask ‘commercial questions such as the size of the target market, demand for the product, margin between cost of production and selling price.’<sup>313</sup> Naturally, MNEs operating in cross-border environments must know the answers to ‘legal questions about the protection that can be secured against unlawful use ... the impact of competition law and other legal regimes in the host country’.<sup>314</sup> MNEs must also be keenly aware of how royalties and income from the sale of goods is treated in the host country and abroad. ‘Another issue may be withholding tax. Any avoidance of double taxation agreement between the sending and host countries should be checked’.<sup>315</sup> The ability to provide a cross-border legal environment spanning both domestic and international law requires commitment from both countries and international organizations to establish and operate such an environment.

The magnitude of the creation, operation, success and/or failure of a cross-border environment is potentially overwhelming. As previously mentioned, there are 195 or 196 countries worldwide. Each of these countries has a unique set of domestic laws, whether customary or codified. Each MNE wishing to do business in, or provide goods to, one or more of these countries is faced with, at a minimum, the questions indicated above, i.e., market characteristics, legal regimes, etc. The actual number of combinations arising from this example is nearly incalculable. However, if one views the issue from another vantage point – that being the necessity to support a common and consistent set of legal concepts required to carry out successful cross-border activities – then the issue is reduced to a fixed number of countries needing to ascribe to this principle. In brief, this has been achieved through current international and domestic law comprising international treaties, domestic statutes, international oversight and administrative organizations, as indicated below. Furthermore, the OECD recently proposed to the G20 leaders the need to adopt a multilateral treaty to address the effects of tax base erosion and profit shifting.<sup>316</sup>

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<sup>313</sup> Robin Burnett, *Law of International Business Transactions* (3<sup>rd</sup> ed, 2004) 318.

<sup>314</sup> *Ibid.*

<sup>315</sup> *Ibid.*

<sup>316</sup> *OECD Secretary – General Report To The G20 Leaders*, above n 70.

DOMESTIC LAW							Taxation		Bilateral DTAs		I E	Taxation		Bilateral DTAs		A U	Taxation		Bilateral DTAs		A U	
									U S			U S					S					I E
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	Patents Act		Patent s Act		Title 35 USC		ITAA 1997				TCA 1997				IRC 2009							
AU Patent Law		IE Patent Law		US Patent Law		AU Tax Law		IE Tax Law		US Tax Law												
Domestic Patent Law						Domestic Tax Law																
INTERNATIONAL LAW	TRIPS	W	P	B	PC T	· · ·	SG(#24 )	Model Tax Convention (MTC) [Used To Create Bilateral Avoidance of Double Taxation Treaties (DTAs)]														
	WTO	WIPO						OECD														
	WTO Charter	WIPO Charter						OECD Charter														
	United Nations (UN)																					
	United Nations Charter																					
Pre-UN Treaties																						

**Figure 4: Legal Landscape – International Organizations and Related Charters.**

The complexity depicted in Figure 4 above arises from a fundamental conflict between public international law and international economic law. ‘[P]ublic international law has developed from the principle that national sovereignty is the essence of statehood and that international law will not seek to interfere with national sovereignty.’<sup>317</sup> However, ‘the bulk of international trade is conducted by private business enterprises’<sup>318</sup> because ‘public international law deals primarily with the relationships of nation states vis-à-vis each other, it has, as a result, had little direct impact upon international commercial transactions.’<sup>319</sup> The development of international organizations and the organizations’ sponsored treaties and policies

<sup>317</sup> Michael Pryles, Jeff Waincymer and Martin Davies, *International Trade Law – Commentary and Materials* (2<sup>nd</sup> ed, 2004) 118.

<sup>318</sup> Ibid.

<sup>319</sup> Ibid.

attempt to mitigate this fundamental conflict between public international law and international trade. Specifically, the UN,<sup>320</sup> the WTO,<sup>321</sup> the WIPO<sup>322</sup> and the OECD<sup>323</sup> as depicted in the shaded region of Figure 4 above, serve to mitigate this conflict.

The treaties and international organizations above represent the body of international and domestic law, the cross-border environment, addressed in the remaining chapters. The shaded areas of Figure 4 indicate the international treaties and international organizations discussed in this chapter. The objective of this legal landscape, as stated above, is to provide a cross-border environment that is conducive to cross-border activities. Laurence Boule reminds us that ‘the eminent economist John Galbraith asserted that it is the corporation, as opposed to the market, which is the dominant institution in modern economics.’<sup>324</sup> ‘[M]ultinational enterprises are not seeking to look solely at consumer demand within a particular geographical area, but also make business decisions based on relative tax rates, wage rates, business regulations and the like.’<sup>325</sup> The previous statement is consistent with the three disciplines (Law, Economics and Business) presented in Chapter 1 as the three pillars supporting this research. Boule indicates further ‘that there are only 21 nation-states with more ‘financial muscle’ than all the corporations participating in the global economy, and that nearly 30% of the 50 largest economic entities in the world are corporations.’<sup>326</sup> Boule’s reference to corporations in the previous quotation was derived from his table of ‘Fifty Largest Economic Entities in 2005’.<sup>327</sup> Another commentator indicated that ‘[s]ome multinational corporations have total assets which far outweigh those of some small countries on the world scene.’<sup>328</sup> Wal-Mart Stores and General Electric were ranked as two of the largest economic entities in the world

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<sup>320</sup> See generally, <[www.un.org](http://www.un.org)>.

<sup>321</sup> See generally, <[www.wto.org](http://www.wto.org)>.

<sup>322</sup> See generally, <[www.wipo.org](http://www.wipo.org)> or <[www.wipo.int](http://www.wipo.int)>.

<sup>323</sup> See generally, <[www.oecd.org](http://www.oecd.org)>.

<sup>324</sup> Laurence Boule, *The Law of Globalisation* (2008) 21.

<sup>325</sup> *Ibid.*

<sup>326</sup> *Ibid* 23.

<sup>327</sup> *Ibid* 22.

<sup>328</sup> Michael Pryles et al., above n 317, 118.

in 2005 at 22<sup>nd</sup> and 43<sup>rd</sup>, respectively.<sup>329</sup> MNEs have truly become dominant institutions in modern economics, and as one commentator observed:

Multinational corporations cannot be treated in the same way as domestic corporations. While the national government still has sovereignty and legislative power over any corporation conducting business within its boundaries, if the governmental rules are considered to be too onerous, the multinational will simply move its investment to more favourable shores.<sup>330</sup>

The cross-border environment, the layered legal architecture, provides the ‘sea’ upon which MNEs navigate. In brief, this legal environment “thus provides the ‘rules of the game’ for the exercise of political, economic and societal activities.”<sup>331</sup> Countries that ascribe to these rules, which allow MNEs to navigate to their shores, benefit greatly through increased Gross Domestic Product (‘GDP’) – ‘GDP per person rose by 1.4% in the 1990s in non-globalizing developing countries, it rose by 5.1% a year in globalizing ones.’<sup>332</sup> International law and domestic law work symbiotically. No matter how complicated or how many layers of international law exist, ‘contemporary international economic law is ultimately dependent on the domestic laws of contract, business associations and property, and dispute resolution systems associated with them.’<sup>333</sup> In other words, MNEs are subject to the domestic laws of the host country in which the MNEs do business. In general, international law serves to provide MNEs with, at a minimum, a uniform level of legal consistency in the host countries in which the MNEs engage in business activities.

Figure 4 requires some explanation. The upper right-hand portion of Figure 4 represents domestic tax law instruments for Australia, Ireland and the U.S. The *Income Tax Assessment Act 1997* (Cth) (‘ITAA 1997’) is Australia’s principal domestic tax law, represented in Figure 4 as *ITAA 1997*.<sup>334</sup> The *Tax Consolidation Act 1997* (‘TCA 1997’) is Ireland’s principal domestic tax law, represented in Figure 4

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<sup>329</sup> Ibid 22.

<sup>330</sup> Michael Pryles et al., above n 317, 118.

<sup>331</sup> Laurence Boule, above n 324, 54.

<sup>332</sup> WTO, *Statistics on Globalisation* (2001) Statistics – International Trade and Market Access Data, 3 <[http://www.wto.org/trade\\_resources/statistic/globalisationstat1.doc](http://www.wto.org/trade_resources/statistic/globalisationstat1.doc)> at 15 July 2011.

<sup>333</sup> Laurence Boule, above n 324, 77.

<sup>334</sup> *Income Tax Assessment Act 1997* (Cth).

as *TCA 1997*.<sup>335</sup> Title 26 of the U.S. Code (‘U.S.C.’ or simply ‘USC’) is the U.S.’s principal domestic tax law, represented in Figure 4 as Title 26 USC.<sup>336</sup> In addition to the domestic tax law for each country, the existing DTAs for each country are represented in Figure 4. In particular, Figure 4 indicates that Australia has a DTA with Ireland, the U.S. and 43 additional countries.<sup>337</sup> Ireland, as indicated in Figure 4, has a DTA with Australia, the U.S. and 60 additional countries.<sup>338</sup> The U.S. has a DTA with Australia, Ireland and 56 additional countries, also as indicated in Figure 4.<sup>339</sup> The upper left-hand portion of Figure 4 represents domestic patent law instruments for Australia, Ireland and the U.S. The *Patents Act 1990* (Cth) is Australia’s principal domestic patent law, represented in Figure 4 as *Patents Act*.<sup>340</sup> The *Patents Act 1992* is Ireland’s principal domestic patent law, represented in Figure 4 as *Patents Act*.<sup>341</sup> Title 35 of the U.S. Code is the U.S.’s principal domestic patent law, represented in Figure 4 as Title 35 USC.<sup>342</sup>

The shaded portion of Figure 4 represents four international organizations and their associated charters: (1) UN,<sup>343</sup> (2) WTO,<sup>344</sup> (3) WIPO,<sup>345</sup> and (4) OECD.<sup>346</sup> Each of these four international organizations was established through an international agreement, its Charter and/or Convention. The *TRIPS Agreement* represents an international treaty currently managed by the WTO.<sup>347</sup> W, P, B, PCT, ... SG(#24)

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<sup>335</sup> *Tax Consolidation Act 1997*.

<sup>336</sup> See generally, <<http://www.gpo.gov/fdsys/browse/collectionUScode.action?collectionCode=USCODE>> at 15 November 2011.

<sup>337</sup> Australia, *Australian Tax Treaties* (2011) The Treasury <<http://www.treasury.gov.au/contentitem.asp?NavId=052&ContentID=625>> and <[http://www.treasury.gov.au/content/tax\\_treaties.asp?ContentID=759&title=Tax%20Treaties](http://www.treasury.gov.au/content/tax_treaties.asp?ContentID=759&title=Tax%20Treaties)> at 8 July 2011.

<sup>338</sup> Ireland, *Tax Treaties* (2011) Tax and Customs – Revenue <<http://www.revenue.ie/en/practitioner/law/tax-treaties.html>> at 4 July 2011.

<sup>339</sup> U.S., *United States Income Tax Treaties - A to Z* (2011) Internal Revenue Service <<http://www.irs.gov/businesses/international/article/0,,id=96739,00.html>> at 4 July 2011.

<sup>340</sup> *Patents Act 1990* (Cth).

<sup>341</sup> *Patents Act 1992*.

<sup>342</sup> Title 35 of the U.S. Code – 35 U.S.C.

<sup>343</sup> See generally, <[www.un.org](http://www.un.org)>.

<sup>344</sup> See generally, <[www.wto.org](http://www.wto.org)>.

<sup>345</sup> See generally, <[www.wipo.org](http://www.wipo.org)> or <[www.wipo.int](http://www.wipo.int)>.

<sup>346</sup> See generally, <[www.oecd.org](http://www.oecd.org)>.

<sup>347</sup> *TRIPS Agreement*, above n 148.

represent the 24 intellectual property treaties,<sup>348</sup> including patent-related treaties, managed and administered by WIPO. Finally, the MTC administered and managed by the OECD is a bilateral treaty template for the avoidance of double taxation, e.g., a model DTA.<sup>349</sup> The MTC, unlike the treaties previously mentioned, is merely a template treaty and therefore is not ratified. It, however, once modified and agreed to by two countries forms the actual DTA between those two countries. Even though DTAs are created from a common MTC they are seldom, if ever, identical due to the specific modifications of the MTC that each country makes to arrive at an acceptable DTA.

Each of the four international organizations that play pivotal roles in this research is introduced in the following sections, one section for each organization. The remaining international and domestic components depicted in Figure 4 are addressed in subsequent chapters.

## UN

The UN was established in 1945 on the basis of advancing principles long recognized from previous and existing treaties and following the wake of two world wars, as indicated below.

- ... a strong desire ... for the maintenance of the general peace;
- ... the friendly settlement of international disputes;
- ... the solidarity which unites the members of the society of civilized nations;
- ... strengthening the appreciation of international justice;
- ... that it is expedient to record in an international Agreement the principles of equity and right on which are based the security of States and the welfare of peoples;<sup>350</sup>

Many of these same principles were cited as motivating the establishment of the UN through the Charter of the United Nations,<sup>351</sup> as indicated in a portion of the Charter's preamble below:

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<sup>348</sup> See generally, <<http://www.wipo.int>> at 1 August 2014.

<sup>349</sup> UN, *United Nations Model Double Taxation Convention between Developed and Developing Countries* (2010) Finance for Development - Committee of Experts on International Cooperation in Tax Matters ('*UN MTC*') <[www.un.org/esa/ffd/documents/DoubleTaxation.pdf](http://www.un.org/esa/ffd/documents/DoubleTaxation.pdf)> at 16 October 2011.

<sup>350</sup> *Convention (I) For The Pacific Settlement Of International Disputes* (Hague I).

<p><b>WE THE PEOPLES OF THE UNITED NATIONS DETERMINED</b>  to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind, and  to reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small, and  <b>to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained,</b> and  to promote social progress and better standards of life in larger freedom, [Emphasis Added]</p>
<p><b>AND FOR THESE ENDS</b>  to practice tolerance and live together in peace with one another as good neighbours, and  to unite our strength to maintain international peace and security, and  to ensure, by the acceptance of principles and the institution of methods, that armed force shall not be used, save in the common interest, and  <b>to employ international machinery for the promotion of the economic and social advancement of all peoples,</b> [Emphasis Added]</p>

**Table 2: Establishing the United Nations.**<sup>352</sup>

Of significant importance in this study is the major role the UN plays with respect to maintaining a repository of treaties, in particular the treaties cited in Figure 4. Article 102 of the UN's charter defines this role, as follows:

1. Every treaty and every international agreement entered into by any Member of the United Nations after the present Charter comes into force shall as soon as possible be registered with the Secretariat and published by it.
2. No party to any such treaty or international agreement which has not been registered in accordance with the provisions of paragraph 1 of this Article may invoke that treaty or agreement before any organ of the United Nations.<sup>353</sup>

This function is augmented by the Secretary-General's responsibilities in this regard, as defined in Article 98.<sup>354</sup>

The Secretary-General shall act in that capacity in all meetings of the General Assembly, of the Security Council, of the Economic and Social Council, and of the Trusteeship Council, and shall perform such other functions as are entrusted to him by these organs. The Secretary-General shall make an annual report to the General Assembly on the work of the Organization.<sup>355</sup>

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<sup>351</sup> See generally, <<http://www.un.org/en/documents/charter/index.shtml>> at 5 November 2011.

<sup>352</sup> *Charter Of The United Nations And Statute Of The International Court Of Justice*, opened for signature 26 June 1945 (entered into force 24 October 1945) Preamble ('UN Charter').

<sup>353</sup> *UN Charter*, Article 102.

<sup>354</sup> UN, *Note by the Secretariat* (2011) Databases <[http://treaties.un.org/pages/DB.aspx?path=DB/pageNote\\_en.xml](http://treaties.un.org/pages/DB.aspx?path=DB/pageNote_en.xml)> at 16 April 2011.

<sup>355</sup> *UN Charter*, Article 98.

Furthermore, Article 1(4) requires the UN '[t]o be a centre for harmonizing the actions of nations in the attainment of these common ends.'<sup>356</sup> To this end, the UN produces the largest annual statistical study of the world – the people, the countries, the economies, the rules of law and the conflicts.<sup>357</sup> Without the efforts of the UN, both as the repository of international treaties and as the source of international law and data, it would be impossible to perform this research or similar ones.

## WTO

### Introduction

After World War II political advisors from the U.S. and England met at Bretton Woods to develop 'a comprehensive plan to set up mechanisms dealing with international trade, investment and foreign exchange. The two key prongs of the Bretton Woods system were the IMF and the International Bank for Reconstruction and Development ('World Bank').'<sup>358</sup> Later, a detailed proposal to establish the International Trade Organization ('ITO') was developed. The ITO gave way to the *General Agreement on Tariffs and Trade* ('GATT'). For the purpose of this paper, 'the GATT and its successor the World Trade Organisation are the most important trade-oriented institutions as they shape domestic import and export laws that directly affect all international sale of goods transactions'.<sup>359</sup>

The WTO was established on 15 April 1994 through the *Marrakesh Agreement Establishing The World Trade Organization*.<sup>360</sup> The preamble to this treaty defines the motivation of the drafters of this treaty that pertain to this study, as listed below.

- *Recognizing* ... the field of trade and economic endeavour should be conducted with a view to raising standards of living, ...,
- *Recognizing* ... there is need for positive efforts designed to ensure that developing countries, and especially the least developed among them, secure a share in the growth in international trade ...,

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<sup>356</sup> *UN Charter*, Article 1(4).

<sup>357</sup> UN, *Statistical Yearbook – 54<sup>th</sup> Issue* (2010) United Nations Statistics Division, 143 <[http://unstats.un.org/unsd/syb/syb54/SYB54\\_Final.pdf](http://unstats.un.org/unsd/syb/syb54/SYB54_Final.pdf)> at 16 October 2011.

<sup>358</sup> Michael Pryles et al., above n 317, 133.

<sup>359</sup> *Ibid* 134.

<sup>360</sup> *WTO Charter*, n 147.

- *Being desirous* of ... the substantial reduction of tariffs and other barriers to trade ...,
- *Resolved*, ... to develop an integrated, more viable and durable multilateral trading system encompassing the General Agreement on Tariffs and Trade, ...<sup>361</sup>

The following five articles, indicated in Table 3, of the *WTO Charter* are pertinent to this study in the following manner. Article 1 establishes the WTO as an organ of the UN with repository and data functions similar to those of the UN. Article 2(1) obligates the signatories to the harmonizing effects of the *TRIPS Agreement*<sup>362</sup> found in Annex 1C. The importance of Article 2(1) in this study becomes apparent in a subsequent chapter. Article 3(3) provides the dispute mechanism that has proven effective in numerous jurisdictional patent disputes, not infringements. Article XVI(4) defines the clear difference between the *TRIPS Agreement*,<sup>363</sup> that much of this research is based upon, and the older *Paris Convention*. The *Paris Convention*<sup>364</sup> was adopted as law by the domestic jurisdictions whereas the *TRIPS Agreement*<sup>365</sup> obligates the signatory to modify its existing domestic law to conform to the content of the *TRIPS Agreement*.<sup>366</sup> Finally, Article XVI(5) prohibits reservations, thus ensuring the harmonizing effect of the *TRIPS Agreement*,<sup>367</sup> which is a central point of this cross-border patent research.

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<sup>361</sup> Ibid Preamble.

<sup>362</sup> *TRIPS Agreement*, above n 148.

<sup>363</sup> Ibid.

<sup>364</sup> *Paris Convention*, above n 171.

<sup>365</sup> *TRIPS Agreement*, above n 148.

<sup>366</sup> Ibid.

<sup>367</sup> Ibid.

Article 1 – Establishment of the Organization	The World Trade Organization (hereinafter referred to as "the WTO") is hereby established.
Article 2 – Scope of the WTO	1. The WTO shall <b>provide the common institutional framework for the conduct of trade relations among its Members in matters related to the agreements and associated legal instruments included in the Annexes to this Agreement.</b> [Emphasis Added]
Article 3 – Functions of the WTO	3. The WTO shall administer the Understanding on Rules and Procedures Governing the Settlement of Disputes (hereinafter referred to as the " <b>Dispute Settlement Understanding</b> " or " <b>DSU</b> ") in Annex 2 to this Agreement. [Emphasis Added]
Article XVI – Miscellaneous Provisions	4. <b>Each Member shall ensure the conformity of its laws, regulations and administrative procedures with its obligations as provided in the annexed Agreements.</b> [Emphasis Added]
Article XVI – Miscellaneous Provisions	5. <b>No reservations may be made in respect of any provision of this Agreement.</b> Reservations in respect of any of the provisions of the Multilateral Trade Agreements may only be made to the extent provided for in those Agreements. Reservations in respect of a provision of a Plurilateral Trade Agreement shall be governed by the provisions of that Agreement. [Emphasis Added]

**Table 3: Establishing The World Trade Organization (WTO).**

### **Accession**

The WTO accession process has consistently become more difficult over time. China's WTO accession took 15 years. This was due, in part, to the large number of special provisions that China was obliged to comply with prior to obtaining WTO membership status.<sup>368</sup> The special provisions can be substantial barriers to membership in the WTO. Furthermore, there is no limit on the number of special provisions that can be included in a particular accession protocol, as indicated below.

The Protocol of Ecuador incorporates 21 specific commitments. Comparable figures for the other 11 governments that have acceded are: Mongolia 17; Bulgaria 26; Panama 24; Kyrgyz Republic 29; Latvia 22; Estonia 24; Jordan 29; Georgia 29; Croatia 27; Albania 29; Oman 26.<sup>369</sup>

It is within these special provisions or specific commitments that intellectual property rights, as articulated in the *TRIPS Agreement*,<sup>370</sup> and potential WTO Member States' compliance collide. This is also true of potential WTO Member States' compliance with such standards of behaviour as those from the OECD, e.g., *The OECD's Project*

<sup>368</sup> Julia Ya Qin, "'WTO-Plus' Obligations and Their Implication for the World Trade Organization Legal System" (2003) 37(3) *Journal of World Trade* 483-522.

<sup>369</sup> Ibid.

<sup>370</sup> *TRIPS Agreement*, above n 148.

on *Harmful Tax Practices*.<sup>371</sup> However, this process of accession vetting in the form of these special provisions is not retroactive and is applicable only to current and future applicants wishing to obtain WTO membership.

## WIPO

The WIPO was established on 14 July 1967 through the *Convention Establishing the World Intellectual Property Organization* ('*WIPO Charter*').<sup>372</sup> The preamble to this treaty defines the motivations from this treaty that pertain to this study, as listed below.

- ... encourage creative activity
- ... promote the protection of intellectual property
- ... modernize ... the protection of industrial property<sup>373</sup>

The following five articles, identified in Table 4, of the *WIPO Charter* are pertinent to this study in the following manner. Article 1 establishes WIPO as an organ of the UN with repository and data functions similar to those of the UN. Article 2(viii) defines the scope of the activities of WIPO, including those related to this research. Article 3(i) indicates the commitment of WIPO to promoting intellectual property protection, which is required for MNEs to seriously consider locating or relocating patent portfolios to other jurisdictions. Article 4(i) demonstrates a commitment to aid in the global harmonization of domestic intellectual property law. Article 4(vi) commits WIPO to engaging in studies regarding intellectual property, including patents, and publish the results. WIPO proves to be an invaluable source of data for this research through such WIPO publications as the *World Patent Report* and *World Intellectual Property Indicators, 2012 edition*.<sup>374</sup> And, Article 16 prohibits reservations, thus ensuring the harmonizing effects of the *TRIPS Agreement*.<sup>375</sup>

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<sup>371</sup> See generally, <<http://www.oecd.org/ctp/harmful/>> at 10 April 2013. More specifically, see *Project on Harmful Tax Practices: The 2004 Progress Report* (4 February 2004) Centre for Tax Policy and Administration <<http://www.oecd.org/ctp/harmful/30901115.pdf>> at 13 October 2013.

<sup>372</sup> *WIPO Convention, Convention Establishing the World Intellectual Property Organization*, opened for signature 14 July 1967, 828 UNTS (26 April 1970) ('*WIPO Charter*').

<sup>373</sup> *Ibid* Preamble.

<sup>374</sup> See generally, <<http://www.wipo.int/ipstats/en/>> at 2 April 2013.

<sup>375</sup> *TRIPS Agreement*, above n 148.



The first of the above two points is very appropriate considering the state of the global economy due to the GFC.<sup>379</sup> The second, and closely related to the first, is the commitment to less developed nations. Later, it will be shown that this particular theme throughout modern treaties provides an unintended consequence to domestic law – subsequently referred to as a “tear” in the domestic legal fabric of a jurisdiction.

Article 2	(d) pursue their efforts to <b>reduce or abolish obstacles to the exchange of goods and services</b> and current payments and maintain and extend the liberalisation of capital movements; and (e) <b>contribute to the economic development of both Member and non-member countries in the process of economic development</b> by appropriate means and, in particular, by the flow of capital to those countries, having regard to the importance to their economies of receiving technical assistance and of securing expanding export markets. [Emphasis Added]
Article 3	(a) keep each other informed and furnish the Organisation with the information necessary for the accomplishment of its tasks; (b) consult together on a continuing basis, carry out studies and participate in agreed projects; and

**Table 5: Establishing The OECD.**

Similar in nature to the articles discussed in previous charters, the *OECD Charter* obligates its membership to the principle of harmonization through Article 2(d). Least Developed Countries (‘LDC’s), as the UN defines them, receive special

<sup>379</sup> Strong debates rage about the exact timing of the GFC. Some commentators even suggest that the GFC continues today. Fueling this debate are a plethora of data from the EU and the U.S. suggesting that the GFC recovery is simply an accounting error. Two examples, one from the U.S. and one from the EU, lend credence to this argument. First, Emmanuel Saez of the Department of Economics at the University of California at Berkeley on 23 January 2013 published a paper entitled *Striking it Richer: The Evolution of Top Incomes in the United States (Updated with 2011 estimates)*. Saez suggests that ‘[t]he top 1% [in terms of wealth in the U.S.] absorbed 49% of income losses from 2007 to 2009’ yet captured ‘121% of the income gains in the first two years of the recovery.’ CNBC’s Jeff Cox suggests in his business news report entitled *The 5% recovery: Why most are still in recession* that ‘Huge leaps in the income and wealth of the top 5 percent mask the decline of income and wealth of the bottom 95 percent. Average all wealth and income and it appears that the economy is expanding to the benefit of all, when it [in] fact only the top 5 percent have escaped the recession; the recession never ended for the bottom 95 percent.’ This sentiment was shared on 18 April 2013 by Sarah Bloom Raskin, a member of the Board of Governors of the Federal Reserve System in remarks she made in New York City where she stated, ‘I am persuaded that because of how hard these lower- and middle- income households were hit, the recession was worse and the recovery has been weaker. The recovery has also been hampered by a continuation of longer-term trends that have reduced employment prospects for those at the lower end of the income distribution and produced weak wage growth.’ Those longer-term trends regarding employment are addressed in CNBC’s Jeff Cox’s business news report of 22 August 2013 entitled *Jobless picture is worse than you think: Gallup* in which he states that ‘Gallup puts the nation’s unemployment rate at an ugly 8.6 percent in August, a startling jump from the 7.8 percent the organization recorded for July. When counting the underemployed, the rate zooms to 17.7 percent, off its 2013 high of 18.2 percent ... while the ‘government puts the jobless figure at 7.4 percent, and 14 percent when including the underemployed and those who have quit looking.’ Second, when the European Commission published its *European Economic Forecast – Autumn 2009* in November 2009 it declared the end of the GFC – ‘Recession is over ... with GDP growth turning positive again’. However, the EU enter a recession again in 2011 and just recently exited that recession in 2013 after positive second quarter GDP numbers were released by Eurostat. As confusing as this may appear, the general consensus is that the GFC began sometime in 2007 with a declining GDP for two quarters and ended sometime in 2009 with a positive GDP.

attention by OECD Member States, as dictated in Article 2(e). And, the OECD obligates itself to act as an active participant in studies and with its Member States' assistance serves as a repository of information and data obtained both through the OECD initiated studies and the Member States' supplied data. Without the existence of the OECD and the OECD data this research would be difficult to perform.

## **Summary**

This chapter provided a very brief introduction to the international treaties and international organizations relied upon in this research. This research obtained data from each of the four major international organizations, including treaties pertinent to this research that are managed and/or controlled by one or more of these four international organizations. In general, the source of the bulk of the empirical data examined and analyzed was derived from one of these four sources.

The following list identifies the highlights of this chapter, as provided below.

- Introduced the major sources of international law employed in this study
- Introduced the major sources of empirical data used in this study
- Discussed the purpose of each of the major sources of international law examined in this study
- Discussed the purpose of each of the major sources of the empirical data examined in this study
- Articulated the relationship between the major sources of international law examined in this study and the actual research effort
- Articulated the relationship between the major sources of empirical data examined in this study and the actual research effort of this thesis
- Introduced and discussed the charters for each of the four major international organizations examined in this chapter
- Introduced and discussed specific articles of the charters for each of the four major international organizations examined in this chapter that pertain directly to the research efforts of this thesis

## CHAPTER 4 – INTERNATIONAL LAW: MULTILATERAL PATENT AND INTELLECTUAL PROPERTY TREATIES

This chapter demonstrates the intertwined nature of the multilateral patent and intellectual property treaties, the international organizations that manage and administer those treaties, and the jurisdictions that depend on both in this thesis. While the previous chapter presented international organizations pertinent to this research, the type and nature of the specific treaties that form the foundation for this research are introduced in this chapter. Due to the nature of multilateral treaties the material presented in this chapter has a direct and major impact on the model development presented in Chapter 10.

### Introduction

Patent law and taxation law circumscribe the legal scope of this thesis, as previously indicated. Previous chapters made reference to various international treaties such as the *TRIPS Agreement*<sup>380</sup> and various DTAs.<sup>381</sup> The objective of this chapter is to provide a foundation regarding the international law and treaties depicted in Figure 5 in sufficient detail to develop a model that accurately accounts for their effect. In particular, the shaded portion of Figure 5 is the focus of this chapter.

INTERNATIONAL LAW	TRIPS	W	P	B	PCT	.	SG(#24)	Model Tax Convention (MTC) [Used To Create Bilateral Avoidance of Double Taxation Agreements (DTAs)]	
	WTO	WIPO					OECD		
	WTO Charter	WIPO Charter					OECD Charter		
	United Nations (UN)								
	United Nations Charter								
	Pre-UN Treaties								

**Figure 5: Legal Landscape – International Patent Treaties.**

<sup>380</sup> *TRIPS Agreement*, above n 148.

<sup>381</sup> Australia, *Tax Treaties*, above n 337.

The *Vienna Convention on the Law of Treaties* ('*Vienna Convention 1969*')<sup>382</sup> provides an excellent introduction to the object and purpose of treaties.<sup>383</sup> The framers of, and signatories to, the *Vienna Convention 1969* demonstrate their conviction to the principles, objects and purposes of international law through 'the codification and progressive development of the law of treaties' for 'the maintenance of international peace and security' and 'the development of friendly relations and the achievement of co-operation among nations'.<sup>384</sup> Noticeably missing from the *Vienna Convention 1969* is the ability of international organizations to engage in the treaty process. Nearly twenty years later the importance of international organizations increased such that these international organizations required the ability to engage in the treaty process. Thus, was born the *Vienna Convention on the Law of Treaties between States and International Organizations or between International Organizations* ('*Vienna Convention 1986*'),<sup>385</sup> which fully recognizes international organizations' role in international law.

The previous chapter was devoted to international organizations that play a significant role in this research by, at a minimum, providing invaluable empirical data. Interestingly, the dates of the *Vienna Convention 1969* and the *Vienna Convention*

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<sup>382</sup> *Vienna Convention on the Law of Treaties*, opened for signature 23 May 1969, 1155 UNTS 331 A/CONF.39/11/Add.2 (entered into force 27 January 1980) ('*Vienna Convention 1969*') <<http://treaties.un.org/pages/ViewDetailsIII.aspx?src=UNTS&no=XXIII~1&chapter=23&Temp=mtdsg3&lang=en>> at 4 July 2011.

<sup>383</sup> *Vienna Convention 1969*, Preamble.

**The States ...**, **Considering** the fundamental role of treaties in the history of international relations, **Recognizing** the ever-increasing importance of treaties as a source of international law and as a means of developing peaceful co-operation among nations, whatever their constitutional and social systems, **Noting** that the principles of free consent and of good faith and the *pacta sunt servanda* rule are universally recognized, **Affirming** that disputes concerning treaties, like other international disputes, should be settled by peaceful means and in conformity with the principles of justice and international law, **Recalling** the determination of the people of the United Nations to establish conditions under which justice and respect for the obligations arising from treaties can be maintained, **Having in mind** the principles of international law embodied in the Charter of the United Nations, ... **Believing** that the codification and progressive development of the law of treaties achieved in the present Convention will promote the purposes of the United Nations set forth in the Charter, namely, the maintenance of international peace and security, the development of friendly relations and the achievement of co-operation among nations, **Affirming** that the rules of customary international law will continue to govern questions not regulated by the provisions of the present Convention, **Have agreed** ... [Emphasis Added With Formatting Changes]

<sup>384</sup> *Vienna Convention 1969*.

<sup>385</sup> *Vienna Convention on the Law of Treaties between States and International Organizations or between International Organizations*, opened for signature 21 March 1986, 1155 UNTS 331 Doc. A/CONF.129/15 (entered into force 21 March 1986) ('*Vienna Convention 1986*') <<http://treaties.un.org/pages/ViewDetails.aspx?src=UNTS&no=XXIII-3&chapter=23&lang=en#Participants>> at 4 July 2011.

1986 roughly coincide with significant dates in U.S. tax law regarding the taxation of intangible property. For example, in 1986 the U.S. modified its tax code, specifically 26 U.S.C. § 482, to include ‘[i]n the case of any transfer (or license) of intangible property (within the meaning of section 936(h)(3)(B)), the income with respect to such transfer or license shall be commensurate with the income attributable to the intangible.’<sup>386</sup> This additional sentence is known as the ‘commensurate with income’ requirement. Between 1969 and 1986 international organizations played an ever-increasing role in international law, as reflected in the changes to the preamble of the *Vienna Convention 1986*.<sup>387</sup>

The preamble to the *Vienna Convention 1986* indicates ‘the importance of enhancing the process of codification and progressive development of international law at a universal level’ and through international organizations that ‘possess the capacity to conclude treaties which is necessary for the exercise of their functions and the fulfillment of their purposes’.<sup>388</sup> The progressive development and codification of international law provides member nations with a uniform rule of law. Although an idyllic global fairness may never be achieved, incremental progress towards this goal is arguably achieved with each newly ratified treaty.

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<sup>386</sup> 1986 Amendment of *The Internal Revenue Code of 1954* (22 October 1986) Pub. L. 99-514; 99<sup>th</sup> Congress Sess. II; 100 Stat. 2562-2563.

<sup>387</sup> *Vienna Convention 1986*, Preamble.

**The Parties ... Considering** the fundamental role of treaties in the history of international relations, ... **Affirming** the importance of enhancing the process of codification and progressive development of international law at a universal level, **Believing that** the codification and progressive development of the rules relating to treaties between States and international organizations or between international organizations are means of enhancing legal order in international relations and of serving the purposes of the United Nations, **Having in mind** the principles of international law embodied in the Charter of the United Nations, ... **Bearing in mind** the provisions of the *Vienna Convention on the Law of Treaties* of 1969, **Recognizing** the relationship between the law of treaties between States and the law of treaties between States and *international organizations* or between *international organizations*, **Considering** the importance of treaties between States and *international organizations* or between *international organizations* as a useful means of developing international relations and ensuring conditions for peaceful co-operation among nations, whatever their constitutional and social systems, **Having in mind** the specific features of treaties to which *international organizations* are parties as subjects of international law distinct from States, **Noting** that *international organizations* possess the capacity to conclude treaties which is necessary for the exercise of their functions and the fulfillment of their purposes, **Recognizing** that the practice of *international organizations* in concluding treaties with States or between themselves should be in accordance with their constituent instruments, **Affirming** that nothing in the present Convention should be interpreted as affecting those relations between an *international organization* and its members which are regulated by the rules of the *organization*, ... **Have agreed** ... [Emphasis Added With Formatting Changes]

<sup>388</sup> *Vienna Convention 1986*.

## International Law Regarding Patents

There are two major sources of international law regarding patents, i.e., the WTO and WIPO. It is important to make the distinction between international law (treaties, protocols and agreements) and domestic law with respect to patents. The first, international law, obligates the WTO Member States to implement a common and consistent set of intellectual property laws within the WTO Member States' respective domestic law, including patent law. The second, domestic law governs patents within the respective jurisdictions of the WTO Member States.<sup>389</sup> Both the WTO and WIPO manage multilateral treaties that obligate Member States to modify, add or amend the respective domestic laws with the Member States to conform to treaty obligations. The following three treaties that have the most impact on this study and obligate the WTO Member States in the previous manner are: (1) the *Paris Convention for the Protection of Industrial Property* – referred to as the *Paris Convention*,<sup>390</sup> (2) the *Patent Cooperation Treaty (PCT)* – referred to as the *PCT*,<sup>391</sup> and (3) the *Agreement On Trade-Related Aspects Of Intellectual Property Rights ('TRIPS')* – referred to as the *TRIPS Agreement*.<sup>392</sup> A more detailed discussion of the involvement of the WTO and the WIPO international organizations related to patent law and international law is provided in the following sections.

### WTO And the *TRIPS Agreement*

The WTO maintains the *TRIPS Agreement*,<sup>393</sup> as previously mentioned. The framers of the WTO understood, and foresaw, the importance of intellectual property as a trade-related topic, as indicated in the introduction to the *TRIPS Agreement*.<sup>394</sup>

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<sup>389</sup> D. J. Harris, *Cases and Materials on International Law* (6<sup>th</sup> ed., 2004) 42. 'Considered in themselves, and particularly in their inception, treaties are, formally, a source of obligation rather than a source of law.'

<sup>390</sup> *Paris Convention*, above n 171.

<sup>391</sup> See generally, <<http://www.wipo.int/treaties/en/registration/pct/>> at 10 November 2011.

<sup>392</sup> *TRIPS Agreement*, above n 148.

<sup>393</sup> See generally, <[http://www.wto.org/english/tratop\\_e/trips\\_e/trips\\_e.htm](http://www.wto.org/english/tratop_e/trips_e/trips_e.htm)> at 10 November 2011.

<sup>394</sup> *TRIPS Agreement*, Introduction.

*Members, Desiring* to reduce distortions and impediments to international trade, and taking into account the need to promote effective and adequate protection of intellectual property rights, and to ensure that measures and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade; *Recognizing*, to this end, the need for new rules and disciplines concerning: ... ; *Recognizing* the need for a multilateral framework of principles, rules and disciplines dealing with international trade in counterfeit goods; *Recognizing* that intellectual property rights are private rights;

The framers of the *TRIPS Agreement* were determined ‘to reduce distortions and impediments to international trade, and taking into account the need to promote effective and adequate protection of intellectual property rights.’ This reduction in ‘distortions and impediments’ was achieved through ‘a multilateral framework of principles, rules and disciplines dealing with international trade,’ a principal factor relied on in this study – harmonization of domestic patent laws. Two other major objectives of the *TRIPS Agreement* relied upon in this study are (1) ‘the special needs of the least-developed country Members’ that prove to provide exploited points of access to regional communities, and (2) ‘reducing tensions by reaching strengthened commitments to resolve disputes on trade-related intellectual property issues through multilateral procedures’ that provide an indicator of jurisdiction legal compliance with international norms.

The accepted international norms referred to above begin with the *TRIPS Agreement’s* incorporation of the patent related, <sup>395</sup> as indicated in Article 2. <sup>396</sup> Article 2 of the *TRIPS Agreement* addresses the existence of and benefits from the *Paris Convention* by including Articles 1 through 12 and Article 19, as indicated below.

Article 2 – Intellectual Property Conventions	<p>1. In respect of Parts II, III and IV of this Agreement, Members shall comply with Articles 1 through 12, and Article 19, of the <i>Paris Convention</i> (1967). [Emphasis Added]</p> <p>2. Nothing in Parts I to IV of this Agreement shall derogate from existing obligations that Members may have to each other under the <i>Paris Convention</i>, the <i>Berne Convention</i>, the <i>Rome Convention</i> and the <i>Treaty on Intellectual Property in Respect of Integrated Circuits</i>. [Emphasis Added]</p>
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**Table 6: Establishing Agreement On Trade-Related Aspects Of Intellectual Property Rights (TRIPS Agreement).**

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***Recognizing*** the underlying public policy objectives of national systems for the protection of intellectual property, including developmental and technological objectives; ***Recognizing*** also the special needs of the least-developed country Members in respect of maximum flexibility in the domestic implementation of laws and regulations in order to enable them to create a sound and viable technological base; ***Emphasizing*** the importance of reducing tensions by reaching strengthened commitments to resolve disputes on trade-related intellectual property issues through multilateral procedures; ***Desiring*** to establish a mutually supportive relationship between the WTO and the World Intellectual Property Organization (referred to in this Agreement as “WIPO”) as well as other relevant international organizations; ***Hereby agree*** ... [Emphasis Added With Formatting Changes]

<sup>395</sup> *Paris Convention*, above n 171.

<sup>396</sup> *TRIPS Agreement*, above n 148.

The framers of the WTO desired ‘to reduce distortions and impediments to international trade’ by promoting ‘effective and adequate protection of intellectual property rights’ and ‘ensure that measures and procedures to enforce intellectual property rights’ were established internationally.<sup>397</sup> The necessity of establishing a new patent treaty, the *TRIPS Agreement*,<sup>398</sup> is often puzzling in light of an existing treaty, the *Paris Convention*<sup>399</sup> that has existed since 1883. The short answer to this puzzle is that the *Paris Convention*<sup>400</sup> addresses more administrative issues regarding patents, such as the existence of a domestic patent law, not the substantive content of the domestic patent law itself. The *TRIPS Agreement*,<sup>401</sup> on the other hand, provides eight articles, Articles 27 through 34, that address specific substantive content that must be present in Member States’ domestic patent laws. These Articles, the highlights of which are provided in Table 7, create a harmonized level of compatible and consistent patent right grants and patent right protections in all WTO Member States.

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<sup>397</sup> *TRIPS Agreement*, above n 148.

<sup>398</sup> *Ibid.*

<sup>399</sup> *Paris Convention*, above n 171.

<sup>400</sup> *Ibid.*

<sup>401</sup> *TRIPS Agreement*, above n 148.

Article	Description of Article Content
27	<p>patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application.</p> <p>patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced.</p>
28	<p>where the subject matter of a patent is a product, to prevent third parties not having the owner's consent from the acts of: making, using, offering for sale, selling, or importing for these purposes that product</p> <p>where the subject matter of a patent is a process, to prevent third parties not having the owner's consent from the act of using the process, and from the acts of: using, offering for sale, selling, or importing for these purposes at least the product obtained directly by that process</p>
29	<p>an applicant for a patent shall disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art and may require the applicant to indicate the best mode for carrying out the invention</p>
30	<p>limited exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner</p>
31	<p>use of the subject matter of a patent without the authorization of the right holder</p> <p>[This may occur, but under very limited circumstances and is decided on an individual basis]</p>
32	<p>An opportunity for judicial review of any decision to revoke or forfeit a patent shall be available.</p>
33	<p>The term of protection available shall not end before the expiration of a period of twenty years counted from the filing date.</p>
34	<p>For the purposes of civil proceedings in respect of the infringement of the rights of the owner ... the judicial authorities shall have the authority to order the defendant to prove that the process to obtain an identical product is different from the patented process</p> <p>(a) if the product obtained by the patented process is new</p> <p>(b) if there is a substantial likelihood that the identical product was made by the process and the owner of the patent has been unable through reasonable efforts to determine the process actually used</p>

**Table 7: Significant Patent Rights Afforded In WTO Member States Through The TRIPS Agreement.**<sup>402</sup>

<sup>402</sup> TRIPS Agreement, above n 148, Articles 27-34.

Highlights from the *TRIPS Agreement*, as presented in Table 7, are not enforceable in any WTO Member State jurisdiction. What is enforceable in the WTO Member States is the domestic law derived from compliance with the *TRIPS Agreement*. Three examples (U.S. patent law, Australian patent law, and Irish patent law) are provided below regarding the implementation of Article 27 in the three Member States' respective patent law. Article 27 provides, as indicated in Table 7, that 'patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application.'<sup>403</sup> Article 27 also states that discrimination of patent rights may not occur based on 'place of invention, the field of technology and whether products are imported or locally produced.' It further allows for Member States to exclude certain items and processes from patentability, including treatments for humans or animals and biological processes or organisms.<sup>404</sup>

The first portion of Article 27 is embodied in U.S. patent law in *35 U.S.C. § 101*, as indicated below.

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.<sup>405</sup>

The same portion of Article 27 is embodied in Australian patent law, section 18, in the following manner.

- (1) Subject to subsection (2), an invention is a patentable invention for the purposes of a standard patent if the invention, so far as claimed in any claim:
  - (a) is a manner of manufacture within the meaning of section 6 of the Statute of Monopolies; and
  - (b) when compared with the prior art base as it existed before the priority date of that claim:
    - (i) is novel; and
    - (ii) involves an inventive step; and
  - (c) is useful; and

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<sup>403</sup> For the purposes of this Article, the terms "inventive step" and "capable of industrial application" may be deemed by a Member to be synonymous with the terms "non-obvious" and "useful" respectively.

<sup>404</sup> *TRIPS Agreement*, above n 148.

<sup>405</sup> *35 U.S.C. § 101*.

- (d) was not secretly used in the patent area before the priority date of that claim by, or on behalf of, or with the authority of, the patentee or nominated person or the patentee's or nominated person's predecessor in title to the invention.<sup>406</sup>

Section 9 of Irish patent law implements the same portion of Article 27 in much the same manner as Australian patent law, as indicated below.

- (1) An invention shall be patentable under this Part if it is susceptible of industrial application, is new and involves an inventive step.
- (2) Any of the following in particular shall not be regarded as an invention within the meaning of *subsection (1)*:
- (a) a discovery, a scientific theory or a mathematical method,
  - (b) an aesthetic creation,
  - (c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer,
  - (d) the presentation of information.
- (3) The provisions of *subsection (2)* shall exclude patentability of subject-matter or activities referred to in that subsection only to the extent to which a patent application or patent relates to such subject-matter or activities as such.<sup>407</sup>

Although the wording in the above three examples is somewhat different, the *TRIPS Agreement*<sup>408</sup> demands, and receives, substantive language in the Member States' domestic patent law that implements Article 27, as previously indicated. The remaining articles of the *TRIPS Agreement*<sup>409</sup> may be found in WTO Member States' domestic law. The single most important benefit derived from the *TRIPS Agreement*<sup>410</sup> related to this study, as defined by the above eight articles, is the assurance of legal compatibility and conformity in patent prosecution and patent protection within all WTO Member States' jurisdictions. The significance of this single benefit to MNEs is repeated in this thesis in Chapter 6 during the examination and analysis of domestic patent law and also in Chapter 10 during the discussion on model development. At this stage, however, it is useful to present a relatively simple quantitative example to crystalize the effect of the *TRIPS Agreement* on domestic patent law. The next section presents this simplified example and demonstrates the

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<sup>406</sup> *Patents Act 1990* (Cth) s 18.

<sup>407</sup> *Patents Act 1992*, s 9.

<sup>408</sup> *TRIPS Agreement*, above n 148.

<sup>409</sup> *Ibid.*

<sup>410</sup> *TRIPS Agreement*, above n 148.

level of legal compatibility within the three jurisdictions under study, WTO Member States of the OECD and the UN Member States.

### **WIPO Managed Treaties, Protocols And Agreements**

WIPO maintains 24 intellectual property and patent related treaties, protocols or agreements.<sup>411</sup> Not all of these treaties, protocols or agreements directly relate to patents, however. Eliminating these non-patent related treaties, protocols or agreements from the total number that WIPO maintains yields only 21 patent related treaties, protocols or agreements. Finally, by eliminating all treaties where Australia, Ireland or the U.S. are not signatories from the 21 remaining treaties, protocols or agreements yields 14 treaties, protocols or agreements, as indicated in the following table, Table 8, below.

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<sup>411</sup> See generally, <<http://www.wipo.int/treaties/en/>> at 4 July 2011.

<b>TREATIES</b>	<b>Australia</b>	<b>Ireland</b>	<b>U.S.</b>
WIPO Convention <sup>412</sup>	X	X	X
Paris Convention <sup>413</sup>	X	X	X
Berne Convention <sup>414</sup>	X	X	X
Patent Cooperation Treaty <sup>415</sup>	X	X	X
Patent Law Treaty <sup>416</sup>	X	–	–
Madrid Agreement <sup>417</sup>	–	X	–
Madrid Protocol <sup>418</sup>	X	X	X
Nice Agreement <sup>419</sup>	X	X	X
Locarno Agreement <sup>420</sup>	–	X	–
Strasbourg Agreement <sup>421</sup>	X	X	X
Budapest Treaty <sup>422</sup>	X	X	X
Trademark Law Treaty <sup>423</sup>	X	X	X
WIPO Copyright Treaty <sup>424</sup>	X	X	X
Singapore Treaty <sup>425</sup>	X	–	X
<b>TOTALS</b>	<b>12</b>	<b>12</b>	<b>11</b>

**Table 8: WIPO Managed Treaties, Protocols and Agreements.**

<sup>412</sup> *WIPO Convention*.

<sup>413</sup> *Paris Convention*.

<sup>414</sup> *Berne Convention, Berne Convention for the Protection of Literary and Artistic Works* (1886, amended 1979) (*'Berne Convention'*) <[http://www.wipo.int/treaties/en/ip/berne/trtdocs\\_wo001.html](http://www.wipo.int/treaties/en/ip/berne/trtdocs_wo001.html)> at 7 July 2009.

<sup>415</sup> *PCT*, above n 172.

<sup>416</sup> *PLT*, above n 174.

<sup>417</sup> *Madrid Agreement, Madrid Agreement for the Repression of False or Deceptive Indications of Source on Goods* (1891) (*'Madrid Agreement'*) <[http://www.wipo.int/treaties/en/ip/madrid/trtdocs\\_wo032.html](http://www.wipo.int/treaties/en/ip/madrid/trtdocs_wo032.html)> at 7 July 2009.

<sup>418</sup> *Madrid Protocol, Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks* (1989, amended 2007) (*'Madrid Protocol'*) <[http://www.wipo.int/madrid/en/legal\\_texts/trtdocs\\_wo016.html](http://www.wipo.int/madrid/en/legal_texts/trtdocs_wo016.html)> at 7 July 2009.

<sup>419</sup> *Nice Agreement, Nice Agreement Concerning the International Classification of Goods and Services for the Purposes of the Registration of Marks* (1957, amended 1979) (*'Nice Agreement'*) <[http://www.wipo.int/treaties/en/classification/nice/trtdocs\\_wo019.html](http://www.wipo.int/treaties/en/classification/nice/trtdocs_wo019.html)> at 7 July 2009.

<sup>420</sup> *Locarno Agreement, Locarno Agreement Establishing an International Classification for Industrial Designs* (1968, amended 1979) (*'Locarno Agreement'*) <[http://www.wipo.int/treaties/en/classification/locarno/trtdocs\\_wo014.html](http://www.wipo.int/treaties/en/classification/locarno/trtdocs_wo014.html)> at 7 July 2009.

<sup>421</sup> *Strasbourg Agreement, Strasbourg Agreement Concerning the International Patent Classification* (1971, amended 1979) (*'Strasbourg Agreement'*) <[http://www.wipo.int/treaties/en/classification/strasbourg/trtdocs\\_wo026.html](http://www.wipo.int/treaties/en/classification/strasbourg/trtdocs_wo026.html)> at 7 July 2009.

<sup>422</sup> *Budapest Treaty, Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure* (1977, amended 1980) (*'Budapest Treaty'*) <[http://www.wipo.int/treaties/en/registration/budapest/trtdocs\\_wo002.html](http://www.wipo.int/treaties/en/registration/budapest/trtdocs_wo002.html)> at 7 July 2009.

<sup>423</sup> *Trademark Law Treaty, Trademark Law Treaty* (1994) (*'Trademark Law Treaty'*) <[http://www.wipo.int/treaties/en/ip/tlt/trtdocs\\_wo027.html](http://www.wipo.int/treaties/en/ip/tlt/trtdocs_wo027.html)> at 7 July 2009.

<sup>424</sup> *WIPO Copyright Treaty, WIPO Copyright Treaty* (1996) (*'WIPO Copyright Treaty'*) <[http://www.wipo.int/treaties/en/ip/wct/trtdocs\\_wo033.html](http://www.wipo.int/treaties/en/ip/wct/trtdocs_wo033.html)> at 7 July 2009.

<sup>425</sup> *Singapore Treaty, Singapore Treaty on the Laws of Trademarks* (2006) (*'Singapore Treaty'*) <[http://www.wipo.int/treaties/en/ip/singapore/singapore\\_treaty.html](http://www.wipo.int/treaties/en/ip/singapore/singapore_treaty.html)> at 7 July 2009.

A closer examination of the above 14 remaining WIPO managed treaties, protocols or agreements reveals that the majority of these WIPO managed instruments only reference a patent related treaty or a particular article of a patent related treaty that is of an administrative nature and not a substantive one. Therefore, Table 8 is reduced to a more manageable number of treaties, as indicated below in Table 9.

<b>TREATIES</b>	<b>Australia</b>	<b>Ireland</b>	<b>United States</b>
Paris Convention <sup>426</sup>	X	X	X
Patent Cooperation Treaty <sup>427</sup>	X	X	X
Patent Law Treaty <sup>428</sup>	X	–	–
Strasbourg Agreement <sup>429</sup>	X	X	X
Budapest Treaty <sup>430</sup>	X	X	X
<b>TOTALS</b>	<b>5</b>	<b>4</b>	<b>4</b>

**Table 9: Minimal Number of WIPO Managed Patent Treaties And Agreements.**

The previously defined 14 treaties, however, may represent a minimally accepted international law on patents, as implemented within each of the WTO Member State's domestic patent laws. Figure 6 and Figure 7 below represent, by shape and size, the level of patent law compatibility achieved within the studied jurisdictions and the Member States of the UN. The outer most ring depicts the 14 treaties identified in Table 8 using the following notation that is a simplified acronym for each treaty, as follows: (1) W represents the *WIPO Convention*, (2) P represents the *Paris Convention*, (3) B represents the *Berne Convention*, (4) PCT represents the *Patent Cooperation Treaty*, (5) MP represents the *Madrid Protocol*, (6) N represents the *Nice Agreement*, (7) IPC represents the *Strasbourg Agreement*, (8) BP represents the *Budapest Treaty*, (9) WCT represents the *WIPO Copyright Treaty*, (10) TLT represents the *Trademark Law Treaty*, (11) SG represents the *Singapore Treaty*, (12) PLT represents the *Patent Law Treaty*, (13) MI represents the *Madrid Agreement*, and (14) LO represents the *Locarno Agreement*.

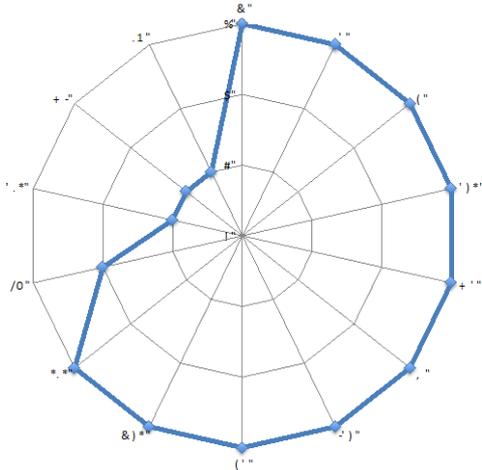
<sup>426</sup> *Paris Convention*, above n 171.

<sup>427</sup> *PCT*, above n 172.

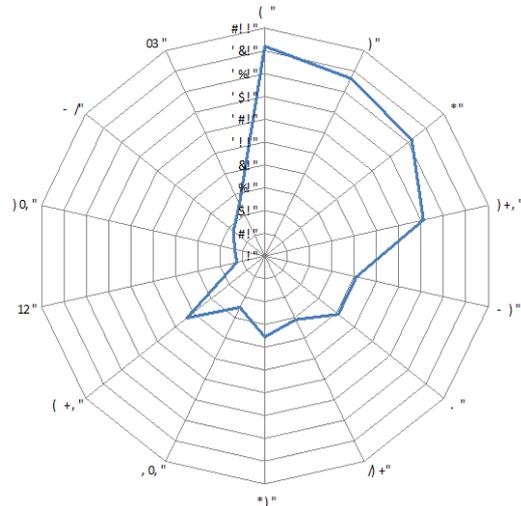
<sup>428</sup> *PLT*, above n 174.

<sup>429</sup> *Strasbourg Agreement*, above n 421.

<sup>430</sup> *Budapest Treaty*, above n 422.



**Figure 6: Legal Compatibility of Patents And Patent Protections Within Australia, Ireland And The U.S.**



**Figure 7: Legal Compatibility of Patents And Patent Protections Within The Member States of The UN.**

As indicated in the above figures, the distance from the centre point to the outer-most ring coincides with the number of potential ratifications for the specified treaty. The area within the figures represents the aggregate proportion of patent law consistency and compatibility achieved through ratification within the designated Member States. For example, the legal compatibility regarding patents and patent protection in Australia, Ireland and the U.S. is almost 100%. The legal compatibility regarding patents and patent protection in all UN Member States, which represents the vast majority of the world’s population, is less than 25% based on the above indications, e.g., Figure 7. These percentages are significant factors in the model development of Chapter 10. Although the above figures provide a legal compatibility indicator, they do not account for infractions of the legal norms established through the above treaties. This accounting is best performed through the number of disputes arising from compliance issues regarding the internationally accepted laws. Two mechanisms serve this purpose – the WTO Dispute Settlement Body (‘DSB’)<sup>431</sup> and the Special 301 Report.<sup>432</sup> Each of these two mechanisms is described below.

<sup>431</sup> See generally, WTO Dispute Settlement <[http://www.wto.org/english/tratop\\_e/dispu\\_e/dispu\\_e.htm](http://www.wto.org/english/tratop_e/dispu_e/dispu_e.htm)> at 4 July 2011.

<sup>432</sup> U.S., *2011 Special 301 Report* (2011) The Office of the United States Trade Representative, 45 <<http://www.ustr.gov/about-us/press-office/reports-and-publications/2011/2011-special-301-report>> at 13 November 2011.

## WTO And Dispute Settlement

In addition to the patent right grants and patent right protections afforded in the WTO Member States, disputes regarding the *TRIPS Agreement*<sup>433</sup> are handled through the WTO's DSB.<sup>434</sup> The Dispute Settlement Understanding ('DSU')<sup>435</sup> governs the rules and procedures employed by the DSB during dispute settlement proceedings, as indicated below.

The rules and procedures of this Understanding shall apply to disputes brought pursuant to the consultation and dispute settlement provisions of the agreements listed in Appendix 1 to this Understanding (referred to in this Understanding as the "covered agreements"). The rules and procedures of this Understanding shall also apply to consultations and the settlement of disputes between Members concerning their rights and obligations under the provisions of the Agreement Establishing the World Trade Organization ... and of this Understanding taken in isolation or in combination with any other covered agreement.<sup>436</sup>

The DSU was established in conjunction with the establishment of the WTO to settle disputes quickly and ensure that such disputes do not become impediments to international trade, as indicated by the WTO.

A dispute arises when a member government believes another member government is violating an agreement or a commitment that it has made in the WTO. The authors of these agreements are the member governments themselves — the agreements are the outcome of negotiations among members. Ultimate responsibility for settling disputes also lies with member governments, through the Dispute Settlement Body.<sup>437</sup>

The DSB has adjudicated a number of disputes based on the *TRIPS Agreement*,<sup>438</sup> strengthening confidence in the WTO's dispute settlement ability to mitigate non-compliance and/or non-conformance in member state's domestic law regarding the *TRIPS Agreement*.<sup>439</sup> India, in particular, received attention for *The Patents Act*

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<sup>433</sup> *TRIPS Agreement*, above n 148.

<sup>434</sup> WTO Dispute Settlement, above n 431.

<sup>435</sup> *Dispute Settlement Understanding in Marrakesh Agreement Establishing the World Trade Organization*, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) annex 2, ('DSU') <[http://www.wto.org/english/tratop\\_e/trips\\_e/t\\_agm3c\\_e.htm#5](http://www.wto.org/english/tratop_e/trips_e/t_agm3c_e.htm#5)> at 4 July 2011.

<sup>436</sup> *Ibid.*

<sup>437</sup> WTO Dispute Settlement, above n 431.

<sup>438</sup> *TRIPS Agreement*, above n 148.

<sup>439</sup> *Ibid.*

1970<sup>440</sup> that ‘directly contravened Article 27 of the *TRIPS Agreement*.’<sup>441</sup> Not only did *The Patents Act 1970* contravene Article 27 of the *TRIPS Agreement*,<sup>442</sup> ‘the Indian domestic pharmaceutical industry flourished in the absence of product patents.’<sup>443</sup> ‘The competitive generic market resulted in production of generic versions of blockbuster drugs at very low prices. These generic drugs cost about 5% of the price of similar drugs sold by US and EU pharmaceutical firms.’<sup>444</sup> The U.S. filed for consultation with the WTO on 2 July 1996, as indicated below.

On 2 July 1996, the US requested consultations with India concerning the alleged absence of patent protection for pharmaceutical and agricultural chemical products in India. Violations of the TRIPS Agreement Articles 27, 65 and 70 are claimed.<sup>445</sup>

A panel was established by the DSB on 20 November 1996. The panel report was distributed on 5 September 1997 indicating that India had not complied with Article 70.8(a) or Articles 63(1) and 63(2) of the *TRIPS Agreement*<sup>446</sup> ‘by failing to establish a mechanism that adequately preserves novelty and priority in respect of applications for product patents for pharmaceutical and agricultural chemical inventions’<sup>447</sup> Furthermore, India had not complied with its obligations under ‘Article 70.9 of the *TRIPS Agreement*<sup>448</sup> by failing to establish a system for the grant of exclusive marketing rights.’<sup>449</sup> India appealed the panel’s ruling and on 19 December 1997 India lost its appeal with the single exception that Article 63(1) was not upheld. On 22 April 1998 during a DSB meeting the parties agreed to a 15-month implementation period. Finally, on 28 April 1999 India presented in a DSB meeting its final status report on implementation of the corrective action. However, ‘Article 65.4 of TRIPS

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<sup>440</sup> *The Patents Act 1970* <<http://ipindia.nic.in/ipr/patent/patents.htm>> at 4 July 2011.

<sup>441</sup> Prabhu Ram, *India’s New “TRIPS-Compliant” Patent Regime* (2006) 1 <<http://jip.kentlaw.edu/art/volume%205/5%20Chi-Kent%20J%20Intell%20Prop%20195.pdf>> at 4 July 2011.

<sup>442</sup> *TRIPS Agreement*, above n 148.

<sup>443</sup> *Ibid.*

<sup>444</sup> *Ibid.*

<sup>445</sup> DISPUTE DS50: *India — Patent Protection for Pharmaceutical and Agricultural Chemical Products* (1996) WTO Dispute Settlement Body <[http://www.wto.org/english/tratop\\_e/dispu\\_e/cases\\_e/ds50\\_e.htm](http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds50_e.htm)> at 4 July 2011.

<sup>446</sup> *TRIPS Agreement*, above n 148.

<sup>447</sup> *Ibid.*

<sup>448</sup> *Ibid.*

<sup>449</sup> *Ibid.*

provided a special transitional provision for those countries that did not grant product patents. The provision provided an additional five years (until 2005) ... India took advantage of this extra transition period.<sup>450</sup> Therefore, it was not until *The Patents (Amendment) Act 2005*<sup>451</sup> that came into force on 1 January 2005, a full eleven years after India signed the *TRIPS Agreement*,<sup>452</sup> that India could truly claim it met its obligations under that agreement.

Despite resolution achieved between the WTO and India regarding India's non-compliance with the *TRIPS Agreement*,<sup>453</sup> Bruce Abramson of The World Bank does not believe the issue is fully resolved.<sup>454</sup> Abramson indicates that the changes made to India's patent system in 2005 may only be the beginning, as stated below.

Saraswati, the goddess of knowledge, and Laxmi, the goddess of wealth, have been familiar figures in India for thousands of years. The Government of India has recently brought them together in a new and very human form: a modern patent system. Patents, by their very nature, allow people with innovative ideas to leverage their knowledge into wealth, tracing the route from Saraswati to Laxmi. This study describes the recent advances in Indian patent law and discusses the steps that India must take to complete its journey to an effective patent system.<sup>455</sup>

Abramson makes it acutely obvious that the World Bank believes in the patent system, in general. Furthermore, the World Bank expects patents to 'allow people with innovative ideas to leverage their knowledge into wealth'<sup>456</sup> and that may stimulate the local economy and bring financial rewards to the local communities.

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<sup>450</sup> Prabhu Ram, above n 441, 2.

<sup>451</sup> *The Patents (Amendment) Act 2005* <[http://ipindia.nic.in/ipr/patent/patent\\_2005.pdf](http://ipindia.nic.in/ipr/patent/patent_2005.pdf)> at 4 July 2011.

<sup>452</sup> *TRIPS Agreement*, above n 148.

<sup>453</sup> *Ibid.*

<sup>454</sup> Bruce Abramson, 'India's Journey Toward An Effective Patent System' (Working Paper No 4301, The World Bank, 2007) <<http://elibrary.worldbank.org/deliver/4301.pdf?itemId=/content/workingpaper/10.1596/1813-9450-4301&mimeType=pdf>> at 4 July 2011.

<sup>455</sup> *Ibid* 1.

<sup>456</sup> *Ibid* 1.

## Special 301 Report: Treaty Compliance Regarding Intellectual Property

Under special provisions of the *Uruguay Round Agreements Act of 1994*<sup>457</sup> and Section 182 of the *Trade Act of 1974*,<sup>458</sup> as amended by the *Omnibus Trade and Competitiveness Act of 1988*,<sup>459</sup> an annual report of countries not providing an adequate level of Intellectual Property Rights ('IPR') protection must be produced by the U.S. Trade Representative ('USTR').<sup>460</sup>

Based on the requirement for an annual USTR report, the U.S. publishes the annual Special 301 Report. There is an interesting relationship between the Special 301 Report and the multilateral treaties that exist. The U.S. encourages trading partners to join international organizations, such as the WTO and WIPO. The U.S. also encourages trading partners to ratify WIPO managed treaties, as defined by the previously discussed WIPO managed treaties, in areas the U.S. deems the trading partner is non-compliant. The following is a quotation taken from a recent Special 301 Report supporting this statement.

To encourage strong action against piracy over the Internet, the United States will seek to work with the following trading partners to strengthen legal regimes and enhance enforcement: Argentina, Belarus, Brazil, Brunei, Canada, Colombia, India, Italy, Malaysia, Mexico, Philippines, Romania, Russia, Spain, Thailand, Turkey, Ukraine, Venezuela, and Vietnam. In particular, the United States will encourage trading partners implement the WIPO Internet Treaties<sup>461</sup>

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<sup>457</sup> *Uruguay Round Agreements Act of 1994*, Pub. L. 103-465, 108 Stat. 4809 (December 8, 1994).

<sup>458</sup> *Trade Act of 1974*, Pub. L. 93-618, 88 Stat. 1978 (3 January 1975).

<sup>459</sup> *Omnibus Trade and Competitiveness Act of 1988*, Pub. L. 100-148, 102 Stat. 1107 (August 23, 1988).

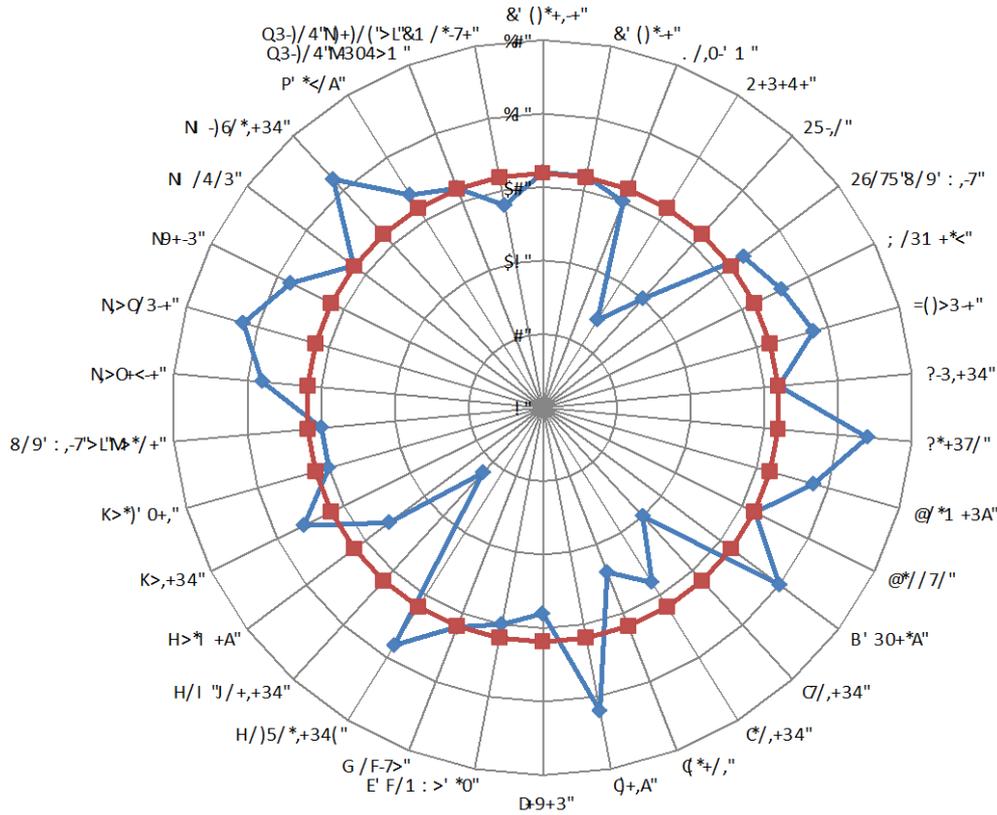
<sup>460</sup> *2011 Special 301 Report*, above n 432, 45.

Pursuant to Section 182 of the Trade Act of 1974, as amended by the Omnibus Trade and Competitiveness Act of 1988 and the Uruguay Round Agreements Act (enacted in 1994) ("Special 301"), under Special 301 provisions, USTR must identify those countries that deny adequate and effective protection for IPR or deny fair and equitable market access for persons that rely on intellectual property protection. ("Countries" in this context include separate customs territories and the European Union). Countries that have the most onerous or egregious acts, policies, or practices and whose acts, policies, or practices have the greatest adverse impact (actual or potential) on the relevant U.S. products must be designated as "Priority Foreign Countries."

Priority Foreign Countries are potentially subject to an investigation under the Section 301 provisions of the Trade Act of 1974. USTR may not designate a country as a Priority Foreign Country if it is entering into good faith negotiations or making significant progress in bilateral or multilateral negotiations to provide adequate and effective protection of IPR.

<sup>461</sup> *Ibid* 11-12.

Another relationship between Member States of the OECD and the WIPO managed treaties appears to exist. As Figure 8 below indicates, both Canada and New Zealand ratify less than ten of the WIPO managed treaties. All other OECD Member States ratify no less than ten WIPO managed treaties with an average ratification greater than 15, nearly twice the number of either Canada or New Zealand.



**Figure 8: WIPO Managed Treaty Ratification by OECD Member States.**

Parenthetically, the concentric circle of data points depicted in Figure 8 represents the average number of WIPO managed treaties ratified by OECD Member States. The relatively small number of WIPO managed treaties ratified by both Canada and New Zealand suggests an increased likelihood of non-compliance regarding IPR. In fact, New Zealand is listed in the Special 301 Report for 2011 regarding its pharmaceutical industry, as indicated below.

With respect to New Zealand, U.S. industry has expressed serious concerns about the policies and operation of New Zealand’s Pharmaceutical Management Agency (PHARMAC). Industry continues to express concerns regarding, among other things, the transparency, fairness, and predictability of the PHARMAC pricing

and reimbursement regime, as well as the overall climate for innovative medicines in New Zealand.<sup>462</sup>

New Zealand is not new to the Special 301 Report. New Zealand has obtained a spot in the report for the last several years. New Zealand, fortunately, is not on the “Priority Watch List.” However, Canada has become a permanent fixture on the “Priority Watch List.” It should come as no surprise that ‘[p]iracy over the Internet is a significant concern with respect to a number of trading partners, including Brazil, Canada, China, India, Italy, Russia, Spain, and Ukraine.’<sup>463</sup> The surprise to most is that Canada is a perennial member of this infamous group of IPR abusers.<sup>464</sup> One may now realise that quantifying the information from both the WTO’s dispute settlement process and the Special 301 Report provides great insight into the patent risks an MNE may face when expanding into a new jurisdiction. Thus, this information provides an invaluable data component for the model of Chapter 10.

## Summary

The material presented in this chapter has a direct and major impact on the model development presented in Chapter 10. It also, to some extent, demonstrates the intertwined nature of the multilateral treaties, the international organizations that manage and administer those treaties, and the countries that depend on both. The following list provides the highlights from this chapter.

- Described the role of an international organization in more detail
- Identified the WTO’s role with respect to the *TRIPS Agreement*

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<sup>462</sup> Ibid 14.

<sup>463</sup> Ibid 11.

<sup>464</sup> Ibid 27-28.

Canada remains on the Priority Watch List. The United States continues to urge Canada to implement its previous commitments to improve its legal framework for IPR protection and enforcement. Unfortunately, Canadian efforts in 2010 to enact long-awaited copyright legislation were unsuccessful. The United States encourages Canada to make the enactment of copyright legislation that addresses the challenges of piracy over the Internet, including by fully implementing the WIPO Internet Treaties, a priority for its new government. The United States encourages Canada to provide for deterrent-level sentences to be imposed for IPR violations, as well as to strengthen enforcement efforts, including at the border. Canada should provide its Customs officials with *ex officio* authority to effectively stop the transit of counterfeit and pirated products through its territory. U.S. stakeholders have also expressed strong concerns about Canada’s administrative process for reviewing the regulatory approval of pharmaceutical products, as well as limitations in Canada’s trademark regime. The United States appreciates the high level of cooperation between the Canadian and U.S. Governments, and looks forward to continuing engagement on these important issues.

- Provided a detailed discussion of the patent related aspects of the *TRIPS Agreement*
- Identified WIPO's role with respect to the treaties it manages
- Provided an overview of these treaties
- Introduced the concept of legal compatibility regarding patents and patent protection
- Described the dispute settlement mechanism of the WTO
- Identified an example WTO dispute between the U.S. and India regarding patent protection of pharmaceuticals
- Introduced the Special 301 Report
- Discussed the relationship between ratification of the WIPO managed treaties and the inclusion in the Special 301 Report

## CHAPTER 5 – INTERNATIONAL LAW: MODEL TAX CONVENTIONS AND BILATERAL TREATIES FOR THE AVOIDANCE OF DOUBLE TAXATION (DTAs)

Chapter 3 introduced the major international organizations that (1) collect information from jurisdictions, (2) analyze information collected from jurisdictions, (3) serve as repositories for this international information, and (4) serve to address international issues through combined jurisdictional support. Chapter 4 presented the way in which the international community addressed patent issues by adopting a multilateral treaty that defined a minimally accepted level of patent protection in most jurisdictions. This chapter is similar in nature to Chapter 4 by presenting the way the international community addressed, and continues to address, the issue of double taxation through bilateral treaties on the avoidance of double taxation.

### Introduction

The previous two chapters addressed the items depicted below in Figure 9 with the exception of model taxation treaties or conventions that are indicated by the shaded region. This chapter addresses MTCs and the bilateral DTAs derived from them.

INTERNATIONAL LAW	TRIPS	W	P	B	PCT	.	SG(#24)	Model Tax Convention (MTC) [Used To Create Bilateral Avoidance of Double Taxation Treaties (DTAs)]
	WTO	WIPO						
	WTO Charter	WIPO Charter						OECD Charter
	United Nations (UN)							
	United Nations Charter							
	Pre-UN Treaties							

**Figure 9: Legal Landscape – Avoidance of Double Taxation Treaties Based on Model Tax Conventions.**

There are currently three separate, but very similar, MTCs. The first, and the origin of the other two, is the *OECD MTC*.<sup>465</sup> The second is the *UN MTC*.<sup>466</sup> The third is

<sup>465</sup> OECD, *Model Tax Convention on Income and on Capital* (2010) Centre for Tax Policy and Administration ('*OECD MTC*') <<http://www.oecd.org/dataoecd/25/24/47213736.pdf>> at 16 October 2011.

the *US MTC*.<sup>467</sup> There are currently ‘over 2,500 bilateral double tax treaties (DTTs).’<sup>468</sup> Table 10 indicates both the number of Bilateral Investment Treaties (‘BIT’s) and DTAs from UNCTAD<sup>469</sup> statistics up through the year 2002. Ten years on, with the increase in treaties each year as indicated, the number of DTAs is currently well over 2,500.

YEAR	Total Per Year (Left Scale)		Cumulative Total (Right Scale)		YEAR	Total Per Year (To Be Divided By 2)	
	BITs	DTAs	BITs	DTAs		BITs	DTAs
1990	61	50	446	1193	1990	122	100
1991	81	55	527	1248	1991	162	110
1992	124	62	651	1309	1992	248	124
1993	129	96	780	1405	1993	258	192
1994	191	107	971	1512	1994	382	214
1995	202	101	1173	1613	1995	404	202
1996	211	114	1384	1727	1996	422	228
1997	172	126	1556	1852	1997	344	252
1998	171	95	1727	1947	1998	342	190
1999	129	114	1857	2061	1999	258	228
2000	84	57	1941	2118	2000	168	114
2001	159	68	2099	2185	2001	318	136
2002	82	68	2181	2255	2002	164	136

**Table 10: Number of BITs and DTAs concluded per year.**<sup>470</sup>

Each of these DTAs was developed from one of the three previously listed MTCs. The vast majority of DTAs, however, are developed from the *OECD MTC*. Given that DTAs are developed from a model or template, well over half of the actual words of all DTAs are the same. Furthermore, the scope and structure of DTAs is unsurprisingly the same, as indicated in an excerpt from the U.S. IRS.

The U.S. Model Income Tax Convention is used as a starting point in bilateral treaty negotiations with other countries. The Model Technical Explanation will serve as the basis for technical explanations of

<sup>466</sup> UN, *United Nations Model Double Taxation Convention between Developed and Developing Countries* (2010) Finance for Development - Committee of Experts on International Cooperation in Tax Matters (‘*UN MTC*’) <[www.un.org/esa/ffd/documents/DoubleTaxation.pdf](http://www.un.org/esa/ffd/documents/DoubleTaxation.pdf)> at 16 October 2011.

<sup>467</sup> U.S., *The U.S. Model Income Tax Convention and Model Technical Explanation* (2010) Internal Revenue Service (‘*U.S. MTC*’) <<http://www.irs.gov/businesses/small/international/article/0,,id=164686,00.html>> at 4 July 2011.

<sup>468</sup> Reuven S. Avi-Yonah, *Double Tax Treaties: An Introduction* (2007) 1 <<http://ssrn.com/abstract=1048441>> 4 July 2009.

<sup>469</sup> See generally, <<http://unctad.org/en/Pages/DIAE/World%20Investment%20Forum/Search-by-countryeconomy.aspx>> at 4 April 2013.

<sup>470</sup> UN, *Quantitative Data On Investment Treaties And Double Taxation Treaties* (2002) UNCTAD <<http://www.unctad.org/Templates/WebFlyer.asp?intItemID=3150&lang=1>> at 4 July 2011.

bilateral tax treaties based on the U.S. Model Income Tax Convention.<sup>471</sup>

DTAs share some similarities with other bilateral treaties, particularly investment treaties. However, MTCs that are templates for DTAs do not contain a Most Favoured Nations clause or article. It is important to understand that DTAs do not dictate taxation. DTAs are bilateral treaties between sovereign nations each of which determines its own taxation policy. What DTAs do, however, is allocate taxing rights between the country of residence of the taxpayer and the country where the source of the income is located to prevent evasion and double taxation, thus reducing tax in cross-border transactions. For example, if income is sourced<sup>472</sup> in country X by a resident<sup>473</sup> of country Y then tax is due in country X. However, country Y may levy taxes, as well. Therefore, there is the possibility of a double taxation event. It is the reduction or elimination of the tax in country Y, the residence<sup>474</sup> country that is the focus of DTAs. For this reason, DTAs are formally referred to as a “Convention between X and Y for the Avoidance of Double Taxation.”

As with all treaties, Article 31(1) of the *Vienna Convention 1986*<sup>475</sup> dictates how DTAs are interpreted. In particular, ‘[a] treaty should be interpreted in good faith and in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in light of its object and purpose.’ Likewise, the meaning of undefined terms in a DTA is to be interpreted in accordance with Article 3(2) of the treaty. Article 3(2) from the U.S. MTC is provided below.

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<sup>471</sup> U.S. MTC, above n 467.

<sup>472</sup> OECD, *Glossary of Tax Terms* (2013) [SOURCE OF INCOME] <[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. SOURCE OF INCOME: The place (or country) where a particular item of income is deemed to originate or where it is deemed to be generated. National rules vary, depending on which concept of source is used.

<sup>473</sup> OECD, *Glossary of Tax Terms* (2013) [RESIDENT] <[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. RESIDENT: A person who is liable for tax in a country or state because of domicile, residence, place of management, or other similar criterion.

<sup>474</sup> OECD, *Glossary of Tax Terms* (2013) [RESIDENCE] <[http://www.oecd.org/document/29/0,3343,en\\_2649\\_34897\\_33933853\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/29/0,3343,en_2649_34897_33933853_1_1_1_1,00.html)> at 4 July 2013. RESIDENCE: Residence is a basis for the imposition of taxation. Usually a resident taxpayer is taxed on a wider range of income or other taxable items than a non-resident. Residence in a state is a criterion for invoking a tax treaty of that state, and residence for treaty purposes involves considering the domestic law of residence for tax purposes, and then the requirements in Article 4 of the OECD Model, especially in the case of tiebreaker tests in cases of dual residence.

<sup>475</sup> *Vienna Convention 1986*, Article 31(1).

2. As regards the application of the Convention at any time by a Contracting State any term not defined therein shall, unless the context otherwise requires, or the competent authorities agree to a common meaning pursuant to the provisions of Article 25 (Mutual Agreement Procedure), have the meaning which it has at that time under the law of that State for the purposes of the taxes to which the Convention applies, any meaning under the applicable tax laws of that State prevailing over a meaning given to the term under other laws of that State.<sup>476</sup>

There are specific chapters in all MTCs, as indicated in the list below, that address the following items generally, with the articles within the chapters addressing the items specifically.

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<sup>476</sup> *The U.S. M Tax Convention and Model Technical Explanation*, above n 471, Art. 3(2).

Chapter	Article	Description Of Articles	
		OECD MTC	U.S. MTC
1		<b>Scope</b>	
	1	Persons covered	GENERAL SCOPE
	2	Taxes covered	TAXES COVERED
2		<b>Definitions</b>	
	3	General definitions	GENERAL DEFINITIONS
	4	Resident	RESIDENT
	5	Permanent establishment	PERMANENT ESTABLISHMENT
3		<b>Taxation of Income</b>	
	6	Income from immovable property	INCOME FROM REAL PROPERTY
	7	Business profits	BUSINESS PROFITS
	8	Shipping, inland waterways transport and air transport	SHIPPING AND AIR TRANSPORT
	9	Associated enterprises	ASSOCIATED ENTERPRISES
	10	Dividends	DIVIDENDS
	11	Interest	INTEREST
	12	Royalties	ROYALTIES
	13	Capital gains	GAINS
	14	[Deleted]	INCOME FROM EMPLOYMENT
	15	Income from employment	DIRECTORS' FEES
	16	Directors' fees	ENTERTAINERS AND SPORTSMEN
	17	Artistes and sportsmen	PENSIONS, SOCIAL SECURITY, ANNUITIES, ALIMONY, AND CHILD SUPPORT
	18	Pensions	PENSION FUNDS
	19	Government service	GOVERNMENT SERVICE
	20	Students	STUDENTS AND TRAINEES
	21	Other income	OTHER INCOME
4		<b>Taxation of Capital</b>	
	22	Capital	LIMITATION OF BENEFITS
5		<b>Elimination of Double Taxation</b>	
	23A	Exemption method	Article 23: RELIEF FROM DOUBLE TAXATION
	23B	Credit method	
6		<b>Special Provisions</b>	
	24	Non-discrimination	NON-DISCRIMINATION
	25	Mutual agreement procedure	MUTUAL AGREEMENT PROCEDURE
	26	Exchange of information	EXCHANGE OF INFORMATION AND ADMINISTRATIVE ASSISTANCE
	27	Assistance in the collection of taxes	MEMBERS OF DIPLOMATIC MISSIONS AND CONSULAR POSTS
	28	Members of diplomatic missions and consular posts	ENTRY INTO FORCE
	29	Territorial extension	
7		<b>Entry Into Force and Termination</b>	
	29	Entry into force	
	30	Termination	

**Table 11: OECD And U.S. Model Taxation Conventions' Structure.**

Rather than attempting an analysis of the *OECD MTC*, as indicated in a previous chapter as a task beyond the scope of this thesis, a brief discussion of a few articles

pertinent to this research follows. ‘This convention shall apply to persons who are residents of one or both of the contracting States,’ as indicated in Article 1.<sup>477</sup> Article 3<sup>478</sup> provides the answer as to what the term “persons” is referring to in Article 1, which ‘... includes an individual, a company and any other body of persons.’ Likewise, Article 4<sup>479</sup> provides the answer to what the term residents is referring to in Article 1, which is a person ‘by reason of his domicile, residence, place of incorporation ...’

With regards to this research Article 12<sup>480</sup> on royalties and Article 26<sup>481</sup> on the exchange of information between contracting States are potentially involved. However, it must be remembered that DTAs relate to income MNEs wish to repatriate from country X to country Y, using the initial example of countries X and Y. Referring back to Chapter 1, it is clear that repatriation is not always the intent of MNEs and therefore limits the effectiveness of any DTA in this study. Understanding the limitations of DTAs with regards to this study, there are still three items remaining unanswered. First, do DTAs exist between the jurisdictions examined in this study? Second, what is the level of DTA ratification within the jurisdictions under study? And third, what indicators may be gleaned from the DTA information provided in this chapter? Each of these three topics is discussed in subsequent sections of this chapter.

### **DTA Between Australia And Ireland**

As previously mentioned, the attractiveness of the Irish tax scheme requires that the foreign entity’s country have a double taxation avoidance treaty with Ireland. Ireland has such a tax treaty with the Australia, *Agreement between the Government of Australia and the Government of Ireland for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income and Capital Gains*<sup>482</sup> (‘AU-IE DTA’) that took effect on 21 December 1983.

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<sup>477</sup> OECD MTC, Article 1.

<sup>478</sup> Ibid Article 3.

<sup>479</sup> Ibid Article 4.

<sup>480</sup> Ibid Article 12.

<sup>481</sup> Ibid Article 26.

<sup>482</sup> *Agreement between the Government of Australia and the Government of Ireland for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income and Capital Gains*, opened for signature 31 May 1983, 1983 ATS 25 (entered into force 21 December 1983) (‘AU-IE DTA’)

Article 13 (Royalties) paragraph 3, defines the term royalties for the purposes of this article.<sup>483</sup> Royalties governed by Article 13 arise when ‘a resident of the other Contracting State is beneficially entitled, may be taxed in that other State.’<sup>484</sup> The treatment of such royalties is largely based on whether the resident has established a permanent establishment in the Contracting State, as indicated below.

(4) The provisions of paragraphs (1) and (2) of this Article shall not apply if the person beneficially entitled to the royalties, being a resident of one of the Contracting States, carries on business in the other Contracting State, in which the royalties arise, through a permanent establishment situated therein, or performs in that other State independent personal services from a fixed base situated therein, and the right or property in respect of which the royalties are paid or credited is effectively connected with such permanent establishment or fixed base. In such a case, the provisions of Article 8 or Article 15, as the case may be, shall apply.<sup>485</sup>

The establishment of a permanent establishment in the Contracting State versus merely a sales branch office is relevant to the ongoing James Hardie company discussion.

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<<http://www.info.dfat.gov.au/Info/Treaties/Treaties.nsf/AllDocIDs/0773010B967EF503CA256B740012DB3F>> at 4 July 2011.

<sup>483</sup> Ibid Article 13.3.

(3) The term ‘royalties’ [sic] in this Article means payments or credits ... which they are made as consideration for-

- (a) the use of, or the right to use, any copyright, patent, design or model, plan, secret formula or process, trademark, or other like property or right;
- (b) the use of, or the right to use, any industrial, commercial or scientific equipment;
- (c) the supply of scientific, technical, industrial or commercial knowledge or information;
- (d) the supply of any assistance that is ancillary and subsidiary to, and is furnished as a means of enabling the application or enjoyment of, any such property or right as is mentioned in subparagraph (a), any such equipment as is mentioned in subparagraph (b) or any such knowledge or information as is mentioned in subparagraph (c);
- (e) the use of, or the right to use-
  - (i) motion picture films;
  - (ii) films or video tapes for use in connection with television; or
  - (iii) tapes for use in connection with radio broadcasting; or
- (f) total or partial forbearance in respect of the use of a property or right referred to in this paragraph.

<sup>484</sup> Ibid Article 13.1.

<sup>485</sup> Ibid Article 13.4.

## DTA Between The U.S. And Ireland

Ireland has an avoidance of double taxation treaty, similar to the *AU-IE DTA* previously discussed, with the U.S. The Irish DTA with the U.S., *Irish-U.S. Tax Treaty 1997*<sup>486</sup> ('*IE-US DTA*') was signed into effect on 28 July 1997. Both the *AU-IE DTA* and the *IE-US DTA* are intended to address the same issue; there are significant differences between them. An obvious difference between the two treaties is that royalties are dealt with in Article 13 of the *AU-IE DTA*, yet Article 12 of the *IE-US DTA* addresses royalties. The renumbering of an article within a treaty is a simple structural change, if the content of the article is not changed. As indicated below, Article 12 (Royalties) paragraph 5,<sup>487</sup> from the *IE-US DTA* differs significantly from its counterpart in the *AU-IE DTA* since Article 12 from the *AU-IE DTA* addresses interest, not royalties.

Notwithstanding the structural differences between the *IE-US DTA* and the *AU-IE DTA*, an article is devoted to royalties in all Irish DTAs. The Irish government discussed the meaning of the royalties article in their tax treaties,<sup>488</sup> including the *IE-US DTA* and the *AU-IE DTA*. 'This article provides rules for the taxation of royalties. It limits the taxation in the source State of royalties paid to a resident of the other State.'<sup>489</sup> This is notably different from the OECD MTC provisions. 'While the

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<sup>486</sup> *Irish-U.S. Tax Treaty 1997*, (entered into force 28 July 1997) ('*IE-US DTA*') available at The Irish Revenue-Tax Treaties website <<http://www.revenue.ie/>> at 10 April 2010.

<sup>487</sup> *Ibid.*

5. A State may not impose any tax on royalties paid by a resident of the other State, except insofar as
- (a) the royalties are paid to a resident of the first-mentioned State;
  - (b) the royalties are attributable to a permanent establishment or a fixed base situated in the first-mentioned State;
  - (c) the contract under which the royalties are paid was concluded in connection with a permanent establishment or a fixed base which the payer has in the first-mentioned State, and such royalties are borne by such permanent establishment or fixed base and are not paid to a resident of the other State; or
  - (d) royalties are paid in respect of intangible property used in the first-mentioned State and not paid to a resident of the other State, but only where the payer has also received a royalty paid by a resident of the first-mentioned State, or borne by a permanent establishment or fixed base situated in that State, in respect of the use of that property in the first-mentioned State and provided that the use of the intangible property in question is not a component part of, nor directly related to, the active conduct of a trade or business in which the payer is engaged as meant in paragraph 3 of Article 23 (Limitation on Benefits).

<sup>488</sup> Ireland, *Commentary on Typical Provisions of Irish Tax Treaties*, The Irish Revenue Service (date unknown) <<http://www.revenue.ie/>> at 10 April 2009.

<sup>489</sup> *Ibid.*

OECD model treaty grants full exemption from taxation in the source State, many Irish treaties allow for reduced rates of taxation of gross royalty payments.<sup>490</sup>

Article 12 paragraph 5 indicates that '[a] state may not impose any tax on royalties paid by a resident of the other State, ...'<sup>491</sup> This provision of the *IE-US DTA* is interpreted in the commentary as, '[i]t [Article 12] limits the taxation in the source State of [to] royalties paid to a resident of the other State.'<sup>492</sup> This interpretation of the double taxation avoidance provisions of the treaty allows large disparities to exist when a large royalty taxation rate differential exists between the source and the contracting state. In the instance of the U.S. as the source country with a minimum of a 35% royalty tax rate and Ireland as the other country with a 0% royalty tax rate, the differential is at least 35%. This differential cannot be resolved until the royalty earnings are repatriated to the U.S., in the event that repatriation to the U.S. ever occurs. U.S. MNEs' foreign earnings available for repatriation to the U.S. are currently estimated at approximately 10 billion U.S. dollars annually<sup>493</sup> and between 600 to 700 billion U.S. dollars total, respectively.<sup>494</sup>

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This article provides rules for the taxation of royalties. It limits the taxation in the source State of royalties paid to a resident of the other State. While the OECD model treaty grants full exemption from taxation in the source State, many Irish treaties allow for reduced rates of taxation of gross royalty payments.

The term "royalties" is defined in the article and covers payments in respect of copyright of literary, artistic or scientific work as well as patents and trademarks. ...

The source State retains the right to tax royalties attributable to a permanent establishment of the beneficial owner in that State. ...

Royalties are deemed to arise in the Contracting State that the payer is a resident of or, if paid in connection with a permanent establishment in the Contracting State, in the State where the permanent establishment is situated.

In cases involving special relationships between the payer and beneficial owner of a royalty, the provisions of the article will only apply to the extent that the royalty does not exceed the amount that would have been paid between parties at arm's length.

<sup>490</sup> Ibid.

<sup>491</sup> *IE-US DTA*, above n 486.

<sup>492</sup> The Irish Revenue Service, above n 488.

<sup>493</sup> U.S., *2007 Investment Climate Statement: Ireland* (2007) Department of State <<http://www.state.gov/e/eeb/afd/2007/80709.htm>> at 10 April 2010.

<sup>494</sup> *U.S. Treasury tightens rules on Offshore Patents and Licenses* (2006) Asset Protection Corporation <<http://www.assetprotectioncorp.com/patentsandlicenses.html>> at 10 April 2010.

## Microsoft Corporation: An Example Of DTA Leveraging

The IMF published an article in 2001 stating, ‘Economists tend to favour the free flow of capital across national borders because it allows capital to seek out the highest rate of return.’<sup>495</sup> This may be true, but common sense dictates otherwise in the situation caused by MNEs’ research and development activities in Ireland. Let’s examine the impact of just one of these MNEs, Microsoft Corporation. Microsoft’s establishment of Irish facilities reduces its U.S. tax liability by almost USD 1 billion annually.<sup>496</sup> But what does this have to do with the EU? The EU is equally impacted by Ireland’s tax scheme, in much the same way as the U.S. is impacted. Microsoft pays USD 300-500 million annually in Irish corporate taxes (at 12.5%).<sup>497</sup> However, Microsoft pays less than USD 20 million in taxes to the rest of the EU Member State.<sup>498</sup> The most egregious case involves the UK with Microsoft sales, predominantly licensing of Microsoft’s software products, of approximately USD 1.8 billion, in 2004.<sup>499</sup> The UK, in this case, could not levy UK tax on these earnings because they were “rolled-up” into the earnings reported in Ireland where an exemption from tax exists on licensing income from royalties. The legal basis is found in the *OECD-MTC* Article 5 concerning PEs.<sup>500</sup> Microsoft takes advantage of Article 12 (Royalties) and Article 9 (Business Profits) of the *IE-US DTA* to reduce and/or avoid EU Member State taxation with the exception of Ireland.<sup>501</sup>

One commentator, Richard Murphy, an Irish accountant and visiting fellow at the Centre for Global Political Economy at the University of Sussex, who is affiliated with a European group called the Tax Justice Network believes that Microsoft is walking a fine line, as indicated below.

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<sup>495</sup> Prakash Loungani and Assaf Razin, ‘How Beneficial Is Foreign Direct Investment for Developing Countries?’, *Finance & Development*-A quarterly magazine of the IMF (June 2001, Volume 38, Number 2) 2.

<sup>496</sup> Glenn R. Simpson, above n 118.

<sup>497</sup> *Ibid.*

<sup>498</sup> *Ibid.*

<sup>499</sup> *Ibid.*

<sup>500</sup> Kornelia Waitz-Ramsauer, *Associated Companies – The subsidiary as a distribution company* (2005) 127-135.

<sup>501</sup> *Ibid.*

To avoid U.K. corporate-profits tax, a company must show it has no "permanent establishment" in Britain through which it makes sales. Microsoft has a large U.K. operation (owned by Round Island) that it calls marketing and a tiny Ireland-based sales staff. Mr. Murphy says Microsoft "is walking a fine tightrope."<sup>502</sup>

The situation with Microsoft, described above, exists with over 600 U.S. MNEs and over 48 AU MNEs, as previously calculated.<sup>503</sup> That is not to say that every U.S. MNE or every AU MNE is as profitable as Microsoft, or depends so greatly on the licensing of patent royalty-based products; but the financial impact on the EU is substantial. The effect of Ireland's tax scheme on the rest of the EU is significant enough to require EU attention.

A professor at the University of Bologna, Silvia Giannini, in a presentation at the *1<sup>st</sup> Euroframe Conference on Economic Policy Issues in the European Union* on 4 June 2004, summarized Ireland's tax scheme as "Harmful Tax Competition".<sup>504</sup> EU Member States have long opposed the EU mandating national tax rates. However, in recent years a number of countries (Netherlands, France and Germany) have called for greater coordination and a minimum corporate tax rate.<sup>505</sup> The 'EU Commission has reaffirmed that no action will be taken to coordinate national tax rates.'<sup>506</sup> The EU, however, has a number of initiatives focused on the general problem of member state to member state tax disparities. Two of the most active initiatives are the Code of Conduct ('CoC') that aims to 'fight Harmful Tax Competition and preserve tax revenue',<sup>507</sup> and Common Consolidated Tax Base ('CCTB') that aims to address transfer pricing issues.<sup>508</sup>

The CoC initiative has led to the enactment by The EU Council of a Code of Conduct concerning transfer-pricing documentation.<sup>509</sup> This is the first step in controlling the

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<sup>502</sup> Glenn R. Simpson, above n 118.

<sup>503</sup> *2007 Investment Climate Statement: Ireland*, above n 493.

<sup>504</sup> Silvia Giannini, 'Tax competition, income tax coordination and fiscal sovereignty in the EU' (Speech delivered at the 1<sup>st</sup> Euroframe Conference on Economic Policy Issues in the European Union, University Paris Dauphine, 4 June 2004).

<sup>505</sup> *Ibid.*

<sup>506</sup> *Ibid.*

<sup>507</sup> *Ibid.*

<sup>508</sup> *Ibid.*

<sup>509</sup> *RESOLUTION OF THE COUNCIL AND OF THE REPRESENTATIVES OF THE GOVERNMENTS OF THE MEMBER STATES, MEETING WITHIN THE COUNCIL on a Code of Conduct on transfer*

problem exemplified by the Microsoft scenario. The *EU Common Guidelines* are in addition to a previously adopted recommendation concerning anticompetitive practices.<sup>510</sup> Within this recommendation is expressed the comity required between Member States in order to deal with this complex issue, as indicated below.

Considering also that closer co-operation between Member countries is needed to deal effectively with anticompetitive practices by enterprises situated in Member countries when they affect the interests of one or more other Member countries and have a harmful effect on international trade.<sup>511</sup>

Ireland's tax scheme definitely affects the interests of one or more of the other EU Member States. Furthermore, it is viewed as anticompetitive with respect to each individual EU Member State. Such views have accelerated the adoption of various OECD guidelines by the EU. The EU has encouraged EU Member States to adopt *The OECD's Project on Harmful Tax Practices*<sup>512</sup> and has established the EU Joint Transfer Pricing Forum ('EU JTPF')<sup>513</sup> as efforts to curb the "poaching" of member states' tax revenue. *The OECD's Project on Harmful Tax Practices*<sup>514</sup> has been instrumental in identifying 40 harmful tax features in EU Member States. As a side-note, a number of Ireland's harmful tax features, identified through this project, have been abolished. This provides hope that the voluntary national tax rates, and tax practices, of EU Member States can be monitored and modified without resulting to "Draconian" measures.

The United Nations Economic and Social Council acknowledged this problem in their *Abuse of tax treaties and treaty shopping* report.<sup>515</sup> In that report the UN makes clear that nations are involved in major treaty activities to alleviate this problem. In particular, 'all recent United States treaties include a comprehensive limitation-of-

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*pricing documentation for associated enterprises in the European Union (EU TPD)* [20 June 2006] 9738/06 FISC 74 OC 405 ('*EU Common Guidelines*').

<sup>510</sup> *Recommendation of the Council concerning Co-operation between Member Countries on Anticompetitive Practices affecting International Trade* [27 July 1995] C(95)130/FINAL.

<sup>511</sup> *Ibid.*

<sup>512</sup> *Project on Harmful Tax Practices*, above n 371.

<sup>513</sup> 'Transfer Pricing – International and Local Perspectives', PriceWaterhouseCooper (Bucharest, 24 February 2005).

<sup>514</sup> *Project on Harmful Tax Practices*, above n 371.

<sup>515</sup> UN, *Abuse of tax treaties and treaty shopping* E/C.18/2005/2 (15 November 2005) United Nations Economic and Social Council <www.un.org> at 9 August 2009.

benefits provision’.<sup>516</sup> This provision became ‘the basis for the alternative provision in paragraph 20 of the Commentary on Article 1’.<sup>517</sup> The report applauds the United Kingdom’s treaty activities stating ‘the articles dealing with dividends, interest and royalties’<sup>518</sup> became ‘the basis for the alternative provision now found in paragraph 21.4 of the Commentary on Article 1’.<sup>519</sup> There is no mistake that the U.S., the UK, the EU and others have been financially impacted by Ireland’s tax scheme. It is equally clear that these jurisdictions are responding through international treaties, and other means, to mitigate the damage caused through these abuses.

### **U.S. DTA Activity**

The U.S. has four major treaty instruments dealing with taxation issues. The four treaty types, ranging from less complex to more complex, are: (1) Trade and Investment Framework Agreements (‘TIFA’s),<sup>520</sup> (2) Tax Information Exchange Agreements (‘TIEA’s),<sup>521</sup> (3) BITs,<sup>522</sup> and (4) FTAs.<sup>523</sup> The *IE-US DTA* predates much of the fervour related to the issues chronicled in this thesis. The *IE-US DTA* appears to reduce U.S. tax liability for U.S. MNEs such as Microsoft that locate their EMEA operations in Ireland, as previously discussed. In response to these reductions, the U.S. has increased its treaty activity. U.S. treaty activity is proceeding at a record pace.<sup>524</sup> Harrington, former U.S. Treasury tax counsel, makes the point to the U.S. Senate that treaties are the principle instruments used to obtain tax information from foreign jurisdictions.<sup>525</sup> Article 26 of the U.S. Model Tax Convention, in particular, states:

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<sup>516</sup> Ibid.

<sup>517</sup> Ibid.

<sup>518</sup> Ibid.

<sup>519</sup> Ibid.

<sup>520</sup> See generally, The Office of The United States Trade Representative website <[http://www.ustr.gov/Trade\\_Agreements/TIFA/Section\\_Index.html](http://www.ustr.gov/Trade_Agreements/TIFA/Section_Index.html)> at 10 April 2009.

<sup>521</sup> See generally, United States Department of The Treasury website <<http://www.treasury.gov/resource-center/tax-policy/treaties/Pages/treaties.aspx>> at 10 October 2013.

<sup>522</sup> See generally, The United States Trade Compliance Center website <<http://www.ustr.gov/trade-agreements/bilateral-investment-treaties>> at 10 April 2009.

<sup>523</sup> Ibid.

<sup>524</sup> See generally, <[www.ustr.gov](http://www.ustr.gov)> at 9 August 2009.

<sup>525</sup> John Harrington, ‘Offshore Tax Evasion’ (Testimony of Treasury Tax Counsel John Harrington Before the Senate Finance Committee on Offshore Tax Evasion, Washington DC, 3 May 2007) <<http://www.treas.gov/press/releases/hp385.htm>> at 9 August 2009.

that "the competent authorities of the Contracting States [the treaty partners] shall exchange such information as may be relevant for carrying out the provisions of this Convention or of the domestic laws of the Contracting States concerning taxes of every kind imposed by a Contracting State to the extent that the taxation thereunder is not contrary to the Convention, including information relating to the assessment or collection of, the enforcement or prosecution in respect of, or the determination of appeals in relation to, such taxes."<sup>526</sup>

Harrington provides examples of two major tax evasion cases in the U.S. that were a direct result of a recent U.S. Tax Information Exchange Agreement with Bermuda.<sup>527</sup> The cases provided by Harrington were: 1) Walter Anderson's attempts to avoid tax on \$365 million and ended up with nine years in prison, and 2) Almon Glenn Braswell who received 18 months and \$10 million dollar fine for back taxes and penalties.

To date, however, the U.S. has not actively pursued amendments to existing treaties. In particular, the *IE-US DTA* appears to be a perfect example of a treaty that needs review and/or modification. This treaty apparently had only one clarification that may be considered an amendment. This agreement is entitled, *Competent Authority Agreement*, and concerns the treatment of 'Common Contractual Funds under the Convention Between the Government of the United States of America and the Government of Ireland for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income and Capital Gains.'<sup>528</sup> It is possible, within the framework of the *Irish-U.S. Tax Treaty 1997 Treatment Agreement*<sup>529</sup> that clarification to Article 12 of the *Irish-U.S. Tax Treaty 1997*<sup>530</sup> might be made. A clarification such as this could impose a requirement that the treatment of Article 12<sup>531</sup> must be compliant with the OECD's Harmful Tax Guidelines.<sup>532</sup>

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<sup>526</sup> Ibid.

<sup>527</sup> Ibid.

<sup>528</sup> *Common Contractual Funds under the Convention Between the Government of the United States of America and the Government of Ireland for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income and Capital Gains*, (entered into force 9 February 2006) ('*Irish-U.S. Tax Treaty 1997 Treatment Agreement*') available at The Irish Revenue-Tax Treaties website <<http://www.revenue.ie/>> at 10 April 2009.

<sup>529</sup> Ibid.

<sup>530</sup> Ibid.

<sup>531</sup> Ibid.

<sup>532</sup> *Project on Harmful Tax Practices*, above n 371.

## **DTA Activity Of Australia, Ireland And The U.S.**

The following table, Table 12, indicates the DTA activity of each of the three jurisdictions (Australia, Ireland and the U.S.) studied. The table is structured to easily identify countries of interest to all three of the jurisdictions studied, denoted as “Three DTAs” in the far right column. Interestingly, there does not seem to be a pattern represented by the countries present in the far right column. This leads to the question of how countries are selected for bilateral DTA treatment within a given jurisdiction. More specifically, is the process of country selection for bilateral treaty efforts analytical or *ad hoc*? Hopefully, the process of country identification and the ensuing treaty negotiation is based on more than an *ad hoc* process. Assuming the process is analytical, one might expect the analytics to include such variables as the force of attraction between jurisdictions and the DTA data presented in Table 12. Furthermore, one hopes that an expected return on governmental resources expended in the treaty process is factored into the country selection process.

ONE DTA		TWO DTAs		THREE DTAs	
DTA STATE	WITH	DTA STATE	WITH	DTA STATE	WITH
Albania	- I -	Australia	- I U	Austria	A I U
Argentina	A - -	Belarus	- I U	Belgium	A I U
Armenia	- - U	Bulgaria	- I U	Canada	A I U
Azerbaijan	- - U	Chile	A I -	China	A I U
Bahrain	- I -	Cyprus	- I U	Czech Republic	A I U
Bangladesh	- - U	Estonia	- I U	Denmark	A I U
Barbados	- - U	Georgia	- I U	Finland	A I U
Bosnia & Herzegovina	- I -		- I U		A I U
Croatia	- I -	Greece		France	
Egypt	- - U	Iceland	- I U	Germany	A I U
Fiji	A - -	Indonesia	A - U	Hungary	A I U
Hong Kong	- I -	Ireland	A - U	India	A I U
Jamaica	- - U	Israel	- I U	Italy	A I U
Kazakhstan	- - U	Latvia	- I U	Japan	A I U
Kiribati	A - -	Lithuania	- I U	Korea	A I U
Kuwait	- I -	Luxembourg	- I U	Mexico	A I U
Kyrgyzstan	- - U	Malaysia	A I -	Netherlands	A I U
Macedonia	- I -	Moldova	- I U	New Zealand	A I U
Malta	- I -	Morocco	- I U	Norway	A I U
Montenegro	- I -	Pakistan	- I U	Poland	A I U
Papua New Guinea	A - -	Philippines	A - U	Romania	A I U
Serbia	- I -		- I U		A I U
Taiwan (Taipei)	A - -	Portugal		Russia	
Tajikistan	- - U	Singapore	A I -	Slovak Republic	A I U
Trinidad	- - U	Slovenia	- I U	South Africa	A I U
Tunisia	- - U	Sri Lanka	A - U	Spain	A I U
Turkmenistan	- - U	Thailand	A - U	Sweden	A I U
Ukraine	- - U	United States	A I -	Switzerland	A I U
United Arab Emirates	- I -	Vietnam	A I -	Turkey	A I U
Uzbekistan	- - U			United Kingdom	A I U
Venezuela	- - U				
Zambia	- I -				

**Table 12: Number of DTAs per Country with AU, IE or the U.S.**

The information contained in the above table serves as yet another indicator that is included in the model development of Chapter 10.

### Summary

This chapter focused on the international aspects of taxation regarding patents and patent related activities. The following is a list of highlights from this chapter.

- Introduced the three major MTCs – OECD, UN, and U.S.
- Introduced the anatomy of a DTA created from an MTC
- Provided insight into the number of DTAs that exist and the relative growth rate of DTAs

- Introduced the DTA between Australia and Ireland
- Introduced the DTA between the U.S. and Ireland
- Provided an example of an MNE leveraging a DTA regarding patent and patent related activities
- Provided the level of DTA activity within Australia, Ireland and the U.S. jurisdictions

## CHAPTER 6 – DOMESTIC LAW: PATENTS

Chapter 4 introduced the international aspects of patents and intellectual property adopted by the international community, but avoided the affect the international initiatives have on jurisdictions’ domestic patent law. The aim of this chapter is to investigate and quantify this effect. This chapter presents the domestic patent law of Ireland as an example of how the international initiatives directly affect Irish patent law. Quantification of these effects is then provided for Australia and the U.S. using the same approach developed during the presentation of Irish patent law.

### Introduction

The shaded region of Figure 10 below indicates the subject matter of this chapter. Previous chapters discussed the legal landscape with a focus on international law. This chapter is the first chapter devoted to domestic law, in particular, domestic patent law of the specified jurisdictions. More specifically, this chapter documents the implementation of a quantitative analysis of the domestic patent law in each of the jurisdictions under study (Australia, Ireland, and the U.S.).

DOMESTIC LAW				Taxation	Bilateral DTAs	I	Taxation	Bilateral DTAs	AU	Taxation	Bilateral DTAs	AU		
						E			U			S	U	S
						U			S			S	S	S
						.			.			.	.	.
						.			.			.	.	.
			#	#	#	#	#							
			4	6	6	6	6							
			3	2	2	2	2							
			ITAA 1997			TCA 1997			IRC 2009					
Patents Act			Patents Act			Title 35 USC			AU Patent Law					
AU Patent Law			IE Patent Law			US Patent Law			AU Tax Law					
Domestic Patent Law			Domestic Tax Law											

**Figure 10: Legal Landscape – Domestic Patent Laws.**

Chapter 4 was devoted to the international aspects of patent law, the international organizations involved and the specific treaties constituting that law. Examples were presented in Chapter 4 regarding the specifics of domestic patent law complying with

various articles of the *TRIPS Agreement*.<sup>533</sup> Chapter 4 made clear that this agreement provides a level of legal compatibility throughout WTO Member States' domestic patent law. Furthermore, disputes lodged through the WTO dispute settlement process against non-complying WTO Member State jurisdictions such as India were shown to be resolved through this process.<sup>534</sup> The legal compatibility achieved across jurisdictions provides compatibility of patent rights and protections. Therefore, examination of one jurisdiction's patent laws provides insight into patent rights and protections in other jurisdictions. This allows this chapter to narrow its focus to only one of the three jurisdictions' patent laws under study. Therefore, this chapter's focus is Irish patent law. This also aids in the understanding of MNEs' patent and patent related activities located in Ireland.

### **Irish Domestic Law**

On 16 January 1988 *The Economist* published '[p]oor Ireland behaved as though it was rich. Now it must pay the price.'<sup>535</sup> The article continued, 'in the mid-1970s it set out to build a welfare state as generous as Britain's ... by the end of the 1970s the country had waded deeper into debt ... unemployment rate rose to 19%.' Finally, in 1986 Ireland hit rock bottom when 'its national debt had doubled, to 25 billion Ireland pounds – 28,000 Ireland pounds for every Irish household.' It appears that the world is reliving Ireland's history today as a result of the GFC. However, Ireland's history provided answers to such an historic domestic failure, i.e., '[t]he government is about to turn its attention to tax.'

Twenty years after *The Economist* published the piece on 'Poor Ireland,' Brian Finn from Ireland's Department of Finance delivered a presentation on 2 April 2008 at the Trinidad & Tobago International Financial Centre Symposium in Trinidad and Tobago.<sup>536</sup> In his presentation, Mr. Finn summarized the state of the Irish economy in 1987 using the following five facts. First, Ireland's '[u]nemployment was over

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<sup>533</sup> *TRIPS Agreement*, above n 148.

<sup>534</sup> Prabhu Ram, above n 441.

<sup>535</sup> 'Poorest of the rich', *The Economist* (US) 16 January 1988.

<sup>536</sup> Brian Finn, *Ireland's International Financial Services Industry Since 1987*, (April 2008) <[www.finance.gov.tt/documents/news/spE64FC7.pdf](http://www.finance.gov.tt/documents/news/spE64FC7.pdf)> at 25 October 2008. Delivered by Mr. Brian Finn - Department of Finance, Ireland, at Ministry of Finance TTIFC Symposium, THE HYATT REGENCY HOTEL 02 April 2008.

16%.<sup>537</sup> Second, Ireland's '[i]nflation had averaged about 10.5% per annum in the preceding 10 years.'<sup>538</sup> Third, Ireland's '[e]migration [was] at [the] highest level since [the] 1950s.'<sup>539</sup> Fourth, Ireland's '[b]udget deficit was about 10% of GNP.'<sup>540</sup> Fifth and final, Ireland's '[n]ational debt/GNP<sup>541</sup> ratio was about 120%.'<sup>542</sup> Messieurs Hossack and Kim in their 2007 ASEAN-U.S. presentation summarized Mr. Finn's statements in the following manner:

Ireland has been one of the poorest nations in the EU between the 1960s and the 1980s

High rates of unemployment, emigration, and inflation and economic mismanagement<sup>543</sup>

*The Economist* published an even bleaker description of Ireland and its economy in 1997 – 'For more than a century the view of Ireland that the Irish knew best was looking back from a boat heading somewhere else.'<sup>544</sup> With Ireland in such tatters in 1987, it is almost impossible to believe that within a mere 10-year period Ireland became 'one of the wealthiest nations in the EU.'<sup>545</sup>

The birth of the Celtic Tiger cannot be attributed to any one particular item. However, it is virtually impossible to find an article addressing Ireland's transformation without a reference to Irish tax reform and patents. In general, the transformative Irish tax reform consisted of an overall reduction in corporate tax rate<sup>546</sup> and specific tax exemptions for qualifying innovation.<sup>547</sup> Together, these

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<sup>537</sup> Ibid Slide 3.

<sup>538</sup> Ibid.

<sup>539</sup> Ibid.

<sup>540</sup> Ibid.

<sup>541</sup> See generally, United Nations, *Statistical Yearbook*, UN Doc ST/ESA/STAT/SER.S/28 Sales No. E/F.08.XVII.1 (2010) 11-12, 31-43, 44-53, 171-188, 386-396  
<<http://unstats.un.org/unsd/syb/syb52.pdf>> at 2 May 2011. Gross Domestic Product (GDP) is the preferred term used to describe a nation's output, as indicated in the UN's annual statistical yearbook.

<sup>542</sup> Brian Finn, above n 536.

<sup>543</sup> Brad Hossack and Ji-Dong Kim, *IRELAND: Learning From The Celtic Tiger* (12/4/2007) Presented at the 30<sup>th</sup> Anniversary ASEAN-US Dialogue, 2007 ASEAN-U.S. Enhanced Partnership Medical Device Workshop – Slide 4.

<sup>544</sup> *The Economist*, above n 207.

<sup>545</sup> Brad Hossack and Ji-Dong Kim, above n 543.

<sup>546</sup> *ECOFIN CoC*, above n 293, 35.

<sup>547</sup> *Finance Act 1973* s 34(1).

measures, on the part of the Irish government, signalled the country's transformation from an agricultural-based economy to a high technology and service economy, as noted retrospectively by Mr. Finn.

Some of the Irish government's reforms began early in the 1970s, e.g., the Irish *Finance Act 1973*. The Irish *Finance Act 1973* introduced the '[e]xemption from tax of income from patent royalties.'<sup>548</sup> It also introduced three significant definitions: (a) "**qualifying patent**," (b) "income from a **qualifying patent**," and (c) "resident of the State." These three new statutory definitions were integral to Ireland's success in attracting high technology industry. Today, these statutory definitions, or at least their evolution, provide a roadmap regarding Ireland's policy success and the extraterritorial influence exerted on Ireland to change these policies.

The analysis of Ireland's legislative tax reform initiative regarding intellectual property (IP) begins with the definition of "**qualifying patent**."

*"a qualifying patent"* means a *patent* in relation to which the research, planning, processing, experimenting, testing, devising, designing, developing or similar activity leading to the invention which is the subject of the patent was carried out in the State<sup>549</sup> [Emphasis Added]

Ireland's legislative intent required 'the research, planning, processing, experimenting, testing, devising, designing, developing or similar activity' be performed in Ireland. The hope, no doubt, was to attract high technology jobs to Ireland's shores. As documented in two contrasting articles in *The Economist* appearing 10 years apart, *The poorest of the rich* – 1988<sup>550</sup> and *Europe's Shining Light* – 1997,<sup>551</sup> Ireland's gamble paid off.

The second definition, "income from a **qualifying patent**," provides the boundaries on income allowed to fall within the Irish tax exemption. The scope is, however, very broad indeed.

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<sup>548</sup> Ibid.

<sup>549</sup> Ibid.

<sup>550</sup> *The Economist*, above n 535.

<sup>551</sup> *The Economist*, above n 207.

"income from a **qualifying patent**" means any royalty or other sum paid in respect of the user of the invention to which the **qualifying patent** relates and includes any sum paid for the grant of a licence to exercise rights under such **patent**<sup>552</sup> [Emphasis Added]

A "**qualifying patent**" may be a patent from any jurisdiction, as long as the requisite research, testing, etc. is performed within Ireland. The user in the above definition refers to the one benefitting from the use of the patent and thus, must pay the licence fee (royalty) to the owner of the patent. The "income from a **qualifying patent**" allows 'any royalty' or 'any sum' that is paid to 'exercise rights under' the patent to be included. The above wording is very broad.<sup>553</sup> The use of 'any' is an indicator of just how broad the Irish legislature intended the statute to be. However, it is the unspecified 'rights' that truly indicates the breadth of the enacted statute. In brief, this statute covers any imaginable right under the "**qualifying patent**".

The third definition, "resident of the State," enacted by the Irish legislature articulates which entities may benefit from the legislation. As indicated below, the third definition is equally as broad as the previous two.

"resident of the State" means any person who is resident in the State for the purposes of income tax and who is not resident elsewhere; a company shall be regarded as a resident of the State if it is managed and controlled in the State<sup>554</sup>

One quickly notices that 'a company ... if it is managed and controlled' in Ireland may benefit from the tax exemption afforded through section 34(1) of the Irish *Finance Act 1973*.<sup>555</sup> The above definitions indicate that Ireland wished any, and all, individuals and companies to take advantage of this legislation.

The final piece of the legislative puzzle is the statute itself. Section 34(2) of the Irish *Finance Act 1973*, as provided below, completes the Irish legislative changes that rocked the global tax community regarding intangible property (intellectual property).

(2) A resident of the State who makes a claim in that behalf and makes a return in the prescribed form of his total income from all sources, as

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<sup>552</sup> *Finance Act 1973* s 34(1).

<sup>553</sup> *Ibid.*

<sup>554</sup> *Ibid.*

<sup>555</sup> *Finance Act 1973* s 34(1).

estimated in accordance with the provisions of the Income Tax Acts, shall be entitled to have any income from a **qualifying patent** arising to him on or after the 6th day of April, 1973, disregarded for all the purposes of the Income Tax Acts, and of the enactments relating to corporation profits tax.<sup>556</sup>

‘[A]ny income from a qualifying patent’ may be ‘disregarded’ from taxation under Ireland’s income tax acts. It appears Ireland attempted to provide maximum benefit to the maximum number of entities, as long as such entities established and maintained Irish content in their patent-related processes and/or products. Ireland’s intent is verified in subsection 3 of section 34, as indicated below.

(3) Where, under section 92 of the Patent Act, 1964, or any corresponding provisions of the law of any other country, an invention which is the subject of a **patent** is made, used, exercised or vended by or for the service of the State or the government of the country concerned, the provisions of this section shall have effect as if the making, user, exercise or vending of the invention had taken place in pursuance of a licence and any sums paid in respect thereof were income from a **qualifying patent**.<sup>557</sup>

Section 34(3), above, clearly indicates that an invention from ‘any other country’ may benefit from section 34. Pfizer was one of the major beneficiaries of this bold legislative move, as discussed in section I.<sup>558</sup> Pfizer owned numerous patents and intellectual property, albeit foreign intellectual property, predominantly U.S.-based. Section 34(3) of Ireland’s *Finance Act 1973* enabled Pfizer to benefit from Pfizer’s early investment in a citric acid plant established in Ireland in the late 1960s. The benefits garnered by Pfizer through this legislation did not go unnoticed, as chronicled in Chapter 2. Chapter 2 also documents the economic success of Ireland’s tax-related legislation since 1973.

### **Analysis of Patent Law Statutes**

The development of the model presented in Chapter 10 requires the concept of legal compatibility and legal complexity to be quantified. In other words, these concepts must be transformed into metrics capable of use in mathematical formulae. The initial step in this process is to prove there exists a transformative process that can

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<sup>556</sup> *Finance Act 1973* s 34(2).

<sup>557</sup> *Finance Act 1973* s 34(3).

<sup>558</sup> Glenn R. Simpson, above n 118.

accomplish the transformation from concept to metric. The proof of legal compatibility between the patent laws of the jurisdictions under study is intuitive. First, all jurisdictions that are members of the WTO are obligated to encode the articles of the *TRIPS Agreement* into their respective domestic patent law. Second, the WTO has an established and functioning patent dispute resolution process, as previously discussed. Third, the three jurisdictions under study do not have any outstanding patent disputes challenging their patent law compliance obligations. Therefore, one is compelled to accept that the encoding of the articles of the *TRIPS Agreement* into the three jurisdictions' domestic patent laws is accurate and complete. Furthermore, since these articles are properly encoded it follows that there is complete legal compatibility between the encoded patent laws across the three jurisdictions under study.

Previous chapters discussed the merits of the *TRIPS Agreement* and its effect on legal complexity without providing a detailed explanation and/or proof. The detailed explanation, or informal proof, is based on information theory.<sup>559</sup> Information theory's central concept consists of a message, an arbitrary string of symbols (bits, characters, digits, letters, words or groups of the aforementioned), transmitted between a sender and one or more receivers. The transmission may be verbal, written, visual, or electronic. Shannon formulated the notion of information entropy, where entropy is defined as the 'uncertainty' of receiving a given message from the set of all possible messages. Likewise, Shannon defined 'information' as the inverse of uncertainty, suggesting that to gain information is to lose uncertainty.

Assume that the articles of the *TRIPS Agreement* are messages that must be transmitted to various jurisdictions. In this case, the messages are transmitted in written form and received (translated into the domestic legislative legal framework or jargon) in written form as domestic legislation. The entropy (uncertainty) of the messages is zero since the information of the messages is fully known – the articles of the *TRIPS Agreement*. Now referring back to the example in Chapter 4 of Article 27, as implemented in the three jurisdictions under study, one sees dramatic differences between the received messages. One would expect the received messages to be

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<sup>559</sup> Claude E. Shannon, 'A Mathematical Theory of Communication' (1948) 27 *The Bell System Technical Journal* 379-423.

identical to the transmitted messages. Oddly enough, Shannon's work is not concerned with the content of a message, merely the probability of selecting the message from the stochastic sequence of all potential messages. Recognizing this oddity in Shannon's work, a Russian mathematician name Kolmogorov suggested that the succinctness of a message was due to the descriptive language used to describe the message.<sup>560</sup> Each of the examples of Article 27's codification in the respective domestic patent law of the jurisdiction presented in Chapter 4 employed a different descriptive language – the jurisdiction's domestic legislative legal framework. Thus, although the message (Article 27) was the same for all jurisdictions, the use of different descriptive languages caused variations in each of the jurisdiction's domestic patent law. Therefore, the descriptive language of each jurisdiction, the jurisdiction's domestic legislative legal framework, in some manner dictates the complexity of the received message. In 1965 Kolmogorov proposed that the 'complexity' of a message can be defined by the shortest descriptive language representation of that message.<sup>561</sup> Therefore, the complexity, or legal complexity, of the examples provided in Chapter 4 is simply the descriptive length (in words) of the codified statutes. Furthermore, Kolmogorov's complexity was proven to relate to Shannon's entropy, which unified the theory of complexity and information theory.

The following paragraphs are devoted to obtaining data (word counts of statutes) from Irish patent law that are used to determine the legal complexity the Irish patent law. It is also necessary to examine the patent laws from Australia and the U.S. to determine their respective legal complexity. Beginning with the Irish *Patents Act 1992*, it comprises 132 sections or statutes consisting of 48,382 legislated words. As indicated in Table 13 below, the 10 largest statutes in this Act (in terms of number of words) account for nearly 23% of the total Act.

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<sup>560</sup> Ming Li and Paul Vitanyi, *An Introduction to Kolmogorov Complexity and Its Applications* (3<sup>rd</sup> ed, 2008) 2.

<sup>561</sup> Andrei N. Kolmogorov, 'Three Approaches to the Quantitative Definition of Information' (1965) 1(1) *Problems Information Transmission* 1-7.

	<b>Section Number and Description</b>	<b># Words</b>
1	Sec. 2.	1558
2	Sec. 70.	1446
3	Sec. 77.	1289
4	Sec. 108.	1097
5	Sec. 120.	1077
6	Sec. 123.	1024
7	Sec. 85.	1015
8	Sec. 83.	906
9	Sec. 119.	856
10	Sec. 68.	764
	<b>Totals</b>	<b>11032</b>

**Table 13: Irish *Patents Act 1992* Statute Statistics.**

Next, the Australian *Patents Act 1990* comprises 268 sections or statutes consisting of 51,469 legislated words. As indicated in Table 14 below, the 10 largest statutes in this Act (in terms of number of words) account for nearly 20% of the total Act.

	<b>Section Number and Description</b>	<b># Words</b>
1	Sch. 1 - Dictionary	2541
2	Sec. 228 Regulations	1702
3	Sec. 223 Extensions of time [see also Table B]	984
4	Sec. 33 Applications by opponents etc.	795
5	Sec. 133 Compulsory licences	789
6	Sec. 119 Infringement exemptions: prior use	718
7	Sec. 201 Offences: unregistered persons etc.	718
8	Sec. 7 Novelty and inventive step	690
9	Sec. 54 Notice of publication	611
10	Sec. 144 Void conditions	609
	<b>Totals</b>	<b>10157</b>

**Table 14: Australian *Patents Act 1990* Statute Statistics.**

Finally, the U.S. patent law, Title 35 USC,<sup>562</sup> comprises 148 sections or statutes that comprise 59,971 legislated words. As indicated in Table 15 below, the 10 largest statutes in this Title (in terms of number of words) account for nearly 40.8% of the total Title.

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<sup>562</sup> See generally, <http://www.gpo.gov/fdsys/browse/collectionUSCode.action?collectionCode=USCODE> at 8 January 2013.

	<b>Section Number and Description</b>	<b># Words</b>
1	Sec. 156. Extension of patent term	5809
2	Sec. 154. Contents and term of patent; provisional rights	2756
3	Sec. 287. Limitation on damages and other remedies; marking and	2577
4	Sec. 41. Patent fees; patent and trademark search systems	2573
5	Sec. 202. Disposition of rights	2561
6	Sec. 3. Officers and employees	2104
7	Sec. 271. Infringement of patent	1940
8	Sec. 2. Powers and duties	1566
9	Sec. 119. Benefit of earlier filing date; right of priority	1321
10	Sec. 273. Defense to infringement based on earlier inventor	1257
	<b>Totals</b>	<b>24464</b>

**Table 15: U.S. Title 35 U.S.C. (Patents) Statute Statistics.**

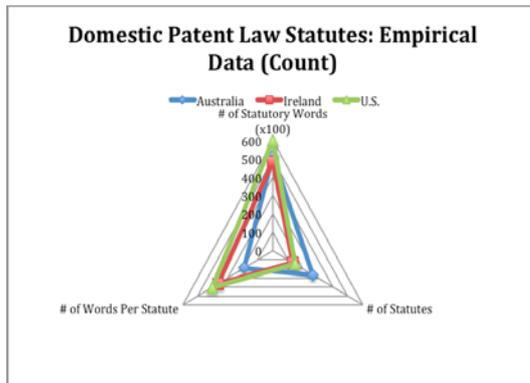
As indicated in Table 16 below, in the center band of data, the size of the patent laws in the three jurisdictions ranges from 30.27% of total for Ireland to 37.52% for the U.S. This indicates a variation of only 7.25% in the size of the patent law statutes across the three jurisdictions. Such a small variation in size coupled with the demands of the *TRIPS Agreement*<sup>563</sup> indicates a high level of legal complexity and similarity between the jurisdictions under study.

		<b>Australia</b>	<b>Ireland</b>	<b>U.S.</b>	<b>TOTALS</b>
<b>PATENTS</b>	# Statutes	268	132	148	548
	% of Total	48.91%	24.09%	27.01%	
	# Words	51,469	48,382	59,971	159,822
	% of Total	32.20%	30.27%	37.52%	
	# Words per Statute	192.05	366.53	405.21	963.79
	% of Total	19.93%	38.03%	42.04%	

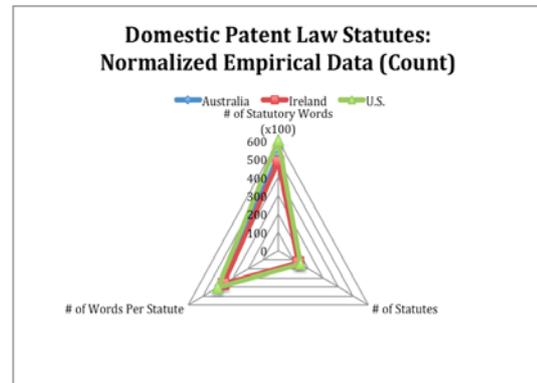
**Table 16: Summary Of Patent Statute Statistics.**

The *TRIPS Agreement* provides harmonization in patent rights and patent protection. The harmonization effects of the *TRIPS Agreement* are depicted in the following two figures.

<sup>563</sup> *TRIPS Agreement*, above n 148.



**Figure 11: Empirical Counts Obtained From Domestic Patent Law Statutes.**



**Figure 12: Normalized Empirical Counts Obtained From Domestic Patent Law Statutes.**

Figure 11 above indicates the very close relationship in the quantitative (empirical) data obtained from the three jurisdictions under study. However, one quickly sees that the number of statutes in Australian patent law is significantly larger than in the other two jurisdictions. This anomaly occurs due to the structure of the Australian *Patents Act 1990*. This act includes examination rules and regulations that are typically excluded from the patent act proper. Adjusting the data to account for this legislative anomaly by dividing the number of Australian statutes in half results in doubling the number of words per statute. Figure 12 represents this normalization, which creates an almost perfectly harmonious patent law landscape in three dramatically different jurisdictions – Australia, Ireland and the U.S.

## Summary

This chapter analyzed the domestic patent law of the selected jurisdictions. Due to the discussions contained in previous chapters regarding multilateral patent related treaties, the focus of this chapter was narrowed to a discussion of Irish patent law. The analysis of the Irish patent law provided a means to quantify relationships between the domestic patent laws of Ireland, Australia and the U.S. The highlights of this chapter are listed below.

- Discussed the Irish phenomenon referred to as the Celtic Tiger
- Identified motivating factors for the Irish reforms of the 1970s and 1980s
- Provided a definition for qualifying patents in Irish law

- Examined the relationship between qualifying patents and the Irish taxation scheme
- Presented the results of the analysis of the Irish patent law statutes
- Presented the results of the analysis of the Australian patent law statutes
- Presented the results of the analysis of the U.S. patent law statutes
- Presented the patent law compatibility between the jurisdictions of Australia, Ireland and the U.S.

## CHAPTER 7 – DOMESTIC LAW: TAXATION

The domestic nature of this chapter is similar to that of Chapter 6. The significant difference, however, is that this chapter focuses on domestic tax law, and not on domestic patent law. This chapter presents an overview domestic tax law in a similar manner as domestic patent law was introduced in Chapter 6. This chapter also focuses on one jurisdiction's domestic tax law, the U.S. domestic tax law, followed a quantification of all three jurisdictions' domestic tax laws.

### Introduction

The previous chapter presented an analysis of the domestic patent law of Australia, Ireland and the U.S. with a focus on Irish patent law. Due to the similarity and legal compatibility shown in the analysis of the jurisdictions' domestic patent law, as a direct result of international efforts and treaties, one might expect a similar level of domestic tax law compatibility and consistency. Domestic tax law, however, does not benefit in the same manner domestic patent law benefits from international treaties. DTAs, the principal international tax instrument, are virtually all tax relief treaties and not tax imposition treaties. Fundamental domestic tax policies, regarding the imposition of tax, remain domestic, not international. Simply stated, a jurisdiction's domestic tax law is not under any international obligation to comply or be compatible with another jurisdiction's domestic tax law. In the terms of the previous chapter's discussion on the analysis of patent law statutes, there is not a single/unifying treaty article (message) that must be encoded into a jurisdiction's domestic tax law. This chapter, however, utilizes the same quantitative approach as employed in the previous chapter to analyze domestic tax law statutes. By utilizing the same quantitative approach to analyze both domestic patent and tax law statutes, the results of the two may be compared with respect to the legal complexity of each. The shaded region of Figure 13 depicts the scope of the discussion contained in this chapter.

DOMESTIC LAW				Taxation	Bilateral DTAs	IE	Taxation	Bilateral DTAs	AU	Taxation	Bilateral DTAs	AU
						US			US			IE
				·	·	·	·	·	·	·	·	·
				·	·	·	·	·	·	·	·	·
				#	#	#	#	#	#	#	#	#
			4	6	6	6	6	6	6	6	6	
			3	2	2	2	2	2	2	2	2	
			ITAA	TCA	IRC							
			1997	1997	2009							
Patents Act	Patents Act	Title 35 USC	AU Tax Law	IE Tax Law	US Tax Law							
AU Patent Law	IE Patent Law	US Patent Law										
Domestic Patent Law			Domestic Tax Law									

**Figure 13: Legal Landscape – Domestic Taxation Laws.**

There is great variability in domestic tax law from one jurisdiction to another, which is quantified later in this chapter. Increases in variability tend to increase the legal complexity of the domestic tax law. Without the benefit of an accepted international tax treaty, similar to the *TRIPS Agreement*, jurisdictions' domestic tax laws diverge rather than converge towards a harmonized set of international tax law principles and implementation thereof. This is consistent with the basic tenant of information theory that information entropy has a tendency to increase (the degree of uncertainty increases) when information is reduced, as previously discussed. The information referred to here is the lack of an international tax treaty. Therefore, this chapter focuses on what, arguably, is the most complex of the three jurisdictions' domestic taxation law, the U.S. domestic tax law. The U.S. domestic tax law's fundamental principles governing patents and income from patent related activities, including royalties, are representative of similar taxation principles found in the other two jurisdictions' domestic tax law. After a brief overview of the U.S. domestic tax law governing the taxation of patents and patent related activities, a quantitative analysis of the three jurisdictions' tax statutes is provided. The objective of the analysis of the jurisdictions tax statutes is two-fold. First, a determination of the complexity and variability of the three jurisdictions' taxation law is obtained from the analysis of the jurisdictions' respective statutes. Second, the results of the analysis are incorporated into the model developed in Chapter 10.

## U.S. Taxation Law Background

A number of preparatory topics are useful in understanding the materials in this chapter, such as: (1) background of the U.S. taxation system, (2) types, names and locations of the various documentation related to the U.S. taxation system, e.g., navigation aids, and (3) specific differences between U.S. statutes and regulations, and the associated repositories chartered with the responsibility of maintaining these statutes and regulations. The first topic, referred to above as the background of the U.S. taxation law, began during the first Congress of the newly formed U.S. of America when the first internal-revenue tax law was enacted.<sup>564</sup> This occurred on 3 March 1791, and imposed a tax on distilled spirits and stills. Some might argue that the first taxation occurred in 1789,<sup>565</sup> but care should be taken when reading that statute. For example, it explicitly states that ‘... duties hereinafter mentioned shall be laid on the following goods, wares and merchandises imported into the United States from any foreign port or place ... On all distilled spirits ... imported from any kingdom or country’.<sup>566</sup> The statute of 1789 applied duties on imported goods, not internal goods. It was not until 1791 that internal goods were taxed, as indicated by the following excerpt from section 14. ‘That upon all spirits which after the last day of June next, shall be distilled within the United States, ... there shall be paid for their use the duties following’.<sup>567</sup> Taxation of goods within the U.S. quickly followed. Legislation enacted tax on goods such as carriages, retail dealers in wines and foreign spirituous liquors, snuff, refined sugar, property sold at auction, legal instruments, real estate, and slaves.<sup>568</sup> All of these taxes and the offices created for the enforcement of the tax were abolished in 1802.

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<sup>564</sup> United States of America – The Statutes at Large, *An Act supplemental to the act “establishing the Treasury Department,” and for a farther [sic] compensation to certain officers*, 1<sup>st</sup> Congress, Sess. III, Ch. 18, Chap. XVIII (1791) 199-214; 1 Stat. 199-214 (1789-1799).

<sup>565</sup> United States of America – The Statutes at Large, *An Act for laying a Duty on Goods, Wares, and Merchandises imported into the United States*, 1st Congress, Sess. I, Chapter II (1789) 24-27; 1 Stat. 24-27 (1789-1799).

<sup>566</sup> Ibid.

<sup>567</sup> United States of America – The Statutes at Large, above n 564, 202.

<sup>568</sup> United States of America – The Statutes at Large, *An Act to continue in force the acts laying duties on licenses for selling wines, and foreign distilled spirits by retail, and so much of the act laying certain duties on snuff and refined sugar as respects a duty on refined sugar, on property sold at auction, and on carriages for the conveyance of persons*, 6<sup>th</sup> Congress, Sess. II, Chap. IX (1801) 102-103; 2 Stat. 102-103 (1799-1813).

Because of the financial demands of the War of 1812, internal taxation was again imposed in 1813. The taxes were levied on items upon which they were previously levied, with some broadening of scope. The Commissioner of Revenues, an officer of the Treasury Department, was in charge of the administration of such taxes. On 23 December 1817 these taxes were repealed by statute in '*[a]n Act to abolish the internal duties.*'<sup>569</sup> The office of Commissioner of Revenues was discontinued, effective upon the completion of the collection of the outstanding taxes.

During 1818 to 1861, a period of 43 years, no internal revenue taxes were imposed. In 1861, an Act was passed imposing a tax on incomes and real property.<sup>570</sup> In 1862, '*the office of the Commissioner of Internal Revenue*'<sup>571</sup> in the Treasury Department was created to oversee taxation after the 43-year lull in collection. Curiously, however, no income tax was ever collected under this Act, and all of the tax collected on real property was returned to the states under the authority of the Act of 2 March 1891.<sup>572</sup>

The Act of 1 July 1862<sup>573</sup> is largely the basis of the present U.S. system of taxation. It contained the first law under which any income tax was collected, and it attempted to tax almost everything that Congress thought possible of yielding revenue. Spirits, tobacco, and beer were the three principle sources of revenue from this initiative. For a long time, the backbone of the internal revenue's collections was these three taxable items. Even today, the statutory code reflects vestiges of this special treatment, i.e., specific statutes regarding each of these items.

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<sup>569</sup> United States of America – The Statutes at Large, *An Act to abolish the internal duties*, 15<sup>th</sup> Congress, Sess. I, Statute I, Chap. I (1817) 401-403; 3 Stat. 401-403 (1811-1823).

<sup>570</sup> United States of America – The Statutes at Large, *An Act to provide increased Revenue from Imports, to pay interest on the Public Debt, and for other Purposes*, 37<sup>th</sup> Congress, Sess. I, Chap. XLV (1861) 292-297; 12 Stat. 292-297 (1855-1863).

<sup>571</sup> United States of America – The Statutes at Large, *An Act to provide Internal Revenue to support the Government and to pay Interest on the Public Debt*, 37<sup>th</sup> Congress, Sess. II, Chap. CXIX (1862) 432-435; 12 Stat. 432-435 (1855-1863) 432.

<sup>572</sup> United States of America – The Statutes at Large, *An Act to credit and pay to the several States and Territories and the District of Columbia all moneys collected under the direct tax levied by the act of Congress approved August fifth, eighteen hundred and sixty-one*, 51<sup>st</sup> Congress, Sess. II, Chap. 496 (1891) 822-823; 26 Stat. 822-823 (1887-1891).

<sup>573</sup> United States of America – The Statutes at Large, *An Act to provide Internal Revenue to support the Government and to pay Interest on the Public Debt*, 37<sup>th</sup> Congress, Sess. II, Chap. CXIX (1862) 432-435; 12 Stat. 432-435 (1855-1863).

The Revised Statutes of 1873 constitute the first codification of the internal-revenue laws; title XXXV,<sup>574</sup> which was made absolute law. A perfected edition of the Revised Statutes was prepared in 1878 but is only *prima facie* law, not absolute law.<sup>575</sup> Again in 1924, the internal-revenue laws were codified in Title 26 of the U.S. Code, which was sanctioned as *prima facie* law. Arguably, between these two dates occurred the most significant event in U.S. tax law – the sixteenth amendment to the U.S. constitution.<sup>576</sup> The sixteenth amendment states, ‘*The Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several States, and without regard to any census or enumeration.*’<sup>577</sup>

In 1930 a substitute for Title 26 of the U.S. Code, the tax law, was published.<sup>578</sup> The substitute law was known as the Internal Revenue Code or IRC, and contained all permanent law in force on 1 December 1930. The Joint Committee on Internal Revenue Taxation published the IRC. The IRC consisted of corrections, omissions, and restructuring of the U.S. tax code. It was not a mere duplication of what was previously in force.

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<sup>574</sup> United States of America – The Statutes at Large, Title XXXV, Internal Revenue, *Officers of Internal Revenue*, 18 Stat. DCLXXV (1778-1875) 601, §§3140-3171.

<sup>575</sup> The importance of absolute, positive (statutory), law versus *prima facie* law is best understood through the following two paragraphs from the U.S. GPO. The first of these paragraphs briefly describes the structure of U.S. law. The second provides a list of the U.S. laws (Titles) that are absolute or positive law. Noticeably missing from this list is the U.S. IRC, Title 26.

The United States Code is the codification by subject matter of the general and permanent laws of the United States. It is divided by broad subjects into 51 titles and published by the Office of the Law Revision Counsel of the U.S. House of Representatives. The U.S. Code was first published in 1926. The next main edition was published in 1934, and subsequent main editions have been published every six years since 1934. In between editions, annual cumulative supplements are published in order to present the most current information.

Of the 51 titles, the following titles have been enacted into [positive \(statutory\) law](#): 1, 3, 4, 5, 9, 10, 11, 13, 14, 17, 18, 23, 28, 31, 32, 35, 36, 37, 38, 39, 40, 41, 44, 46, 49, and 51. When a title of the Code was enacted into positive law, the text of the title became legal evidence of the law. Titles that have not been enacted into positive law are only *prima facie* evidence of the law. In that case, the Statutes at Large still govern.

<sup>576</sup> United States of America – The Statutes at Large, *Sixteenth Amendment to the Constitution*, 61<sup>st</sup> Congress, Sess. I, Joint Resolution (1913) 1735; 37 Stat. 1735 (1906-1913).

<sup>577</sup> *Ibid*, Article XVI, 1785

<sup>578</sup> *Revenue Act of 1930*.

In 1933 a new edition of the U.S. IRC was published containing the tax laws in force on 16 July 1932. This version of the IRC is *prima facie* law today.<sup>579</sup> A third edition was published in 1938. Finally, in 1939 the IRC was brought up to date through cooperation between the U.S. Legislature and the U.S. Treasury Department. It was this version of the IRC that ultimately became known as the Code. It exclusively contained the internal revenue laws in force on 2 January 1939. Prior laws were superseded by the Code, which became ‘the law.’<sup>580</sup> As of the Code’s enactment date, it provided a single source for all revenue law. Since enactment, other laws have been added which are not always reflected in the Code requiring reference to ‘Related Statutes.’

The Title 26 of the U.S. Code is officially known as the Internal Revenue Code, according to section 2 of the Code Enacting Act, and is cited as the IRC. Ordinarily it is referred to as the ‘Code’. The latter name is somewhat confusing since the U.S. Code, all U.S. laws, is often referred to as the Code, as well. The tax-related context of use is usually sufficient to resolve this ambiguity without the introduction of another short title for Code.

### **Navigating Historical U.S. Taxation Laws<sup>581</sup>**

Codification of the U.S. tax law was not a new idea. Various previous attempts were made to segregate and consolidate these laws.

**Revised Statutes:** The first successful codification of the law was the Revised Statutes, enacted by Congress in 1874 as absolute law. It was codified and re-enacted, as Title XXXV. As to exact dates, it appears that the Revised Statutes were drafted in 1873 but were not enacted as law until 22 June 1874. A refined version of the Revised Statutes was prepared in 1878. This version, however, was never enacted by Congress and thus never became law.

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<sup>579</sup> U.S., *United States Code* (2013) United States Government Printing Office (‘U.S. GPO’) <<http://www.gpo.gov/fdsys/browse/collectionUScode.action?collectionCode=USCODE>> at 11 January 2013.

<sup>580</sup> United States of America – The Statutes at Large, Public No. 1, 76<sup>th</sup> Congress, 1<sup>st</sup> Session, Chapter 2, 53 Statute 1-503, First Part (10 February 1939).

<sup>581</sup> Commerce Clearing House, Inc., *Report 48 – Internal Revenue Code* (1952) 14-15.

**U.S. Code:** The U.S.C. is an ‘official restatement in convenient form of [all] the general and permanent laws of the United States’. The U.S.C. was sanctioned by law, but was never enacted as law. It is, therefore, only *prima facie* evidence of the law. It is possible to rebut it by showing what the original law is, as in *Rasquin v. Muccini*.<sup>582</sup> The true value of it lies in having an organized and complete set of federal law. The compilers of the IRC took great pains not to disrupt the structure of the U.S. Code, and so far as possible the scope of the Internal Revenue Code was kept within the bounds of Title 26 of the U.S. Code, which relates to internal revenue. Where the citation ‘U.S.C.’ is inserted in the IRC, the reference is to the U.S. Code.

**The Revenue Acts:** Subsequent to the approval, in 1913, of the Sixteenth Amendment to the Constitution of the U.S. relating to income taxes, the major tax legislation was contained in various revenue acts. These acts tended to follow a pattern even in the early years and, by the time the Revenue Act of 1926 was enacted, legislators, taxpayers and government officials saw the desirability of keeping a uniform outline as much as possible, at least so far as the income tax was concerned. But some of the tax levies never found a permanent allocation; and in time numerous provisions remained non-repealed or non-replaced so that the effective law, prior to its codification, gradually came to present a picture somewhat as follows: (1) the law relating to the Board of Tax Appeals remained under sections 900-912 of the Revenue Act of 1924, as amended; (2) the estate tax was found at sections 300-321 of the Revenue Act of 1926, as amended; (3) the gift tax was found at sections 501-532 of the Revenue Act of 1932, as amended; (4) the income tax was found in title I of the Revenue Act of 1938; and (5) a number of miscellaneous taxes could be found only by studying carefully each separate Revenue Act since 1916. The administrative provisions were a mixture of amended or re-enacted Revised Statutes provisions and various amendatory and supplementary provisions appearing in almost all of the Revenue Acts.<sup>583</sup>

**Other Laws:** In addition to the Revised Statutes and the revenue acts, internal revenue laws were also to be found in an odd assortment of public enactments, some bearing a popular title, others designated merely by the date of enactment or public

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<sup>582</sup> *Rasquin v. Muccini*,<sup>582</sup> (CCA-2; 1934) 72 Fed. (2d) 688.

<sup>583</sup> Commerce Clearing House, above n 581, 15.

act number. Familiar titles include the Social Security Act (*42 U.S.C. § 1305*),<sup>584</sup> the Carriers' Taxing Act,<sup>585</sup> the Liquor Tax Administration Act<sup>586</sup>, the National Firearms Act,<sup>587</sup> etc. The whole category of internal revenue laws from which the original Code was derived is found in the 'Source Notes; Finding Lists' division of various early copies of the Code.<sup>588</sup>

**U.S. Statutes at Large:** In some sections of the Code, citations are made to the U.S. Statutes at Large, an indexed compilation that contains the acts of Congress, printed in full and arranged in the order of their enactment. Such citations are made with the volume number preceding the abbreviation 'Stat.', which is followed by the page number. Thus, reference to Act of 27 March 1942, c. 199, 56 Stat. 176, Public Law 507, 77<sup>th</sup> Cong., 2<sup>nd</sup> Sess., shows besides the date of enactment, session of Congress during which the law was enacted, chapter number, and public law number, that the act is reproduced in full at page 176 in Volume 56 of the U.S. Statutes at Large.<sup>589</sup>

### **Differences Between F.R. and C.F.R.**

There are two critical repositories of rules and notices of the U.S. Federal Government. The first repository is the U.S. Federal Register ('F.R.' or simply 'FR').<sup>590</sup> The **Federal Register**,<sup>591</sup> on the Government Printing Office site – GPO Access,<sup>592</sup> is the daily publication for Rules, Proposed Rules, and Notices of the Federal Government. The second repository is the U.S. Codification of Federal Regulations ('C.F.R.' or simply 'CFR').<sup>593</sup> Until now it was unlikely that an understanding of the difference between the FR and the CFR was required. However, now it is extremely important to understand the difference. The importance is

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<sup>584</sup> *Social Security Act of 1935*, ch. 531, 49 Stat. 620 (42 U.S.C. 301 et seq.) enacted on 14 August 1935.

<sup>585</sup> *Carriers' Taxing Act of 1937*, ch. 405, 50 Stat. 435 enacted on 29 June 1937.

<sup>586</sup> *Liquor Tax Administration Act of 1936*, ch. 830, 49 Stat. 1939 enacted on 26 June 1936.

<sup>587</sup> *National Firearms Act of 1934*, ch. 757, 48 Stat. 1236, 72<sup>nd</sup> Congress, Sess. 2, enacted on June 26, 1934.

<sup>588</sup> Commerce Clearing House, above n 581.

<sup>589</sup> *Ibid.*

<sup>590</sup> See generally, <<http://www.archives.gov/federal-register/the-federal-register/>> at 7 April 2013.

<sup>591</sup> See generally, <[www.ofr.gov](http://www.ofr.gov)> at 16 October 2013.

<sup>592</sup> See generally, <[www.gpo.gov](http://www.gpo.gov)> at 16 October 2013.

<sup>593</sup> See generally, <<http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>> at 7 April 2013.

primarily due to some errors and inconsistencies directly related to the nature of the FR and the CFR.

The U.S. National Archives & Records Administration<sup>594</sup> provides the following definition of the Federal Register.

Published every Federal working day, the *Federal Register* is the official gazette of the United States Government. It provides legal notice of administrative rules and notices and Presidential documents in a comprehensive, uniform manner.

The *Federal Register* contains:

- Federal Agency Regulations
- Proposed Rules and Public Notices
- Executive Orders
- Proclamations
- Other Presidential Documents<sup>595</sup>

Likewise, the U.S. National Archives & Records Administration provides the following definition of the Code of Federal Regulations.

The Code of Federal Regulations (CFR) is an annual codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government.<sup>596</sup>

There are two major issues regarding the FR and the CFR that become apparent when researching U.S. domestic tax law, more specifically patent related statutes such as 26 *U.S.C.* §482. First, the beginnings of section 482 predates the U.S. National Archives, which was not established until 1935,<sup>597</sup> the Federal Register, which was not established until 26 July 1935,<sup>598</sup> and the Superintendent of Documents, which was not established until 1935.<sup>599</sup> Second, the contents of the FR are not always the

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<sup>594</sup> See generally, <[www.archives.gov](http://www.archives.gov)> at 22 February 2012.

<sup>595</sup> U.S., *The Federal Register* (2013) National Archives & Records Administration <<http://www.archives.gov/federal-register/the-federal-register/>> at 7 April 2013.

<sup>596</sup> U.S., *About The CFR* (2013) National Archives & Records Administration <<http://www.archives.gov/federal-register/cfr/about.html>> at 7 April 2013.

<sup>597</sup> *An Act to provide the printing and distribution of Government publications to The National Archives* (1935) 74<sup>th</sup> Congress, Sess. I, Chap. 267 (1935) 386; 49 Stat. 386 (1919-1936).

<sup>598</sup> *An Act to provide for the custody of Federal proclamations, orders, regulations notices, and other documents, and for the prompt and uniform printing and distribution thereof* (1935) 74<sup>th</sup> Congress, Sess. I, Chap. 417 (1935) 500-503; 49 Stat. 500-503 (1919-1936).

<sup>599</sup> U.S., *United States Government Manual of 1935* (1935) 583-584.

same as the content published in the annual codification of the CFR. Taken collectively, these two issues make researching early U.S. statutes and associated regulations quite challenging, especially 26 U.S.C. §482.

### **Overview of Title 26 U.S.C. § 482**

On 21 April 1999 the U.S. Department of Treasury's Internal Revenue Service published a report. The report, *Report on the Application and Administration of Section 482*,<sup>600</sup> included a '[h]istory of [s]ection 482'.<sup>601</sup> This 90-year history of 26 U.S.C. § 482 is one page consisting of seven paragraphs totalling 500 words. This means that the entire 90-year history equates to less than one paragraph per decade. Considering that this history is devoted to, arguably, the most influential domestic tax statute in the world regarding the taxation of intangible property, one paragraph per decade appears inadequate.

The U.S. IRS used only 500 words to present the 90-year history of 26 U.S.C. § 482's.<sup>602</sup> This is an impressive feat for any significant 90-year period of time. Considering the global effect that 26 U.S.C. § 482 has it seems there is considerably more to the history of 26 U.S.C. § 482 than the U.S. IRS published in 1999. A simple principle, the 'Iceberg Principle,'<sup>603</sup> is useful in providing answers to the above dilemma. The 'Iceberg Principle' is best explained by the following statement, '[b]ecause the density of pure water ice is about 920 kg/m<sup>3</sup>, and that of sea water about 1025 kg/m<sup>3</sup>, typically, only one-ninth of the volume of an iceberg is above water.'<sup>604</sup> Furthermore, '[t]he shape of the remainder under the water is difficult to surmise from looking at what is visible above the surface.'<sup>605</sup> 26 U.S.C. § 482 is comprised of only two sentences consisting of a total of only 127 words. This makes this statute one of the smallest statutes in the U.S. domestic tax law. The 127 words of 26 U.S.C. § 482 are provided below.

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<sup>600</sup> U.S., *Report on the Application and Administration of Section 482* (21 April 1999) United States Internal Revenue Service, 3 <<http://www.irs.gov/pub/irs-pdf/p3218.pdf>> at 7 April 2013.

<sup>601</sup> Ibid.

<sup>602</sup> Ibid.

<sup>603</sup> Wikipedia, *Iceberg* <<http://en.wikipedia.org/wiki/Iceberg>> at 31 January 2008.

<sup>604</sup> Ibid.

<sup>605</sup> Ibid.

§ 482. ALLOCATION OF INCOME AND DEDUCTIONS AMONG TAXPAYERS.

[Sentence 1] In any case of two or more organizations, trades, or businesses (whether or not incorporated, whether or not organized in the United States, and whether or not affiliated) owned or controlled directly or indirectly by the same interests, the Secretary may distribute, apportion, or allocate gross income, deductions, credits, or allowances between or among such organizations, trades, or businesses, if he determines that such distribution, apportionment, or allocation is necessary in order to prevent evasion of taxes or clearly to reflect the income of any of such organizations, trades, or businesses.

[Sentence 2] In the case of any transfer (or license) of intangible property (within the meaning of section 936(h)(3)(B)), the income with respect to such transfer or license shall be commensurate with the income attributable to the intangible.<sup>606</sup> [Formatting changes were made in the above quotation to emphasize the structure of the section.]

On the surface *26 U.S.C. § 482* is unobtrusive and minimal in nature, but what lies underneath is a sea of regulations consisting of roughly 55,000 words plus an additional 40,000 words of approved temporary regulations. Statutes have associated regulations that are issued as an aid to the interpretation and enforcement of the statutes. Therein lies the *26 U.S.C. § 482* ‘iceberg’ created by the U.S. IRS. The U.S. IRS determined that one could not properly interpret 127 statutory words without the aid of nearly 100,000 words of additional material. This situation may appear strange, but under U.S. law the U.S. IRS is allowed to adopt regulations without the oversight of the U.S. Legislature as long as the underlying statutes are not modified. Therefore, in mathematical terms, the *26 U.S.C. § 482* iceberg has a statute to regulation ratio of 1:700-800 statutory words to regulatory words while a real iceberg has a ratio of only 1:9, exposed to unexposed iceberg. The previous ratio justifies the use of the proverbial ‘tip of the iceberg’ phrase when discussing statutory U.S. domestic taxation law.

The literature is replete with legal scholars and practitioners confounded by the complexities of U.S. tax law, as presented above. As an example, the drafters of U.S. Patent Application Publication US 2003/0018576 A1,<sup>607</sup> not having the benefit of this

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<sup>606</sup> *26 U.S.C. § 482* of the U.S. Internal Revenue Code of 1954 as amended on 22 October 1986 by 100 Stat. 2562-2563.

<sup>607</sup> Kenneth Zuckerbrot, et al., *Pub. No. US 2003/0018576 A1* (2003) U.S. Patent and Trademark Office <<http://appft1.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PG01&p=1&u=%2Fnethtml%2FPTO%2Fsrchnum.html&r>

discussion, were confounded and may have committed malpractice. U.S. patent applications have two requirements pertinent to this example. First, U.S. patent applications require statutory declarations. Second, U.S. patent applications require that both inventor and inventor's counsel maintain equitable conduct. Inequitable conduct by the inventor or the inventor's counsel may result in rejection of the patent application during prosecution or invalidation after the patent issues. How do these two requirements relate to the example? With respect to the first requirement, under *37 CFR § 1.51(b)(2)* an oath or declaration must be filed along with a patent application. As per *37 CFR § 1.63(b)(2)* and *37 CFR § 1.63(b)(3)* the signatory declares an understanding of the submission and an acknowledgement of the penalties associated with the oath or declaration. Finally, *18 U.S.C. § 1001* entitled, '*Statements or entries generally*', defines the penalties associated with false information proffered in a declaration.<sup>608</sup>

The cited patent application, prepared by the well-known firm of Greenberg-Traurig, states: '*Congress revised and improved upon these proposals over the next few years until the Revenue Act of 1928, when section 45 was finally incorporated into the Internal Revenue Code.*'<sup>609</sup> Unfortunately for the inventors and Greenberg-Traurig, the U.S. Internal Revenue Code was not enacted until the *Revenue Act of 1939* (initial efforts beginning in 1930).<sup>610</sup> Notwithstanding the seriousness of this and other 26 *U.S.C. § 482*-related inaccuracies found within the patent application, the fact that the

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at 3 March 2013.

<sup>608</sup> *18 U.S.C. § 1001*.

(a) Except as otherwise provided in this section, whoever, in any matter within the jurisdiction of the executive, legislative, or judicial branch of the Government of the United States, knowingly and willfully—

- (1) falsifies, conceals, or covers up by any trick, scheme, or device a material fact;
- (2) makes any materially false, fictitious, or fraudulent statement or representation; or
- (3) makes or uses any false writing or document knowing the same to contain any materially false, fictitious, or fraudulent statement or entry; shall be fined under this title, imprisoned not more than 5 years or, if the offense involves international or domestic terrorism (as defined in section 2331), imprisoned not more than 8 years, or both. ...

<sup>609</sup> Kenneth Zuckerbrot, et al., above n 607, page 2 ¶ [0013].

<sup>610</sup> United States of America – The Statutes at Large, 76<sup>th</sup> Congress, Sess. I, Ch. 2 10 February 1939 (1939) 1.

invention purports to patent aspects and requirements demanded by 26 U.S.C. § 482 without a proper understanding of 26 U.S.C. § 482 is incomprehensible.

With respect to the second requirement, *MPEP § 2016* entitled, ‘*Fraud, Inequitable Conduct, or Violation of Duty of Disclosure Affects All Claims*’,<sup>611</sup> states the following:

A finding of “fraud,” “inequitable conduct,” or violation of duty of disclosure with respect to any claim in an application or patent, renders all the claims thereof unpatentable or invalid.<sup>612</sup>

A firm such as Greenberg-Traurig has no excuse for its participation in an attempt to deceive the U.S. PTO. Trained legal professionals are held to an appropriately high standard legal knowledge and legal understanding. Arguably, this information makes a difference in such professionals’ understanding of 26 U.S.C. § 482 and related events surrounding its history and evolution.

### **U.S. Domestic Law: Addressing The Threat Of Tax Base Erosion**

As previously mentioned, the U.S. is aware of both the siphoning-off of intellectual property and the associated tax revenue erosion.<sup>613</sup> This is of grave concern to the U.S., as indicated by Treasury Tax Counsel John Harrington’s statement that:

The Treasury Department is very concerned about the use of offshore jurisdictions to evade U.S. tax. There plainly have been abuses in this area. We have been aggressively pursuing such abuses, and we intend to continue doing so.<sup>614</sup>

The U.S. has taken tactical and strategic steps to address this issue. These steps cover three general areas, as indicated below.

Accordingly, we modify or update U.S. tax rules when we determine that they are being used to perpetrate such abuse. Recent published guidance projects that will improve compliance and that target potential areas of abuse include:

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<sup>611</sup> U.S., *U.S. Manual of Patent Examining Procedure (MPEP)* (August 2012) The United States Patent and Trademark Office (U.S. PTO) <<http://www.uspto.gov/web/offices/pac/mpep/s2016.html>> at 3 March 2013.

<sup>612</sup> Ibid.

<sup>613</sup> *Addressing Base Erosion and Profit Shifting*, above n 21.

<sup>614</sup> John Harrington, ‘Offshore Tax Evasion’ (Testimony of Treasury Tax Counsel John Harrington Before the Senate Finance Committee on Offshore Tax Evasion, Washington DC, 3 May 2007) <<http://www.archives.gov/federal-register/cfr/about.html>> at 9 August 2012.

- Foreign Tax Credit: ... In November 2006, we issued final regulations regarding the proper allocation of partnership expenditures for foreign taxes.
- Transfer Pricing: ... In an increasingly globalized economy, cross-border transactions between controlled entities present significant compliance challenges, making guidance in the transfer pricing area an important part of our administrative efforts to address noncompliance. ... We issued proposed transfer-pricing regulations addressing cost-sharing in August 2005.
- Other Abusive Transactions: ... [I]n October 2006, we published proposed regulations regarding the Federal tax treatment of annuity contracts.<sup>615</sup>

A more detailed discussion of the above amendments and modifications to the U.S. IRC is presented in chronological order below. The previous chapter described the origins of the Celtic Tiger *circa* 1973. One might, however, debate whether Ireland's accession into the European Community,<sup>616</sup> the precursor to the EU, was the true birth of the Celtic Tiger. As early as 1962, the U.S. began to expand its tax collection policies from a domestic-only with minimal international focus to a worldwide initiative. In particular, the regulations under 26 U.S.C. § 482 were amended on 14 April 1962.<sup>617</sup> The amended regulations were the culmination of many lengthy debates in both the legislative and executive offices of the U.S. government, as indicated below.

The U.S. Treasury Department was keenly aware of the shift in the U.S. business model and the threat it posed to U.S. tax revenues. This view was shared by then U.S. President John F. Kennedy through the late former president's personal notes available through The John F. Kennedy Library, in particular his notes on '*Multinational Businesses*'.<sup>618</sup> The U.S. Treasury Department responded by requesting the U.S. Congress to address this change in the U.S. business landscape. The U.S. Congress in a hearing before the Committee on Ways and Means heard M. Caplin, U.S. Commissioner of Internal Revenue at the time; state that '*Problems in the Administration of the Revenue Law relating to the Taxation of Foreign*

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<sup>615</sup> John Harrington, above n 614.

<sup>616</sup> *European Communities Act 1972*.

<sup>617</sup> 27 F.R. 3597 (1962).

<sup>618</sup> John F. Kennedy Library, Former U.S. President's Personal Notes (1962)  
<[http://www.jfklibrary.org/Historical+Resources/Archives/Archives+and+Manuscripts/fa\\_behrman.htm](http://www.jfklibrary.org/Historical+Resources/Archives/Archives+and+Manuscripts/fa_behrman.htm)> at 9 March 9, 2008.

*Income*’ existed.<sup>619</sup> The U.S. Congress discussed how to address this issue of foreign affiliates and protecting the U.S. tax jurisdiction.<sup>620</sup> In 1962, the House proposed a bill introducing a new section to the existing §482 regulations to deal with this situation.<sup>621</sup> The U.S. Senate followed the U.S. House of Representatives bill with its own version of a revenue bill, but without the new section proposed by the House.<sup>622</sup> It was determined by the U.S. Senate Finance Committee that the current regulations had the authoritative power to address the multinational issue.<sup>623</sup> This process led to the signing of the Revenue Act of 1962 by then President John F. Kennedy.<sup>624</sup>

During the signing into law of the *Revenue Act of 1962*, former President John F. Kennedy identified one of the major reasons for enacting this Act in the following statement.

It includes several provisions **designed to reduce tax avoidance on incomes earned by American companies and individuals at home and abroad**. By limiting the opportunities to escape tax liability, it makes the distribution of tax burdens fairer and increases our total tax revenues from those sources.<sup>625</sup>

In 1968, the U.S. Department of the Treasury issued a new set of regulations under 26 U.S.C. § 482, 26 C.F.R. §1.482-1 and 26 C.F.R. §1.482-2.<sup>626</sup> Three significant focus areas are found in these regulations: services, tangible property, and intangible property. Beginning with services, the regulations specified “arm’s length” transactions with safe harbours for non-integral services. Next, new transfer pricing methods (‘TPM’s) for tangible property were introduced. The new TPM consisted of:

- the Comparable Uncontrolled Price (‘CUP’),
- the Resale Price Method (‘RPM’),

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<sup>619</sup> *Hearings on the President’s 1961 Tax Recommendations Before the Committee on Ways and Means*, 87<sup>th</sup> Congress, Sess. I, vol. 4 (1961) 3549.

<sup>620</sup> *H.R. Report No. 1447*, 87<sup>th</sup> Congress, Sess. II, 28 (1962).

<sup>621</sup> *H.R. 10650*, 87<sup>th</sup> Congress, Sess. II (1962) s 6.

<sup>622</sup> See generally, *Hearings on H.R. 10650 Before the Senate Committee on Finance*, 87<sup>th</sup> Congress, Sess. II, pt. 7 (1962) 3011-3012.

<sup>623</sup> *Ibid.*

<sup>624</sup> Phillip M. Adams, *Evolution of 26 U.S.C. § 482: A Quantitative Analysis* (2008) pp. 63-64.

<sup>625</sup> Comments made by U.S. President John F. Kennedy while signing into law the Revenue Act of 1962 (H.R. 10650) <<http://www.presidency.ucsb.edu/ws/print.php?pid=8967>> at 9 March 2008. [Emphasis Added]

<sup>626</sup> 33 *F.R.* 3848 (1968).

- the Comparable Price ('CP'), and
- a "Fourth" method.

Finally, these regulations demanded the use of the Comparable Uncontrolled Transaction ('CUT') method when dealing with intangible property. If the CUT method was not readily applicable then twelve specific factors were used to evaluate the intangible property transactions.

With newly adopted regulations, the U.S. Department of the Treasury appeared prepared to manage the potential of lost tax revenue from international activities by U.S. entities, including individuals. However, once Ireland's *Finance Act 1973* began to attract large amounts of FDI, Ireland's tax policy came under fire, both domestically and internationally. Ireland made the first of many changes to its very broad section 34 of the *Finance Act 1973* in 1981. The very broad, and intentionally international, patent language of s 34(3), 'an invention which is the subject of a patent,' was restricted to a "qualifying patent."<sup>627</sup> Thus, Ireland was able to better defend its liberal tax exemption policy by proffering the argument that the beneficiaries establish adequate presence and activity in Ireland to be afforded such tax benefits by the State. By 1982, the U.S. Department of the Treasury realized that without the ability to obtain and utilize foreign documents, there was no hope of enforcing the tax statutes and regulations needed to address tax schemes similar to that of Ireland. Section 982 of the U.S. IRC was enacted to require U.S. entities operating outside the U.S. to provide documentation held outside the U.S. within 90 days or have the materials deemed inadmissible.<sup>628</sup> Interestingly, 26 U.S.C. §982 was enacted under Subtitle A – Income Taxes, Chapter 1 – Normal Taxes and Surtaxes, Subchapter N – Tax Based on Income From Sources Within or Without the United States, Part III – Income From Sources Without the United States, Subpart I – Admissibility of Documentation Maintained in Foreign Countries;<sup>629</sup> rather than under Subtitle F – Procedure & Administration. One can only wonder why such a procedural and administrative statute was placed in Subchapter N where Subpart F –

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<sup>627</sup> *Finance Act 1981* (1981) s 19 amending *Finance Act 1973* (1973) s 34(3).

<sup>628</sup> 26 U.S.C. §982.

<sup>629</sup> *Ibid.*

Controlled Foreign Companies statutes reside rather than a more appropriate Subchapter.

In 1984, *26 U.S.C. §367(d)*<sup>630</sup> was created to address the contingent payments regime for certain outbound transfers of intangibles. It was apparent to the U.S. Department of the Treasury that intangible property was being transferred offshore without proper recognition of the transfer price of the asset transferred. *26 U.S.C. §982*<sup>631</sup> was also amended in 1984 to enhance the early disclosure process of materials maintained overseas. A mere two years later, *26 U.S.C. § 482*,<sup>632</sup> was amended to include the ‘commensurate with income’ standard for transfers of intangibles. Likewise, *26 U.S.C. §367(d)* was amended in accordance with the ‘commensurate with income’ standard for transfers of intangibles.<sup>633</sup> The ‘commensurate with income’ language was added to the statute to avoid abuses regarding the transfer of extremely valuable intangibles, such as patents, for nominal sums – when in fact, the true value of these intangibles could only be ascertained by monitoring the intangibles’ revenue stream.

The U.S. Congress, in 1984, also enacted two new statutes, *26 U.S.C. §1059A*<sup>634</sup> and *26 U.S.C. §1060*,<sup>635</sup> to help stem the tide of U.S. intangible property flowing offshore with its associated taxable revenue stream. Section 1059A intended to provide a limitation on taxpayer's basis or inventory cost in property imported from related persons. Section 1060 provided special allocation rules for certain asset acquisitions. Finally, in 1986, the U.S. Congress issued a directive to the U.S. IRS to conduct a comprehensive study of transfer pricing rules, as indicated below.

The conferees are also aware that many important and difficult issues under section 482 are left unsolved by this legislation. The conferees believe that a comprehensive study of intercompany pricing rules by the Internal Revenue Service should be conducted and that careful consideration should be given to whether the existing regulations could be modified in any respect.<sup>636</sup>

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<sup>630</sup> *26 U.S.C. §367(d)*.

<sup>631</sup> *26 U.S.C. §982*.

<sup>632</sup> *26 U.S.C. § 482*.

<sup>633</sup> *26 U.S.C. §367(d)*.

<sup>634</sup> *26 U.S.C. §1059A*.

<sup>635</sup> *26 U.S.C. §1060*.

<sup>636</sup> U.S., *H.R. Conf. Rep. No. 841*, 99<sup>th</sup> Congress, 2d Sess. 11-638 (1986).

The results of the U.S. IRS study constitute what is referred to as the ‘White Paper’ of 1988. The White Paper, ‘A Study of Intercompany Pricing under Section 482 of the Code’,<sup>637</sup> repeatedly advocated the need for accurate information.<sup>638</sup> In compliance with the recommendation for required information, 26 U.S.C. §6038A was expanded in 1989 to provide the IRS with power to obtain foreign transfer pricing information in an effort to target inbound transfer pricing abuses.<sup>639</sup> The next year, 1990, 26 U.S.C. §6038A was expanded to target inbound transfer pricing abuses;<sup>640</sup> 26 U.S.C. §6038C was enacted to target transfer pricing abuses by legislating information with respect to foreign corporations engaged in U.S. business;<sup>641</sup> 26 U.S.C. §6662 was amended to impose accuracy-related penalties regarding 26 U.S.C. § 482 regulatory adjustments;<sup>642</sup> and 26 U.S.C. §6503(j) was enacted to suspend the limitation rules on corporations being examined by the U.S. IRS.<sup>643</sup> Indeed, 1990 was a very busy year for U.S. legislators attempting to stem the tide of lost sources of potential tax revenue. The U.S. Department of the Treasury declared outright legislative war on tax avoidance by beneficiaries of tax schemes similar to Ireland’s tax regime.

The above U.S. legislative activity is overwhelming in volume. However, these statutory enactments and amendments fall considerably short of the volume of regulatory changes occurring within the U.S. Department of the Treasury that administers these legislative changes.<sup>644</sup> In 1993, this regulatory trend became far more visible. First, 26 U.S.C. §6662 was expanded to provide transfer pricing penalties.<sup>645</sup> Second, new regulations under 26 U.S.C. § 482 introduced a new regime of regulations focused on high-profit intangibles and transfer pricing abuses.<sup>646</sup> Ireland, no doubt capitulating to international pressure, made a significant amendment

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<sup>637</sup> United States Internal Revenue Service, *A Study of Intercompany Pricing under Section 482 of the Code*, Notice 88-128; 1988-2 C.B. 458; 1988 IRB LEXIS 3758; 1988-49 I.R.B. 7 (July 1988).

<sup>638</sup> Ibid Ch. 13, Section K, Recommendation #9 – ‘produce records necessary to verify the computation ...’

<sup>639</sup> 26 U.S.C. §6038A.

<sup>640</sup> Ibid.

<sup>641</sup> 26 U.S.C. §6038C.

<sup>642</sup> 26 U.S.C. §6662.

<sup>643</sup> 26 U.S.C. §6503(j).

<sup>644</sup> Phillip M. Adams, above n 624.

<sup>645</sup> 26 U.S.C. §6662.

<sup>646</sup> 58 F.R. 5263; T.D. 8470 (1993).

to section 34(1) of Ireland's *Finance Act 1973* in 1994.<sup>647</sup> The amendment restricted the previously employed phrase, 'income from a qualifying patent,' by defining what such income means.<sup>648</sup> Furthermore, the U.S. notion of "related parties" was also added in the amendment through the phrase 'not connected ... with the person who is the beneficial recipient of the royalty or other sum.'<sup>649</sup> The U.S. issued in 1994, 26 *U.S.C. §6662(e)* regulations imposing an accuracy-related penalty on underpayments regarding substantial valuation misstatements,<sup>650</sup> and a new set of regulations under 26 *U.S.C. § 482* that introduced quantitative valuation methods for both tangible and intangible property.<sup>651</sup>

The pace of the legislative and regulatory efforts within the U.S. has increased dramatically from 1994 to the present. Not surprisingly, Ireland's legislative activities also increased during the same time period. Ireland's *Finance Act 1996* amended section 34(1) of *Finance Act 1973* to address tax avoidance and requiring a qualifying patent be related to 'an invention which – (A) involved radical innovation, and (B) was patented for *bona fide* commercial reasons and not primarily for the purpose of avoiding liability to taxation.'<sup>652</sup> In 2006, Ireland amended section 141 to address distributions out of income from patent royalties and limiting expenditures for research and development related to qualifying patents.<sup>653</sup> Then in 2007, Ireland expanded the definition of 'State' to be an 'EEA state,' meaning the European Economic Area.<sup>654</sup> Furthermore, the *Finance Act 2007* limited the amount of income from qualifying patents that is afforded exemption from the Irish Income Tax statutes to 5,000,000 euros.<sup>655</sup> Clearly, both items cited as a result of Ireland's 2007 legislative efforts were compromises with the EU and the global community,<sup>656</sup> in particular the

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<sup>647</sup> *Finance Act 1994* s 28 amending *Finance Act 1973* s 34.

<sup>648</sup> *Ibid.*

<sup>649</sup> *Finance Act 1973* s 34(1)(b)(ii), as amended in 1994.

<sup>650</sup> 26 *U.S.C. §6662(e)*.

<sup>651</sup> 59 *F.R. 34971*; T.D. 8552 (1994).

<sup>652</sup> *Finance Act 1996* s 32 amending s 34(1)(b)(3B)(a)(1) of *Finance Act 1973*.

<sup>653</sup> *Finance Act 2006* s 55 (Ireland).

<sup>654</sup> *Finance Act 2007* s 45 (Ireland).

<sup>655</sup> *Ibid.*

<sup>656</sup> *Direct taxation: Commission requests Ireland to end discriminatory rules on tax treatment of patent royalties*, above n 9.

U.S. On 7 December 2010 Ireland removed the qualifying patent tax exemption all together.<sup>657</sup>

## **Amendments To The U.S. Domestic Tax Law**

### **Approach**

Amendments were made to U.S. Domestic Law to tactically address the situation referred to in this thesis as the phenomenon. These amendments consist of two types. First, the amendments meant to alleviate situations similar to the tax policy of Ireland. These amendments, in both statute and regulation, are primarily found in *26 U.S.C. § 482* and its associated regulations, e.g. *26 C.F.R. § 1.482*.<sup>658</sup> Although voluminous, the size of the modifications paled in comparison to the 188-page document describing them that was distributed by the U.S. Department of The Treasury for public comment.<sup>659</sup> Of course, this 188-page document was fully compliant with the *Paperwork Reduction Act of 1995 (44 U.S.C. §3507(d))*.<sup>660</sup> The changes focused primarily on Transfer Pricing and Cost Sharing Arrangements with respect to intangibles (patents, copyrights, etc.).

Second, amendments to the U.S. Tax Code addressing CFCs, or subpart F of the U.S. IRC were made. As an incentive to accept these changes by MNEs a temporary, one-year, reduced tax rate achieving an effective tax rate of 5% was instituted that applied to MNEs' foreign earnings when repatriated to the U.S. This amendment to the U.S. IRC, *26 U.S.C. §965*,<sup>661</sup> focused on repatriation of MNEs' foreign earnings and attempted to attract those funds back to the U.S. The amount of earnings that could be repatriated was defined in *26 U.S.C. §965(b)(1)(A)*,<sup>662</sup> and limited to 500 million U.S. dollars. There were restrictions on the types of earnings and required earnings documentation, also defined under this section of the tax code.

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<sup>657</sup> Department of Finance - Department of Public Expenditure and Reform: The Budget, n 235.

<sup>658</sup> *26 U.S.C. § 482 (2005) Methods to Determine Taxable Income in Connection With a Cost Sharing Arrangement.*

<sup>659</sup> U.S., *Methods to Determine Taxable Income in Connection With a Cost Sharing Arrangement*, U.S. Department of The Treasury [REG-144615-02] RIN 1545-BB26 Draft of *26 U.S.C. § 482 (2005)*.

<sup>660</sup> *Paperwork Reduction Act of 1995, 44 U.S.C. §3507(d) (1995)*.

<sup>661</sup> *26 U.S.C. §965 (2004) Controlled Foreign Corporations-Temporary dividends received deduction.*

<sup>662</sup> *26 U.S.C. §965(b)(1)(A) (2004) Controlled Foreign Corporations-Temporary dividends received deduction.*

## Impact

The impact of the U.S. IRC amendments was both immediate and significant. The U.S. Department of State documents the impact in the following manner:

In 2004, U.S. investment flows into Ireland reached USD 10.4 billion, but fell to negative USD 3 billion in 2005. This reversal likely reflected the response of U.S. firms to a one-time opportunity under the 2005 *American Jobs Creation Act* to repatriate earnings to the United States at lower tax rates.<sup>663</sup>

J.P. Morgan Stanley indicated that they estimated as much as USD 350 billion would be repatriated in 2005 during the one year reduced tax rate time period afforded by 26 U.S.C. §965(b)(1)(A).<sup>664</sup> This amount of money transferred internationally through an intra-corporate mechanism would distort the typical amounts seen for these types of transactions. Indeed, the Commerce Department stated, ‘42% of all U.S. imports and exports last year, amounting to nearly \$770 billion in cross-border trade, were intra-corporate transactions.’<sup>665</sup> J.P. Morgan Stanley’s estimate was verified in a recent New York Times article stating the following. ‘During that period, multinational companies of all stripes moved a total of about \$300 billion into the United States, avoiding about \$90 billion in taxes.’<sup>666</sup>

A more interesting account of these repatriation events was found in an UNCTAD, *The Emerging Landscape of Foreign Direct Investment: Some Salient Issues*.<sup>667</sup> UNCTAD’s rendition of the events is as follows:

Two thirds of FDI flows in 2006, at \$800 billion, were to developed countries (up from three fifths in 2005). This represents an exceptional 48 per cent estimated increase over the \$542 billion flows into developed countries in 2005. Part of this reflects the revival of the United States as destination for FDI. In 2005, that country did not figure amount the top 10 recipient countries, but in 2006 it returned to its customary number 1 position (pushing the United Kingdom into the number 2 position) with FDI flows of \$177 billion.<sup>668</sup>

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<sup>663</sup> 2007 *Investment Climate Statement: Ireland*, above n 493.

<sup>664</sup> U.S. *Treasury tightens rules on Offshore Patents and Licenses*, above n 494.

<sup>665</sup> *Ibid.*

<sup>666</sup> Alex Berenson, above n 261.

<sup>667</sup> UN, *The Emerging Landscape of Foreign Direct Investment: Some Salient Issues*, United Nations Conference on Trade and Development (UNCTAD) TD/B/COM.2/77 (1 February 2007) 3.

<sup>668</sup> *Ibid.*

The most interesting fact about this version of the events is that there is no mention of the repatriation efforts by the U.S. Since corporate tax returns in the U.S. are filed in the year following the financial activity, there is little doubt that some or nearly all of the increase in FDI is a result of the repatriation of untaxed income of U.S. MNEs.

### **Side Effects**

One of the interesting side effects of the above modifications to the U.S. IRC, that took the business community by surprise, is the incorporation of similar modifications to various states' legislation. For example, a preliminary document from the State of Arkansas used to determine the scope of additions and changes requiring attention in the next legislative session. In particular, AS 43.55.165(i) needs to be addressed in order to incorporate the modifications made to 26 U.S.C. § 482, as indicated below.

#### **AS 43.55.165 (i)**

##### *Need to address:*

Incorporation of concepts of 26 U.S.C. 482

##### *Identified Response:*

None specified at this time.<sup>669</sup>

Arguably, the U.S. led the fight against patent related tax avoidance schemes, like the one developed by Ireland that encourage tax avoidance and erode domestic tax revenue.<sup>670</sup> The U.S. domestic law now provides a number of statutes, both state and federal, to address tax avoidance schemes. The international landscape has changed as well. Considering that the U.S. domestic tax code, the U.S. IRC, has nearly 2,000 statutes, it is necessary to narrow the discussion to the statutes pertaining to patents and the income from patent related activities. Furthermore, a simple list of statutes is useful, but does not fully convey the purpose of the statute. Therefore, Appendix I augments this discussion by including a more detailed discussion of U.S. statutes designed to address tax avoidance schemes related to royalty income from patents. Appendix II provides a hypothetical example of the complexity of these statutes and associated regulations in action.

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<sup>669</sup> U.S., *Preliminary Scoping Document prior to 2006 Regulations Project*, State of Arkansas (11 September 2006).

<sup>670</sup> *Addressing Base Erosion and Profit Shifting*, above n 21.

The U.S. government's legislative initiatives to control and contain any would be beneficiaries of intellectual property motivated tax avoidance schemes are complex and changing with every new statute and regulation. The U.S.'s initiative on the anti-avoidance of taxation on income from patent related activities comprises 35 separate statutes each with the potential for associated regulations, as discussed in Appendix I. The complexity of this legislative initiative, compliance with these statutes while avoiding taxation makes one wonder if the potential benefits derived are worth the effort. Obviously, General Electric, Microsoft, over 600 U.S. MNEs and over 48 AU MNEs believe the additional effort is justified, as documented in Chapter 1.

### **Analysis of Taxation Law Statutes**

This section is devoted to analyzing the empirical data obtained by examining the domestic tax law statutes of each of the three jurisdictions' in this study. The analysis of the empirical data proves there is increased variability in the jurisdictions' taxation law due to the lack of a harmonizing international taxation treaty, similar to the *TRIPS Agreement* governing international intellectual property law. The results of the quantitative analysis of jurisdictions' domestic tax laws are presented below, beginning with the Irish *TCA 1997*.

	<b>Section Number and Description</b>	<b># Words</b>
1	Sec. 133.	5442
2	Sec. 481.	5435
3	Sec. 443.	5379
4	Sec. 734.	4977
5	Sec. 531.	4894
6	Sec. 482.	4548
7	Sec. 1002.	4410
8	Sec. 738.	4367
9	Sec. 811.	4146
10	Sec. 404.	3979
	<b>Totals</b>	<b>47577</b>

**Table 17: Irish Tax Consolidation Act 1997 Statute Statistics.**

The Irish *TCA 1997* comprises 1,104 sections or statutes that consist of 857,773 legislated words. As indicated in the table above, the 10 largest statutes in this Act (by number of words) account for over 5.5% of the total Act. The following table represents the results obtained from the analysis of the Australian taxation law statutes.

	<b>Section Number and Description</b>	<b># Words</b>
1	995-1 Definitions [see Notes 2 and 3]	35128
2	12-5 List of provisions about deductions [see Note 11]	4734
3	52-10 How much of a social security payment is exempt?	4397
4	30-15 Table of gifts or contributions that you can deduct	4119
5	10-5 List of provisions about assessable income	4005
6	30-315 Index	3933
7	40-95 Choice of determining effective life	3064
8	11-15 Ordinary or statutory income which is exempt only if it is derived by certain entities	3011
9	104-5 Summary of the CGT events	2847
10	118-425 Meaning of eligible venture capital investment-investments in companies	2614
	<b>Totals</b>	<b>67852</b>

**Table 18: Australian *Income Tax Assessment Act 1997* Statute Statistics.**

The Australian *ITAA 1997* comprises 3,818 sections or statutes consisting of 1,332,103 legislated words. As indicated in the table above, the 10 largest statutes in this Act (by number of words) account for over 5% of the total Act. The following table represents the results obtained from the analysis of the U.S. taxation law statutes.

	<b>Section Number and Description</b>	<b># Words</b>
1	§ 6103. Confidentiality and disclosure of returns and return	26750
2	§ 401. Qualified pension, profit-sharing and stock bonus plans	24455
3	§ 42. Low-income housing credit	21903
4	§ 170. Charitable, etc., contributions and gifts	20487
5	§ 412. Minimum funding standards	19936
6	<b>§ 168. Accelerated cost recovery system</b>	<b>19252</b>
7	§ 414. Definitions and special rules	19009
8	§ 3121. Definitions	18027
9	§ 72. Annuities; certain proceeds of endowment and life	15552
10	§ 501. Exemption from tax on corporations, certain trusts, etc.	15239
	<b>Totals</b>	<b>200610</b>

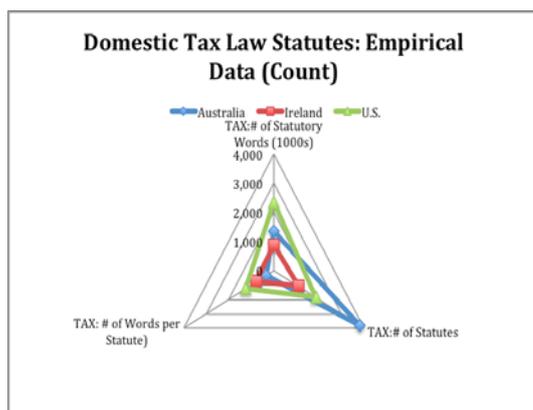
**Table 19: U.S. Title 26 (Taxation) Statutes Statistics.**

The U.S. tax law, Title 26 USC, comprises 1,875 sections or statutes that consists of 2,336,696 legislated words. As indicated in the table above, the 10 largest statutes in this Title (by number of words) account for nearly 8.6% of the total Title. The following table provides the combined results of all three jurisdictions.

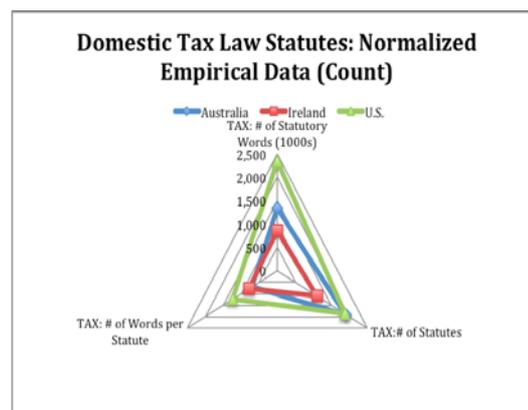
		Australia	Ireland	U.S.	TOTALS
<b>TAXATION</b>	# Statutes	3,818	1,104	1,875	6,797
	% of Total	56.17%	16.24%	27.59%	
	# Words	1,332,103	857,773	2,336,696	4,526,572
	% of Total	29.43%	18.95%	51.62%	
	# Words per Statute	348.90	776.97	1,246.24	2,372.11
	% of Total	14.71%	32.75%	52.54%	

**Table 20: Total Taxation Law Statute Statistics.**

The center horizontal band of data in the above table indicates that the variability in size as a percentage of the total of the three jurisdictions’ total domestic taxation law is 32.67%. Therefore, the difference between one jurisdiction (U.S.) and another (Ireland) is larger than a jurisdiction’s total domestic taxation law (Ireland). The following figures provide a better depiction of the data in Table 20.



**Figure 14: Legal Compatibility Obtained From Empirical Counts From Domestic Tax Law Statutes.**



**Figure 15: Legal Compatibility Obtained From Normalized Empirical Counts From Domestic Tax Law Statutes.**

Figure 14 above indicates the disparity between the quantitative (empirical) data obtained from the tax law statutes in each of the three jurisdictions under study. One notices that the number of statutes in Australian tax law is significantly larger than in the other two jurisdictions. This occurs due to a restriction in the Australian constitution.<sup>671</sup> Section 55 of the Australian constitution requires tax laws ‘shall deal

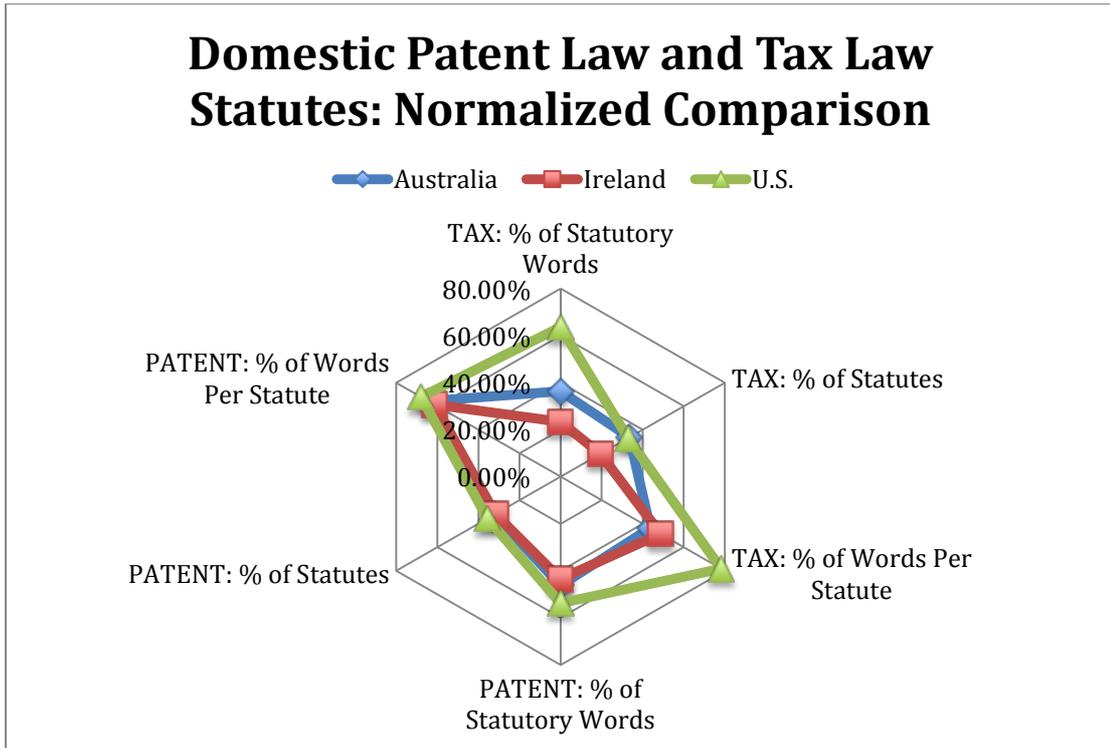
<sup>671</sup> *Commonwealth of Australia Constitution Act (Cth) (1900).*

with one subject of taxation only'.<sup>672</sup> Therefore, one section of the tax law is required to introduce the tax law and one section is required to levy the amount of the tax for the introduced law. Adjusting the data to account for this legislative restriction by dividing the number of Australian statutes in half, which results in doubling the number of words per statute, normalizes the data. Figure 15 represents this normalization, which still lacks the harmonization found in patent law.

The following figure, Figure 16, depicts the results of combining the normalized empirical data from the patent law statutes and the tax law statutes into a single figure.

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<sup>672</sup> Ibid s 55.



**Figure 16: Contrasting The Patent Law And Tax Law Normalized Empirical Data.**

The six end points of the axes represented in Figure 16 are related to either patent or tax law statutes, as indicated by the first word (PATENT or TAX). The patent related data appears on the left side of the figure, while tax related data appears on the right. The left side of the figure, the patent statute related side, indicates an almost perfect overlap of the three jurisdictions. The right side of the figure, the tax statute related side, indicates large variations in the tax law statutes empirical data between the three jurisdictions. In fact, some of these variations between the jurisdictions' tax law empirical data are greater than 100% in contrast to a 7% variability in the jurisdictions' patent law empirical data. Without the harmonizing effects of an international legal instrument such as the *TRIPS Agreement*,<sup>673</sup> large variations and incompatibilities in the domestic legal fabric of countries will continue to exist.<sup>674</sup> Utilizing the variability between jurisdiction's taxation laws as an indicator of legal

<sup>673</sup> *TRIPS Agreement*, above n 148.

<sup>674</sup> *OECD Secretary – General Report To The G20 Leaders*, above n 70. On September 5<sup>th</sup> and 6<sup>th</sup> of 2013 the OECD Secretary-General presented a report to the G20 leaders in St. Petersburg, Russia. As part of that report the OECD Secretary-General made a 'proposal for a truly global model for multilateral and bilateral automatic exchange of information'. In addition, G20 leaders were encouraged to 'join the *Multilateral Convention on Mutual Administrative Assistance in Tax Matters* without further delay.' Depending upon how successful this initiative is will significantly influence whether or not future multilateral tax initiatives equivalent to the *TRIPS Agreement* will become a reality.

complexity may be of significant value in the development of the model in Chapter 10.

## Summary

This chapter is arguably the most complex chapter in the thesis due to the inherent nature of jurisdictions' domestic tax laws. The complexity of jurisdictions' domestic tax laws is a topic of grave concern internationally, including the OECD. In a recent address to the G20 leaders the OECD characterised this matter in the following way.

Globalisation means that domestic policies, including tax policy, cannot be designed in isolation. Tax policy is at the core of countries' sovereignty, and each country has the right to design its tax system in the way it considers most appropriate. At the same time, the increasing interconnectedness of domestic economies has highlighted the gaps that can be created by interactions between domestic tax laws. Therefore, there is a need to complement rules to prevent double taxation with a fundamentally new set of standards designed to establish international coherence in corporate income taxation.<sup>675</sup>

The U.S. taxation laws were used as an example of the complexity of jurisdictions' domestic tax laws and how that law has evolved over the years to attempt to address an ever increasing problem in jurisdictions' domestic tax revenue base without the aid of 'a fundamentally new set of standards designed to establish international coherence in corporate income taxation.' Notwithstanding these complexities, the quantification of the selected jurisdictions' domestic tax laws was presented.

The highlights of this chapter are identified below.

- Introduced the U.S. system of taxation
- Provided insight into the background of the taxation system of the U.S.
- Identified U.S. taxation resources and how to navigate them
- Introduced the little known fact that the U.S. IRC, Title 26, is not absolute, perfected or enacted law
- Provided the chronology of one of the most referenced statutes with regards to the taxation of patents, 26 U.S.C. § 482
- Presented the results of the analysis of the Irish taxation law statutes
- Presented the results of the analysis of the Australian taxation law statutes

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<sup>675</sup> OECD Secretary – General Report To The G20 Leaders, above n 70.

- Presented the results of the analysis of the U.S. taxation law statutes
- Verified the taxation law variability between the jurisdictions of Australia, Ireland and the U.S.
- Suggested a correlation between the variability of taxation law and the legal complexity of the taxation law with the largest variability

## CHAPTER 8 – BUSINESS STRATEGIES AND THE ECONOMICS OF GLOBALIZATION

Chapters 1 and 2 introduced a global phenomenon that is at the center of this research. Chapters 3 through 7 introduced the international and domestic legal framework in which this phenomenon exists. This chapter provides a very brief overview of the business framework encompassing this phenomenon from which quantifiable business metrics may be obtained. In brief, this chapter introduces the business motivation for creating and/or sustaining this phenomenon and quantifies that motivation.

### Introduction

The most commonly documented business strategy has four phases. First, one plans for starting a business. Second, one starts a business. Third, one grows a business. Fourth, one exists as a business.<sup>676</sup> Each of these four phases is accomplished in different ways. However, these basic phases remain.<sup>677</sup>

The focus of this chapter is on growth. Growing a business is at the heart of any business plan and serves as a driving force within an MNE to expand into new markets. The Small Business Administration of the U.S. government provides the following 10 ways to grow a business.

**Open another location.** This is often the first way business owners approach growth. If you feel confident that your current business location is under control, consider expanding by opening a new location.

**Offer your business as a franchise or business opportunity.** Franchising your business will allow for growth without requiring you to manage the new location. This will help to maximize the time you spend improving your business in other ways, too.

**License your product.** This can be an effective, low-cost growth medium, particularly if you have a service product or branded product. Licensing also minimizes your risk and is low cost in comparison to the price of starting your own company to produce and sell your brand

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<sup>676</sup> See generally, <<http://www.business.gov.au/Howtoguides/Pages/default.aspx>> at 10 November 2011.

<sup>677</sup> See generally, <<http://www.sba.gov>> at 10 November 2011.

or product. To find a licensing partner, start by researching companies that provide products or services similar to yours.

**Form an alliance.** Aligning yourself with a similar type of business can be a powerful way to expand quickly.

**Diversify.** Diversifying is an excellent strategy for growth, because it allows you to have multiple streams of income that can often fill seasonal voids and, of course, increase sales and profit margins. Here are a few of the most common ways to diversify:

- Sell complementary products or services
- Teach adult education or other types of classes
- Import or export yours or others' products
- Become a paid speaker or columnist

**Target other markets.** Your current market is serving you well. Are there others? Probably. Use your imagination to determine what other markets could use your product.

**Win a government contract.** One of the best ways to grow your business is to win business from the government. Work with your local SBA and Small Business Development Center to help you determine the types of contracts available to you.

**Merge with or acquire another business.** Two is always bigger than one. Investigate companies that are similar to yours, or that have offerings that are complementary to yours, and consider the benefits of combining forces or acquiring the company.

**Expand globally.** To do this, you'll need a foreign distributor who can carry your product and resell it in their domestic markets. You can locate foreign distributors by scouring your city or state for a foreign company with a U.S. representative.

**Expand to the Internet.** Very often, customers discover a business through an online search engine. Be sure that your business has an online presence in order to maximize your exposure.<sup>678</sup>

As indicated above, after a business is established there are numerous ways to grow that business. The question is how does one determine the best course of action for growing a business given the above alternatives? In other words, how does one determine the risks/rewards trade-off. The Ansoff Matrix<sup>679</sup> was designed to aid in this determination.

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<sup>678</sup> U.S., *Ideas for Growing Your Business* (2011) Small Business Administration  
<<http://www.sba.gov/content/ideas-growing-your-business>> at 10 November 2011.

<sup>679</sup> H. Ansoff, *Corporate Strategy* (1988) Chapter 6.

## Ansoff's Matrix

The Ansoff Matrix is basically designed as a 2 x 2 square matrix. The matrix represents the condition of the market versus the condition of the product or service being sold. In either case, the condition of the market or product/service may be “existing” or “new.” Therefore, there are four distinct cases, as indicated in Table 21 below.

		Product/Service	
		Existing	New
Market	Existing	<p><b>Core Business</b> (Do What You Know)</p> <ol style="list-style-type: none"> <li>1. Continue – Do Nothing</li> <li>2. Withdraw – Close Down</li> <li>3. Consolidate – Defend Business</li> <li>4. Market Penetration</li> </ol>	<p><b>Product Development</b></p> <ol style="list-style-type: none"> <li>1. New Product/Service</li> <li>2. Improved Prod/Service</li> <li>3. Product Extension</li> <li>4. With Existing Capabilities</li> <li>5. With New Capabilities</li> <li>6. Beyond Current Expectations</li> </ol>
	New	<p><b>Market Development</b></p> <ol style="list-style-type: none"> <li>1. Expand To New Segments, Customers, Etc.</li> <li>2. Expand To New Territories</li> <li>3. New Uses For Product</li> <li>4. New Capabilities</li> <li>5. Beyond Current Expectations</li> </ol>	<p><b>Diversification</b></p> <ol style="list-style-type: none"> <li>1. Related</li> <li>2. Unrelated</li> </ol>

**Table 21: Ansoff's Matrix.**<sup>680</sup>

There are four distinct business strategy scenarios indicated in the above table. The most risky of the four strategies occurs when entering a new market with a new product. The least risky of the four strategies occurs when remaining in an existing market with an existing product. The other two alternatives have equal risk, assuming no other information is available regarding the new market or the new product. New markets, in the context of this thesis, mean foreign jurisdictions. Although Ansoff's Matrix provides business strategy alternatives, it does not provide an evaluation of the new markets from a business perspective. Such an evaluation is critical to the success MNEs' expansion into new markets. Governments, including the U.S., provide annual updates on the investment climate in various jurisdictions, i.e., potential new markets for MNE expansion. The U.S.'s position on foreign jurisdictions' investment climate is articulated below.

<sup>680</sup> Adapted from H. Ansoff, *Corporate Strategy* (1988) Chapter 6.

An important component of economic statecraft, investment climate statements provide U.S. firms with country-specific information and assessments prepared by our posts abroad on investment laws, measures, and other factors that may be useful to them in making business decisions. The Investment Climate Statements help identify the barriers and market distortions that too often deter U.S. investment, provide U.S. investors with the information they need to better assess business risks, and serve as a basis for engaging foreign governments on modernizing investment regimes. Prepared by Economic Officers at State Department posts overseas, ...<sup>681</sup>

The U.S. published a 2012 Investment Climate Statement<sup>682</sup> for a large number of countries.<sup>683</sup> The investment climate statements published by the U.S. have the following topical structure that addresses the most important and common business related topics.

- Openness to, and Restrictions on, Foreign Investment;
- Conversion and Transfer Policies;
- Expropriation and Compensation;
- Dispute Settlement;
- Performance Requirements and Incentives;
- Right to Private Ownership and Establishment;
- Protection of Property Rights;
- Transparency of the Regulatory System;
- Efficient Capital Markets and Portfolio Investment;
- Competition from State-Owned Enterprises; and
- Corporate Social Responsibility

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<sup>681</sup> U.S., *Investment Climate Statements* (2013) Department of State <<http://www.state.gov/e/eb/rls/othr/ics/>> at 8 April 2013.

<sup>682</sup> See generally, <<http://www.state.gov/e/eb/rls/othr/ics/2012/index.htm>> at 8 April 2013.

<sup>683</sup> The following countries are included in the Investment Climate Statements of 2012: Afghanistan, Albania, Algeria, Andorra, Angola, Antigua and Barbuda, Argentina, Armenia, Australia, Austria, Azerbaijan, The Bahamas, Bahrain, Bangladesh, Barbados, Belgium, Belize, Benin, Bermuda, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Brunei, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, Cape Verde, Central African Republic, Chad, Chile, China, Colombia, Democratic Republic of the Congo, Republic of the Congo, Costa Rica, Cote d'Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Eritrea, Estonia, Ethiopia, European Union, Fiji, Finland, France, Gabon, The Gambia, Georgia, Germany, Ghana, Greece, Guatemala, Guinea, Guyana, Honduras, Hong Kong, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Republic of Korea, Kosovo, Kuwait, Kyrgyz Republic, Laos, Latvia, Lebanon, Lesotho, Liberia, Lithuania, Macau, Macedonia, Madagascar, Malawi, Malaysia, Maldives, Mali, Malta, Marshall Islands, Mauritania, Mauritius, Mexico, Micronesia, Moldova, Monaco, Montenegro, Morocco, Mozambique, Namibia, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Rwanda, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Sao Tome and Principe, Saudi Arabia, Senegal, Serbia, Sierra Leone, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sudan, Suriname, Swaziland, Sweden, Switzerland, Taiwan, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, United Kingdom, Uruguay, Uzbekistan, Venezuela, Vietnam, West Bank and Gaza, Yemen, Zambia, and Zimbabwe.

The investment climate statements also include three indicators from international governance surveys: (1) Transparency International’s Corruption Perceptions Index,<sup>684</sup> (2) The Heritage Foundation’s Index of Economic Freedom,<sup>685</sup> and (3) The World Bank Doing Business rankings.<sup>686</sup>

	<b>Australia</b>	<b>Ireland</b>	<b>U.S.</b>
<b>Transparency International Corruption Rank 2012</b>	7 <sup>th</sup> (out of 176)	25 <sup>th</sup> (out of 176)	19 <sup>th</sup> (out of 176)
<b>Heritage Economic Freedom Rank 2013</b>	3 <sup>rd</sup> (out of 177)	11 <sup>th</sup> (out of 177)	10 <sup>th</sup> (out of 177)
<b>World Bank Doing Business Rank 2013</b>	10 <sup>th</sup> (out of 185)	15 <sup>th</sup> (out of 185)	4 <sup>th</sup> (out of 185)

**Table 22: Business Ratings By International Governance Surveys.**

Each of the three organizations, and the associated ranking system, referenced in the table above are noteworthy and deserve a brief introduction.

### **Transparency International**

Transparency International (‘TI’) is a global coalition against corruption that was founded in 1993.<sup>687</sup> TI is ‘a non-profit, non-governmental organisation dedicated to fighting corruption’<sup>688</sup> with activity in nearly 100 countries. TI is best known for TI’s ‘Corruption Perceptions Index, which measures levels of perceived corruption around the world.’<sup>689</sup> TI currently maintains country profiles on over 176 countries for the purpose of producing TI’s annual Corruption Perceptions Index. TI also successfully lobbies ‘to bring an end to the tax deductibility of bribe payments in OECD countries. This was written into the OECD Anti-Bribery Convention – the only international anti-corruption instrument that focuses on the supply side of bribery.’<sup>690</sup> Associated with TI’s OECD Anti-Bribery lobbying efforts, TI publishes an annual progress

<sup>684</sup> See generally, <<http://www.transparency.org/>> at 8 April 2013.

<sup>685</sup> See generally, <<http://www.heritage.org/index/>> at 8 April 2013.

<sup>686</sup> See generally, <<http://www.doingbusiness.org/>> at 8 April 2013.

<sup>687</sup> *What has Transparency International achieved?* (2013) Transparency International <[http://www.transparency.org/whoweare/organisation/faqs\\_on\\_transparency\\_international/2/](http://www.transparency.org/whoweare/organisation/faqs_on_transparency_international/2/)> at 8 April 2013.

<sup>688</sup> *What does Transparency International do?* (2013) Transparency International <[http://www.transparency.org/whoweare/organisation/faqs\\_on\\_transparency\\_international/2/](http://www.transparency.org/whoweare/organisation/faqs_on_transparency_international/2/)> at 8 April 2013.

<sup>689</sup> Ibid.

<sup>690</sup> Transparency International, above n 687.

report on OECD Member States' efforts to combat bribery. A recent report, *Exporting Corruption? Country Enforcement of the OECD Anti-Bribery Convention, Progress Report 2012*,<sup>691</sup> provides the following information concerning corruption and corrupt practices in the U.S., Australia and Ireland. The U.S. is actively engaged in the enforcement of bribery cases with the largest number of cases within the OECD Member States. However, TI ranks the U.S. in the 86<sup>th</sup> percentile for controlling corruption, generally. Australia has a moderate number of bribery cases and is ranked by TI in the 96<sup>th</sup> percentile for controlling corruption. Finally, TI considers Ireland to be a no enforcement OECD Member State with no active cases. However, TI ranks Ireland in the 93<sup>rd</sup> percentile for controlling corruption.

### **Heritage Economic Freedom**

'The Heritage Foundation is the nation's most broadly supported public policy research institute, with more than 710,000 individual, foundation and corporate donors.'<sup>692</sup> The Heritage Foundation ('Heritage') was founded in 1973. 'Heritage develops public policy solutions that advance free enterprise, limited government, individual freedom, traditional values and a strong national defense.'<sup>693</sup> Heritage is well known for the Index of Economic Freedom published annually by *The Wall Street Journal* and Heritage.<sup>694</sup> The Index is based on work developed in the late 1700s by a Scottish economist, Adam Smith.<sup>695</sup> Smith capsulized the motivation for Heritage's Index in the a quotation from his book, *The Wealth of Nations*.<sup>696</sup>

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<sup>691</sup> *Exporting Corruption? Country Enforcement of the OECD Anti-Bribery Convention, Progress Report 2012* (2012) Transparency International <[http://www.transparency.org/whatwedo/pub/exporting\\_corruption\\_country\\_enforcement\\_of\\_the\\_oecd\\_anti\\_bribery\\_conventio](http://www.transparency.org/whatwedo/pub/exporting_corruption_country_enforcement_of_the_oecd_anti_bribery_conventio)> at 8 April 2013.

<sup>692</sup> The Heritage Foundation and *The Wall Street Journal*, 'MARCH TOWARD ECONOMIC FREEDOM STALLS WITH ONLY TWO REGIONS IMPROVING, 19TH INDEX OF ECONOMIC FREEDOM SHOWS' (Press Release, 10 January 2013) 3 <<http://www.heritage.org/index/press-release-overview>> at 25 March 2013.

<sup>693</sup> Ibid.

<sup>694</sup> See generally, <<http://www.heritage.org/index/about#faqs>> at 8 April 2013.

<sup>695</sup> Ibid.

<sup>696</sup> Adam Smith, *An Inquiry Into The Nature And Causes Of The Wealth of Nations* (1776) 396.

That it was the spirit of monopoly which originally both invented and propagated this doctrine, cannot be doubted and they who first taught it, were by no means such fools as they who believed it. In every country it always is, and must be, the interest of the great body of the people, to buy whatever they want of those who sell it cheapest. The proposition is so very manifest, that it seems ridiculous to take any pains to prove it; nor could it ever have been called in question, had not the interested sophistry of merchants and manufacturers confounded the common sense of mankind. Their interest is, in this

Smith also provided insight into international trade. Smith posited the following maxim with regards to international trade.

There is not, probably, between any two countries, a trade which consists altogether in the exchange, either of native commodities on both sides, or of native commodities on one side, and of foreign goods on the other. Almost all countries exchange with one another, partly native and partly foreign goods. That country, however, in whose cargoes there is the greatest proportion of native, and the least of foreign goods, will always be the principal gainer.<sup>697</sup>

Heritage's Index incorporates the principles proffered by Smith into '10 freedoms – from property rights to entrepreneurship'<sup>698</sup> grouped into four categories: (1) Rule of Law (property rights, freedom from corruption), (2) Limited Government (fiscal freedom, government spending), (3) Regulatory Efficiency (business freedom, labour freedom, monetary freedom); and (4) Open Markets (trade freedom, investment freedom, financial freedom). These 10 freedoms are assigned 'a grade in each using a scale from 0 to 100, where 100 represents the maximum freedom.'<sup>699</sup> As indicated in Table 22, the Index of Economic Freedom indicates a country ranking within 177 countries. However, Heritage monitors a total of 185 countries. The countries of Afghanistan, Iraq, Kosovo, Libya, Liechtenstein, Somalia, Sudan, and Syria do not provide enough detail for Heritage to compute a complete ranking of these countries.

The twenty highest ranked countries in the Heritage Index are: (1) Hong Kong, (2) Singapore, (3) **Australia**, (4) New Zealand, (5) Switzerland, (6) Canada, (7) Chile, (8) Mauritius, (9) Denmark, (10) **U.S.**, (11) **Ireland**, (12) Bahrain, (13) Estonia, (14) United Kingdom, (15) Luxembourg, (16) Finland, (17) Netherlands, (18) Sweden, (19) Germany, and (20) Taiwan. While the twenty lowest ranked countries in the Index are: (158) Angola, (159) Ecuador, (160) Argentina, (161) Ukraine, (162) Uzbekistan, (163) Kiribati, (164) Chad, (165) Solomon Islands, (166) Timor-Leste,

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respect, directly opposite to that of the great body of the people. As it is the interest of the freemen of a corporation to hinder the rest of the inhabitants from employing any workmen but themselves; so it is the interest of the merchants and manufacturers of every country to secure to themselves the monopoly of the home market.

<sup>697</sup> Adam Smith, above n 696, 393.

<sup>698</sup> *How do you measure economic freedom?* (2013) The Heritage Foundation  
<<http://www.heritage.org/index/about#faqsat>> 8 April 2013.

<sup>699</sup> Ibid.

(167) Congo, Rep. of, (168) Iran, (169) Turkmenistan, (170) Equatorial Guinea, (171) Congo, Dem. Rep. of, (172) Burma, (173) Eritrea, (174) Venezuela, (175) Zimbabwe, (176) Cuba, and (177) North Korea.<sup>700</sup>

The quantitative value (percentage) Heritage uses to rank the 177 countries is 82.2%, 75.7% and 76.0% for Australia, Ireland and the U.S., respectively.<sup>701</sup>

## **World Bank Doing Business**

The World Bank established a Doing Business project in 2002.<sup>702</sup> ‘The Doing Business Project provides objective measures of business regulations and their enforcement across 185 economies and selected cities at the subnational and regional level.’<sup>703</sup> The methodology employed to rank the 185 economies is based on the average score obtained in ten specific areas, as indicated below.

The ease of doing business index ranks economies from 1 to 185. For each economy the ranking is calculated as the simple average of the percentile rankings on each of the 10 topics included in the index in *Doing Business 2013*: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency.<sup>704</sup>

The World Bank Doing Business rankings indicated in Table 22 above are referred to as the ‘Ease of Doing Business’ measure. Associated with this measure is the ‘Distance To Frontier (DTF)’ measure. ‘This measure illustrates the distance of an economy to the “frontier,” and the change in the measure over time shows the extent to which the economy has closed this gap.’ The frontier, referred to in the previous sentence, is ‘a score derived from the most efficient practice or highest score achieved on each of the component indicators in 9 *Doing Business* indicator sets (excluding the employing workers and getting electricity indicators) by any economy since 2005.’<sup>705</sup>

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<sup>700</sup> *2013 Index of Economic Freedom* (2013) The Heritage Foundation  
<<http://www.heritage.org/index/download>> at 8 April 2013.

<sup>701</sup> Ibid.

<sup>702</sup> *About Doing Business* (2013) <<http://www.doingbusiness.org/about-us>> at 8 April 2013.

<sup>703</sup> Ibid.

<sup>704</sup> World Bank, *Doing Business 2013* (2013) Doing Business Project , 131  
<<http://www.doingbusiness.org/~media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB13-Chapters/Ease-of-doing-business-and-distance-to-frontier.pdf>> at 8 April 2013.

<sup>705</sup> Ibid 133.

The twenty highest ranked economies in the World Bank Doing Business rankings are: (1) Singapore, (2) Hong Kong, (3) New Zealand, (4) **U.S.**, (5) Denmark, (6) Norway, (7) United Kingdom, (8) Republic of Korea, (9) Georgia, (10) **Australia**, (11) Finland, (12) Malaysia, (13) Sweden, (14) Iceland, (15) **Ireland**, (16) Taiwan, (17) Canada, (18) Thailand, (19) Mauritius, and (20) Germany. While the twenty lowest ranked countries in the rankings are: (164) Suriname, (165) Iraq, (166) Senegal, (167) Mauritania, (168) Afghanistan, (169) Timor-Leste, (170) Gabon, (171) Djibouti, (172) Angola, (173) Zimbabwe, (174) Haiti, (175) Benin, (176) Niger, (177) Côte d'Ivoire, (178) Guinea, (179) Guinea-Bissau, (180) Venezuela, (181) Congo, Democratic Republic, (182) Eritrea, (183) Congo, Republic, (184) Chad, and (185) Central African Republic.<sup>706</sup>

The DTF, associated with the 'Ease of Doing Business' rank of the 185 countries referred to above, as calculated by the World Bank Doing Business project is 84.3%, 80.7% and 84.6% for Australia,<sup>707</sup> Ireland<sup>708</sup> and the U.S.,<sup>709</sup> respectively.

The rankings provided in Table 22 and the associated percentages calculated for each jurisdiction are used in the computation of the business portion of the model developed in Chapter 10. Rankings, however, do not convey information related to the potential market size of the jurisdiction. A first approximation of a jurisdiction's potential market size may be calculated as the resident population of the jurisdiction. The resident population of a jurisdiction is obtained from one of the many annual UN publications. A more precise calculation of potential market size is calculated as the sum of the population of the jurisdictions that are signatories to a RTA.

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<sup>706</sup> *2013 Index of Economic Freedom* (2013) The Heritage Foundation  
<<http://www.heritage.org/index/download>> at 8 April 2013.

<sup>707</sup> World Bank Doing Business, *Doing Business 2013* (2013)  
<<http://www.doingbusiness.org/~media/giawb/doing%20business/documents/profiles/country/AUS.pdf>> at 8 April 2013.

<sup>708</sup> World Bank Doing Business, *Doing Business 2013* (2013)  
<<http://www.doingbusiness.org/~media/giawb/doing%20business/documents/profiles/country/IRL.pdf>>

<sup>709</sup> World Bank Doing Business, *Doing Business 2013* (2013)  
<<http://www.doingbusiness.org/~media/giawb/doing%20business/documents/profiles/country/USA.pdf>>

## Regional Communities and RTAs

Regional communities are formed for convenience of the Member States. That convenience may well be defined in terms of market expansion. Associated with regional communities are RTAs. The OECD indicates that over half of all trade is accomplished through RTAs, as indicated below.

Regional trade agreements (RTAs) cover more than half of international trade and operate alongside global multilateral agreements under the World Trade Organization (WTO). The first eleven years (1995-2005) of the WTO were paralleled by a tripling of RTAs officially notified to the WTO and in force, from 58 to 188\*.<sup>710</sup>

The WTO appears to agree with the OECD suggesting that RTAs have become a very popular instrument in international trade.

Regional Trade Agreements (RTAs) have become a very prominent feature of the Multilateral Trading System (MTS).

The surge in RTAs has continued unabated since the early 1990s. As of 15 May 2011, some 489 RTAs, counting goods and services notifications separately, have been notified to the GATT/WTO. Of these, 358 RTAs were notified under Article XXIV of the GATT 1947 or GATT 1994; 36 under the Enabling Clause; and 95 under Article V of the GATS. At that same date, 297 agreements were in force.<sup>711</sup>

Caroline Freund of the World Bank and Emanuel Ornelas of the London School of Economics indicate that for each WTO Member State the average number of RTAs that a Member State is a signatory to is 15 RTAs.<sup>712</sup> Smaller countries and LDCs continue to prefer negotiating RTAs rather than expending the costs to attempt WTO accession that may continue for years, as indicated below.

An important advantage of RTAs is that they can deliver faster market access benefits than the multilateral system. While a successful WTO round offers the greatest potential gains in reducing global tariffs - and the only means of eliminating significant trade distorting measures

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<sup>710</sup> OECD, *Regional Trade Agreements* (2011) OECD  
<[http://www.oecd.org/document/62/0,3746,en\\_2649\\_36442957\\_31839102\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/62/0,3746,en_2649_36442957_31839102_1_1_1_1,00.html)> at 10 November 2011.

<sup>711</sup> WTO, *Regional trade agreements* (2011) WTO  
<[http://www.wto.org/english/tratop\\_e/region\\_e/region\\_e.htm](http://www.wto.org/english/tratop_e/region_e/region_e.htm)> at 10 November 2011.

<sup>712</sup> Caroline Freund and Emanuel Ornelas, *Regional Trade Agreements* (2010) 2  
<<http://econ.worldbank.org>> at 10 November 2010.

such as agricultural subsidies - multilateral negotiations are invariably long and drawn-out affairs.<sup>713</sup>

With a tendency for smaller countries, and LDCs, to prefer a fast track RTA agreement there are concerns that unwanted consequences may arise. It is important to recall ‘that there are only 21 nation-states with more “financial muscle” than all the corporations participating in the global economy, and that nearly 30% of the 50 largest economic entities in the world are corporations.’<sup>714</sup> Furthermore, Wal-Mart Stores and General Electric were ranked as two of the largest economic entities in the world in 2005 at 22<sup>nd</sup> and 43<sup>rd</sup>, respectively.<sup>715</sup> Such large MNEs operate in much the same fashion as countries when attempting to expand to new markets. MNEs need for expansion causes MNEs to examine international treaties, such as RTAs, that may open new markets to the MNE. MNEs continued examination of international treaties in search of business opportunities is analogous to an attack on computer networks. The network is incessantly probed to find a flaw, a node that knowingly or unknowingly provides access to the entire network and its contents. So it is with MNEs. MNEs desire to expand into new markets on the most beneficial terms possible, i.e., through less or LDCs associated with larger regional communities.

The concept of LDCs providing access to regional community markets is developed further in Chapter 10.

## Summary

This chapter is the least complex chapter in the thesis because of its narrow focus on business activities associated with growth and market expansion. The highlights of this chapter are listed below.

- Introduced the four phases of business development
- Introduced 10 ways to grow a business
- Introduced the Ansoff Matrix
- Introduced three independent business climate indicators

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<sup>713</sup> Gavin Goh, *REGIONAL TRADE AGREEMENTS AND AUSTRALIA: A NATIONAL INTEREST PERSPECTIVE* (2006) 10 <[www.apec.org.au/docs/060503%20-%20RTA%20Goh.pdf](http://www.apec.org.au/docs/060503%20-%20RTA%20Goh.pdf)> at 10 November 2011.

<sup>714</sup> Boule, above n 324, 23.

<sup>715</sup> Boule, above n 324, 22.

- Correlated business growth with regional communities
- Introduced and discussed RTAs
- Suggested a parallel between MNEs and attacks on computer networks

## CHAPTER 9 – THE STRUCTURE OF JURISDICTIONAL ARBITRAGE

The objective of this chapter is to aggregate the seemingly disparate information from the previous chapters and develop a step-by-step model of corporate structure conducive to jurisdictional arbitrage. After doing so, the corporate structure of a U.S. MNE, Microsoft Corporation, is examined. Certain specific U.S. tax mechanisms such as CFCs and anti-deferral schemes are presented to the extent that they aid in the understanding of how and why the Microsoft Corporation's structure evolved. The examination of Microsoft Corporation's corporate structure provides insight into complex corporate structures and the rationale for such. Similar Australian MNE examples and tax mechanisms are available, however, difficulty exists in identifying an Australian MNE's corporate structure to the level provided in the Microsoft Corporation's example. Therefore, the Microsoft Corporation and U.S. tax law are significant components of this chapter.

### Introduction

Previous chapters introduced a phenomenon, jurisdictional arbitrage, involving cross-border patent royalties and proceeded to discuss the constituent components of this phenomenon, i.e., law, economics and business. This chapter distils the contents of those chapters into a set of common MNE behaviours. These common behaviours are used to create a structural model of the phenomenon followed by examples consistent with the empirical data collected. When it comes to complex structures and behaviours of MNEs, relatively brief and simple descriptive text is not adequate to describe them. 'One look is worth a thousand words'<sup>716</sup> as Frederick R. Barnard wrote in *Printer's Ink*<sup>717</sup> suggests the use of diagrams in these situations. Therefore, the salient points made in this chapter are made through diagrams. Descriptive text is used liberally to annotate the associated diagrams.

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<sup>716</sup> See generally, <[www.phrases.org.uk/meanings/a-picture-is-worth-a-thousand-words.html](http://www.phrases.org.uk/meanings/a-picture-is-worth-a-thousand-words.html)> at 9 April 2013.

<sup>717</sup> Frederick R. Barnard, *Printer's Ink* (1921).

## Step 1: Planning & Objectives

The first step in creating a tax-reduction structure for an MNE is to plan the restructuring, rather than to have an outside force, e.g., the revenue service, dictate one. This requires identifiable goals and objectives. In general, the planning phase of this step should include:

1. Identifying jurisdictions with the largest potential tax differentials;
2. Identifying other favourable laws relating to the MNE's business sector;
3. Identifying the laws in the identified jurisdictions relating to royalties, dividends and withholding tax;<sup>718</sup>
4. Identifying any jurisdiction-specific requirements with respect to the above, e.g., Ireland's definition of qualifying patent;<sup>719</sup>
5. Determining the jurisdictions' suitability and compatibility with the MNE's business model;
6. Determining if the jurisdictions are on 'white', 'grey' or 'black' lists;<sup>720</sup>
7. Determining if the jurisdictions are currently in violation of any tax treaties; and
8. Determining if the jurisdictions are currently negotiating new DTAs that will eliminate any current tax-favourable attraction.

The tax objectives of an MNE are largely determined by the results of the planning phase of this step. These objectives must be clear and concise, e.g., strategic tax reduction of 20% over the next five years. The objectives must also be associated with their inherent risks and costs. Actual numbers for these last two are not computable at this phase, but must be revised as more specificity is developed.

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<sup>718</sup> See generally, <<http://www.doingbusinessdutchcaribbean.com/>> at 9 April 2013; *Guide to doing Business in the Netherland Antilles* (2007) VanEps Kunneman VanDoorne, 23 <<http://www.ekvandoorne.com>> at 9 August 2007.

<sup>719</sup> *Finance Act 2006*, Number 6 of 2006 (2006) s 55 (1)(a).

'[A]nd the specified income is income from a **qualifying patent** in respect of an invention which was patented for bona fide commercial reasons and not primarily for the purpose of avoiding liability to taxation'. [Emphasis Added]

<sup>720</sup> Professor John Prebble, 'Controlled Foreign Company Regimes and Double Taxation' *Asia-Pacific Tax Bulletin* (January/February 2006) 3.

## Step 2: Functional Analysis

With the external research completed and the corporate objectives identified, the focus turns inward. An analysis of an MNE's IP holdings, development, functions, and revenues are investigated. In general, most MNEs' IP operations begin monolithically, as represented in Figure 17 below.



**Figure 17: Worldwide Monolithic MNE.**

Australian federal income taxes<sup>721</sup> and U.S. federal income taxes<sup>722</sup> are based on worldwide income. In general, these taxes include credits for foreign taxes paid. Neither Australia nor the U.S. has DTAs for the avoidance of double taxation with all countries, however. Most provinces and/or domestic states of an independent State impose their own domestic state tax on income. Domestic state taxes typically require a nexus between an MNE, or the service and products it provides, and the specific domestic state. A physical presence in a domestic state usually constitutes a sufficient nexus for the domestic state to assess the entity. Each domestic state taxes its share of an MNE's worldwide income. The determination of domestic state tax liability is typically based on an apportionment formula. Therefore, the MNE depicted in Figure 17 is assessed domestic state tax, in the resident domestic state of the MNE, on its entire worldwide income. This suggests that an MNE might wish to consider relocating some or all of its operations to a low-tax or no-tax state. In the U.S., for example, a domestic state, such as Nevada, serves this purpose.<sup>723</sup>

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<sup>721</sup> 26 CFR § 1.1-1.

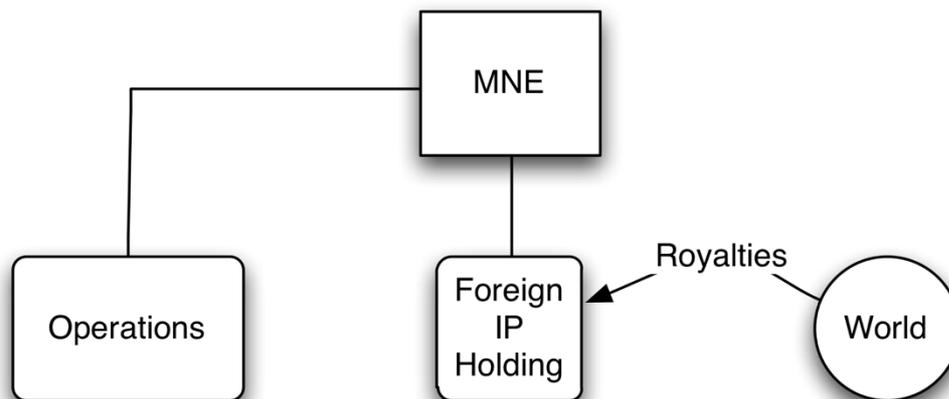
<sup>722</sup> *Income Tax Assessment Act 1997*, s 6.5(2).

<sup>723</sup> LexisNexis, *Tax Law* (2006)

<[www.lexisnexis.com/lawschool/learning/reference/pdf/2005/taxlaw5.pdf](http://www.lexisnexis.com/lawschool/learning/reference/pdf/2005/taxlaw5.pdf)> at 9 August 2007. 'Income Tax: the authority to tax comes from the 16th amendment of the U.S. Constitution. All citizens of the U.S. are subject to federal income tax in order to generate revenue for the federal budget, but not all citizens are subject to state income tax; e.g., Nevada has no state income.'

### Step 3: Functional Decomposition

The functional decomposition step comprises two specific phases. First, identify all IP functions within an MNE. Make sure to identify which portions relate to domestic business transactions and which portions relate to international business transactions. Second, isolate these IP functions within the corporate structure. Figure 18 below is an example of this process.



**Figure 18: Identify and Isolate IP Functions.**

As a prelude to relocating functions, discussed in the next section, an MNE limits its tax liability by separating its domestic operations from its international IP concerns. The ‘Foreign IP Holding’ box in Figure 18, a domestic entity holding foreign related IP of the MNE, serves this purpose. This is extremely important when considering relocation of these functions to different domestic states, and possibly to other countries. Again, this is primarily due to a domestic state tax differential that may exist between various domestic states. For example, if a U.S. MNE is resident in the states of Washington,<sup>724</sup> California,<sup>725</sup> Utah<sup>726</sup> or any US-MTC member;<sup>727</sup> then a significant domestic state tax applies to worldwide IP revenues related to that domestic state.<sup>728</sup>

<sup>724</sup> *State of Washington Tax Code* (2001) RCW 82.04.2907 <[apps.leg.wa.gov/RCW/default.aspx?cite=82.04.2907](http://apps.leg.wa.gov/RCW/default.aspx?cite=82.04.2907)> at 9 August 2007.

<sup>725</sup> *California Codes – Revenue and Taxation Code* (2007) section 25127.

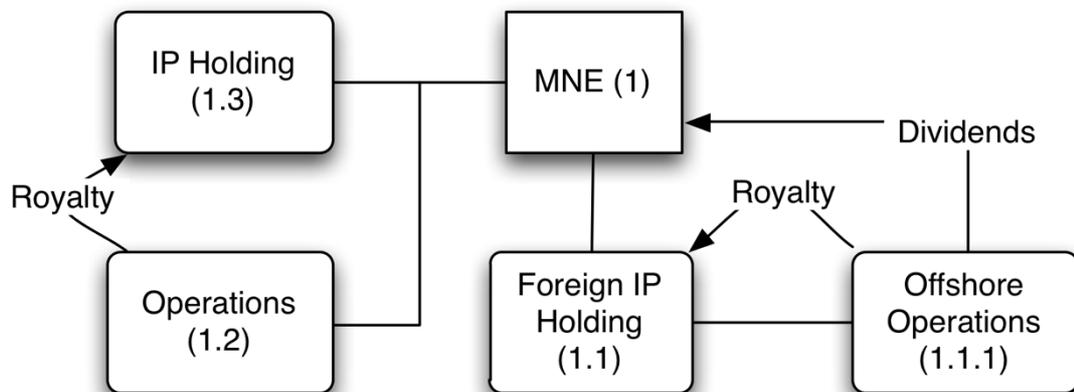
<sup>726</sup> *Utah State Tax Codes* (2007) section 59-7-310.

<sup>727</sup> *United States Multistate Tax Compact* (1967) Article IV <<http://www.mtc.gov/About.aspx?id=78>> at 9 August 2007.

<sup>728</sup> OECD, *OECD SCIENCE, TECHNOLOGY AND INDUSTRY OUTLOOK 2006* (2006) OECD Publications, 170.

#### Step 4: Function Relocation

Once the IP functions of an MNE are identified and isolated, then it is possible to relocate them to the most advantageous jurisdiction. This is accomplished in the following manner. First, relocate an MNE's foreign IP function (entity 1.1) to a low-tax or no-tax domestic state. This eliminates any domestic state tax with respect to the MNE's foreign royalties. Second, relocate the MNE's domestic operations (entity 1.2) to a low-tax or no-tax domestic state. This reduces the MNE's exposure to domestic state taxes, in general. Third, create and locate the MNE's domestic IP function (entity 1.3) to a low-tax or no-tax domestic state. This could also be accomplished by creating this entity with the domestic operations entity as its parent, but this is not represented in Figure 19. This potentially allows the MNE to benefit from any domestic state-specific incentives relating to R&D and its associated IP. Finally, establish a permanent establishment (entity 1.1.1) in a foreign jurisdiction selected as the MNE's foreign base of operations. Entity 1.1.1's parent is the MNE's domestic foreign IP function (entity 1.1). Therefore, 1.1.1, the foreign jurisdiction based entity, pays royalties back to its domestic parent, 1.1. It may also pay dividends to its domestic MNE, but these may be taxed at both the domestic state and federal levels. Figure 19 below depicts such an MNE's structure as defined in this step.



**Figure 19: Relocation of IP Functions - Domestic & International.**

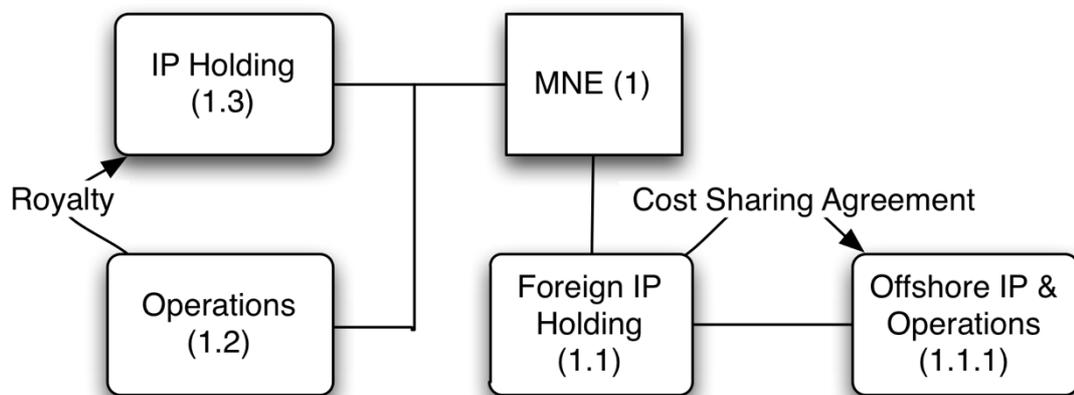
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'In general, countries in Europe, North America and East Asia treat patent royalties similarly in their tax codes: royalties received are treated as taxable income, which is taxed at the prevailing corporate income tax rates; expenses related to patenting, purchase of patents and payment of patent royalties are deductible from taxable business income and not taxed.'

## Step 5: Simple Entity Relationship

Figure 20 looks substantially similar to Figure 19. There is, however, a significant difference between the two. Entity 1.1.1 in Figure 19 does not own the IP that it uses. It has a license and pays royalties for the use of that IP. Through the use of a cost sharing agreement ('CSA') it is possible for both 1.1 and 1.1.1 to co-own the IP. As Michael J. McIntyre, a law professor at Wayne State University, stated: 'some corporate subsidiaries in tax-haven countries, like Singapore and the Netherlands, now directly finance research in the United States. So they own the patents without ever having to "buy" them from their American parents.'<sup>729</sup>

The figure below, Figure 20, depicts a co-ownership relationship, possibly with all derivative IP works owned by 1.1.1, where repatriation of royalties earned offshore does not occur (a deferral scheme). This type of structure, when dealing with intangible property like patents, is not sufficient to avoid U.S. taxation under 26 U.S.C. § 482.<sup>730</sup> Likewise, it is not sufficient to avoid the Australian and the U.S. controlled foreign corporations ('CFC's) taxation regimes. Importantly, both Australia and the U.S. actively target deferral schemes of this type.



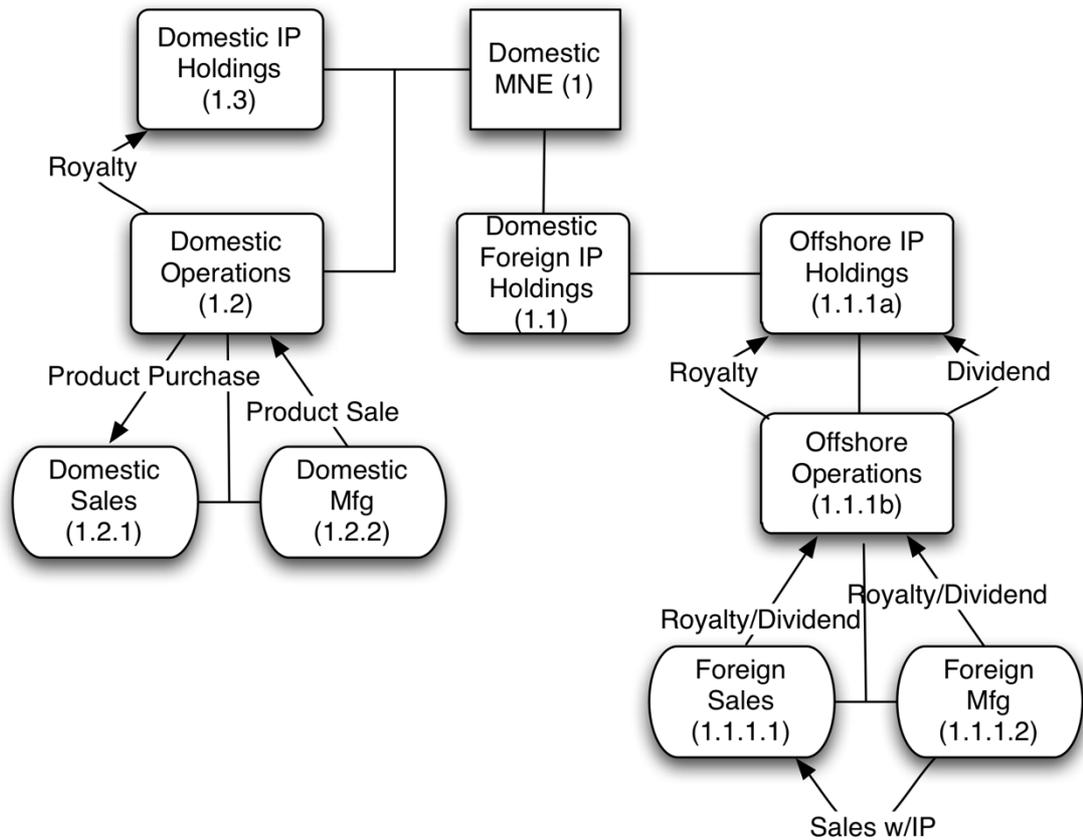
**Figure 20: Cross-Border Cost-Sharing Agreement (CSA).**

<sup>729</sup> Alex Berenson, above n 261.

<sup>730</sup> 26 U.S.C. § 482 (2005) *Methods to Determine Taxable Income in Connection With a Cost Sharing Arrangement*.

## Step 6: Advanced Entity Relationship

The deferral scheme depicted in Figure 20 is not sufficient to meet the requirements established by subpart F of the U.S. IRC or the Australian CFC regulations. In order to comply with subpart F, an MNE must perform something other than a passive function in the foreign jurisdiction, i.e., ‘[f]oreign personal holding company income shall not include rents and royalties’.<sup>731</sup> The ‘active conduct of a trade or business’ requirement of subpart F may be met by establishing a manufacturing function, as indicated in Figure 21 below.



**Figure 21: Cross-Border CSA with Subpart F Avoidance.**

Figure 21 depicts the changes required to transform the MNE’s foreign operations from one that (a) accepted IP developed and owned by the domestic company, and (b) repatriated foreign earnings through royalty and dividend payments (1.1.1 was able to deduct the royalty payments, but not the dividends) – Figure 19; to one that

<sup>731</sup> 26 U.S.C. §954(c)(2)(A).

‘Foreign personal holding company income shall not include rents and royalties which are derived in the active conduct of a trade or business and which are received from a person other than a related person (within the meaning of subsection (d)(3)).’

implemented a CSA – Figure 20. The CSA provides IP benefits within the foreign jurisdiction, but a downside exists. The royalty deduction afforded 1.1.1 was eliminated in this scheme. The CSA structure of Figure 20 is further transformed into the structure of Figure 21 primarily to comply with CFC regulations, necessary to avoid double taxation on the foreign earnings. An added benefit of the structure depicted in Figure 21 is that no royalties are charged 1.1.1.1 because the IP is in the transfer price of the goods sold to 1.1.1.1. This allows the value of the IP to be deducted because it is part of the cost of goods sold and no withholding tax is required.

Further refinements are easily made to the structure depicted in Figure 21 to gain additional tax benefits. For example, a foreign financing operation may be established in a low-tax or no-tax foreign jurisdiction that loans money to the foreign subsidiaries of the MNE. This allows interest deduction benefits to be used by various entities within the foreign structure, especially if they are located in higher tax jurisdictions than the financing entity.

### **A U.S. MNE Example**

Microsoft created an elaborate structure to reduce its tax liability, as previously discussed. How is it possible to understand the structure of such a large MNE? More specifically, what might be learned from Microsoft’s structure that may illuminate Microsoft’s tax-reduction scheme?

### **Microsoft’s Structure**

It is worthwhile analyzing what is known of Microsoft’s elaborate structure. The *Securities Exchange Act of 1934*<sup>732</sup> of the U.S. requires MNEs to file yearly reports with the U.S. Securities and Exchange Commission (‘SEC’). The *Securities Exchange Act of 1934* is also referred to as *15 U.S.C. §78(a)*.<sup>733</sup> These annual reports typically referred to as “Form 10-K’s”, serve many functions. One function is to represent to shareholders the health of the MNE. Another function is to describe the MNE’s purpose, management, and operational characteristics. Within this latter category is the description of the MNE’s legal structure, including subsidiaries of the

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<sup>732</sup> *Securities Exchange Act of 1934*, 48 Stat. 881 (June 6, 1934) §§13, 15(d).

<sup>733</sup> *15 U.S.C. §78(a)*.

MNE. It is through these subsidiaries that an understanding of Microsoft's tax-reduction scheme is found.

As of 30 June 2007, Microsoft Corporation lists the following significant subsidiaries:

#	Subsidiary	Location of Incorporation
1	Fidalgo Insurance Company	U.S.
2	Flat Island Company	Ireland
3	MACS Holdings Limited	Bermuda
4	Microsoft Asia Island Limited	Bermuda
5	Microsoft Capital Group, LP	U.S.
6	Microsoft (China) Company, Limited	China
7	Microsoft Company, Limited	Japan
8	Microsoft EMEA Cost Share, LLC	U.S.
9	Microsoft General Management Company	U.S.
10	Microsoft Global Finance	Ireland
11	Microsoft International BV	Netherlands
12	Microsoft Investments, Inc.	U.S.
13	Microsoft Ireland Capital	Ireland
14	Microsoft Ireland Operations Limited	Ireland
15	Microsoft Korea, Inc.	Korea
16	Microsoft Licensing, GP	U.S.
17	Microsoft Manufacturing BV	Netherlands
18	Microsoft Online, LP	U.S.
19	Microsoft Operations Pte Ltd	Singapore
20	Microsoft Operations Puerto Rico, LLC	Puerto Rico
21	Microsoft R-Holdings, Inc.	U.S.
22	Microsoft Regional Sales Corporation	U.S.
23	Microsoft T-Holdings, Inc.	U.S.
24	MOL Corporation	U.S.
25	Round Island One	Ireland

**Table 23: Microsoft Subsidiaries in June 2007.**<sup>734</sup>

The shaded regions of Table 23 above identify the twenty (20) Microsoft subsidiaries shared between Microsoft's 2006<sup>735</sup> and 2007<sup>736</sup> SEC 10-K filings. The following

<sup>734</sup> U.S., *Subsidiaries of the Company* (30 June 2007) Security and Exchange Commission <<http://sec.gov/Archives/edgar/data/789019/000119312507170817/dex21.htm>> at 9 April 2013.

<sup>735</sup> U.S., *Form 10-K -- Annual report [Section 13 and 15(d), not S-K Item 405]* (30 June 2006) Securities and Exchange Commission <<http://sec.gov/Archives/edgar/data/789019/000119312506180008/0001193125-06-180008-index.htm>> at 9 April 2013.

<sup>736</sup> U.S., *Form 10-K -- Annual report [Section 13 and 15(d), not S-K Item 405]* (30 June 2007) Securities and Exchange Commission <<http://sec.gov/Archives/edgar/data/789019/000119312507170817/0001193125-07-170817-index.htm>> at 9 April 2013.

table indicates the eight (8) subsidiaries present in 2006, but missing in 2007 from Microsoft's 2006 10-K filing.

#	Subsidiary	Location of Incorporation
1	Bagheera International Limited	British Virgin Islands
2	GraceMac Corporation	U.S.
3	Microsoft UKP Limited	United Kingdom
4	Microsoft Holdings V, Inc.	U.S.
5	Microsoft PF Holdings, BV	Netherlands
6	Microsoft Puerto Rico, Inc.	U.S.
7	Microsoft Development Center Copenhagen Aps	Denmark
8	Microsoft Treasury Inc.	U.S.

**Table 24: Microsoft Subsidiaries in June 2006 (Not Present in 2007).<sup>737</sup>**

There is much to be learned from the information (subsidiaries) contained in Microsoft's 2006 and 2007 SEC 10-K filings. First, in 2006 Microsoft listed the state within the U.S. where the subsidiary is resident.<sup>738</sup> The 2007 filings do not.<sup>739</sup> It is not surprising that this information was stripped from the filings considering the increased attention placed on transfer pricing at both the state and federal levels within the U.S. Second, it is no surprise that all references made to 'U.S.' in Microsoft's 2007 filing actually refer to the state of Nevada, with the exception of Fidalgo Insurance Company that is resident in the state of Vermont.<sup>740</sup> There are no state income taxes in Nevada, which makes Nevada a very business friendly state. Considering that some states levy a 10% or greater state income tax, the ability to eliminate state income taxes and directly improve profitability is significant. Third, in light of the modifications made to 26 U.S.C. § 482,<sup>741</sup> entry eight (8) in Table 24 emphasizes the need to totally isolate international cost-sharing agreements. Fourth, there is no mistake that Microsoft has created an elaborate structure of legal entities to

<sup>737</sup> U.S., *Subsidiaries of the Company* (30 June 2006) Security and Exchange Commission <<http://sec.gov/Archives/edgar/data/789019/000119312506180008/dex21.htm>> at 9 April 2013.

<sup>738</sup> Ibid.

<sup>739</sup> U.S., *Subsidiaries of the Company* (30 June 2007) Security and Exchange Commission <<http://sec.gov/Archives/edgar/data/789019/000119312507170817/dex21.htm>> at 9 April 2013.

<sup>740</sup> See, above n 737.

<sup>741</sup> 26 U.S.C. § 482 (2005) *Methods to Determine Taxable Income in Connection With a Cost Sharing Arrangement*.

take advantage of no-tax or low-tax jurisdictions at both the U.S. domestic level (Nevada) and the international level (Ireland, Netherlands, Bermuda and Singapore).

The exact details of the relationships between these legal entities are a Microsoft trade secret that goes to the heart of Microsoft's business and operating strategies. In fact, in recent years Microsoft changed its Irish entity to avoid public disclosure requirements associated with Microsoft's previous Irish entity.<sup>742</sup> By looking back to 2004, it is possible to determine the core legal structures involved in Microsoft's strategy. The following table indicates the seven (7) subsidiaries, all significant subsidiaries, present in Microsoft's 2004 SEC 10-K filing.<sup>743</sup>

#	Subsidiary	Location of Incorporation
5	Microsoft Capital Group, LP	Nevada
9	Microsoft General Management Company	Nevada
10	Microsoft Global Finance	Ireland
14	Microsoft Ireland Operations Limited	Ireland
16	Microsoft Licensing, GP	Nevada
23	Microsoft T-Holdings, Inc.	Nevada
25	Round Island One	Ireland

**Table 25: Microsoft Subsidiaries in June 2004.**<sup>744</sup>

Table 25 maintains the index numbers from Table 23 for ease of comparison. It appears that Table 25 represents the core elements of Microsoft's long-term U.S. tax liability reduction scheme. Table 25 also identifies the no-tax (Nevada) and low-tax (Ireland) jurisdictions that Microsoft has identified as being of most benefit in their scheme. From this core set of subsidiaries located in Nevada and Ireland in 2004, Microsoft developed its tax reduction structure into what is found in Table 23.

<sup>742</sup> Finfacts, *Microsoft to hide Irish Tax Haven data of subsidiaries that have saved it billions of dollars in US taxes* (2006) <[http://www.finfacts.com/irelandbusinessnews/publish/printer\\_1000article\\_10005150.shtml](http://www.finfacts.com/irelandbusinessnews/publish/printer_1000article_10005150.shtml)> at 4 July 2007.

<sup>743</sup> U.S., *Form 10-K -- Annual report [Section 13 and 15(d), not S-K Item 405]* (30 June 2004) Securities and Exchange Commission <<http://sec.gov/Archives/edgar/data/789019/000119312504150689/0001193125-04-150689-index.htm>> at 9 April 2013.

<sup>744</sup> U.S., *Subsidiaries of the Company* (30 June 2004) Security and Exchange Commission <<http://sec.gov/Archives/edgar/data/789019/000119312504150689/dex21.htm>> at 9 April 2013.

## Microsoft's Purpose

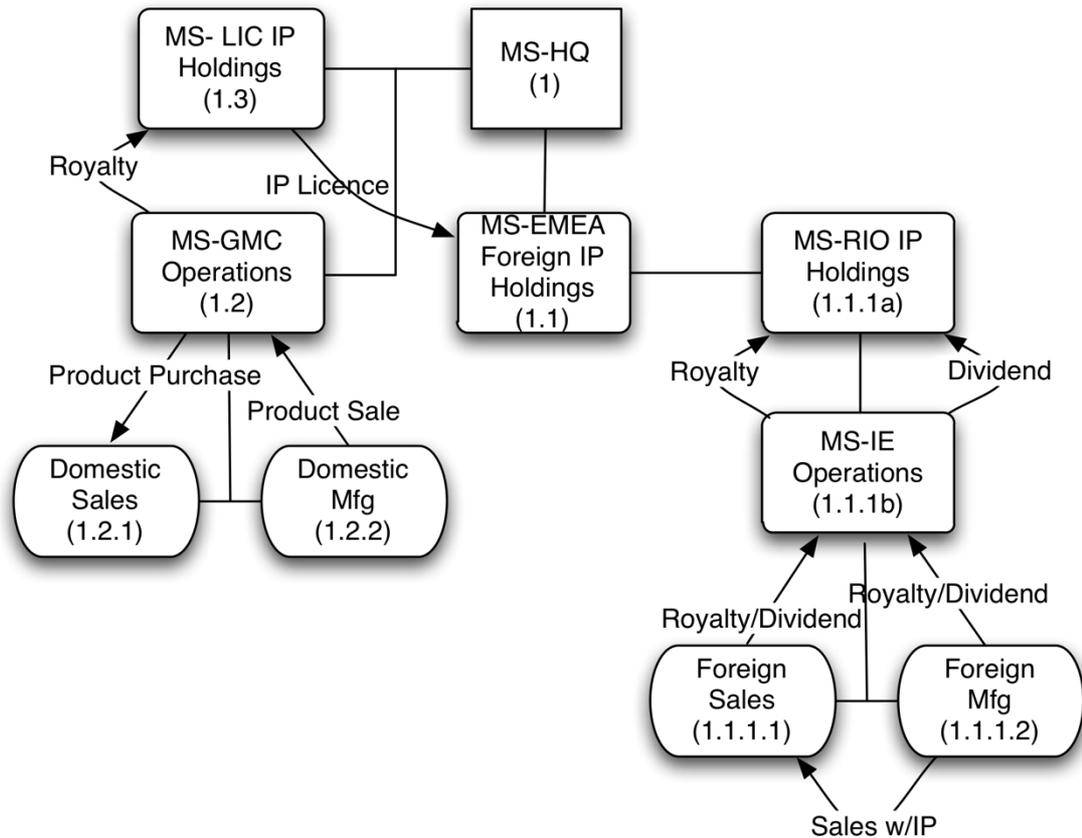
It is important to understand Microsoft's business. 'Licensing fees make up about three-fourths of Microsoft's nearly \$40 billion in annual revenue.'<sup>745</sup> These licensing fees are based on patents and copyrights. Thus, they are classified as royalties. Microsoft, headquartered in the State of Washington ('MS-HQ'), established an Irish subsidiary, Round Island One Ltd ('MS-RIO'). Round Island One Ltd is established in Ireland because of Ireland's tax-friendly laws, including a 12.5% corporate tax rate. The parent of Round Island One Ltd is not MS-HQ, as one might expect. Rather, the parent is another subsidiary, Microsoft EMEA Cost Share LLC ('MS-EMEA'), of MS-HQ established in Nevada.<sup>746</sup> A review of the previous discussion on Microsoft's structure suggests that MS-EMEA is entrusted with IP from Microsoft Licensing GP ('MS-LIC'). Figure 22 below, depicts Microsoft's cross-border structure that leverages the favourable Irish tax scheme described in a previous chapter.

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<sup>745</sup> Glenn R. Simpson, above n 118.

<sup>746</sup> Ibid.

'Within the U.S., the rights to many of Microsoft's products and copyrights are managed by a subsidiary in Nevada, which, unlike the company's headquarters State of Washington, doesn't tax royalty income on intellectual property.'



**Figure 22: Microsoft's International Structure For Tax Minimization.**

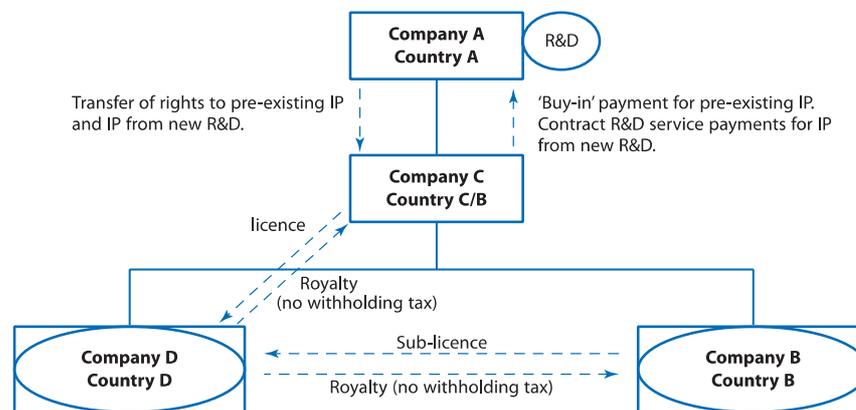
The purpose of the above structuring is to perform two separate functions, i.e., locate and isolate business functions from IP holdings. In this particular situation, MS-EMEA serves to locate Microsoft's IP portfolio in a no-tax state, Nevada. MS-EMEA's function as a parent to Round Island One Ltd is two-fold. First, it locates a Microsoft subsidiary in the low-tax jurisdiction of Ireland. Second, it establishes an ideal structural relationship within the same company (Microsoft) for moving Microsoft's IP holdings offshore. This is accomplished through agreements between MS-EMEA and Round Island One Ltd. Specifically, the arrangement is established as a qualified cost-sharing agreement ('QCSA') in 26 U.S.C. § 482 parlance. Finally, Round Island One Ltd distributes Microsoft products throughout EMEA, collecting royalties from each country, paying virtually no tax within those other countries<sup>747</sup> while paying Ireland's low-tax on earned profits.<sup>748</sup>

<sup>747</sup> Glenn R. Simpson, above n 118.

'Microsoft delivers its Windows products to European customers straight from Ireland, and the profits go straight back to Ireland. Since most of the profits from Microsoft programs are in the form of copyright licensing fees, "it is likely that low or nil taxes are payable in the other EU states,"

Microsoft, Round Island One Ltd, is extremely careful not to create permanent establishments (PEs) within the EU (with the exception of Ireland), and specifically within the United Kingdom.<sup>749</sup> This is essential to avoid falling within Article 7 (Business Profits) and Article 12 (Royalties) of the *OECD MTC*.<sup>750</sup> Couple the above structural analysis and purpose with the findings of Oxford Professor Michael Devereux and University of Warwick Professor Ben Lockwood<sup>751</sup> and it is easy to see why Microsoft Corporation selected Ireland as a partner in reducing Microsoft Corporation's U.S. royalty tax liability by over \$500 million annually.<sup>752</sup>

A structure surprisingly similar to that of Microsoft Corporation is provided in Annex C of the OECD's recent publication on tax base erosion and profit shifting, as depicted below.<sup>753</sup>



Source: OECD.

**Figure 23: OECD Tax Planning Structure.**

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[Emphasis Added] says John Ward, a tax professor at the University of Ulster in Belfast, Northern Ireland.'

<sup>748</sup> Ibid.

'Microsoft routes the license sales through Ireland and Round Island pays a total of just under \$17 million in taxes to about 20 other governments'.

<sup>749</sup> Ibid.

'To avoid U.K. corporate-profits tax, a company must show it has no "permanent establishment" in Britain through which it makes sales. Microsoft has a large U.K. operation (owned by Round Island) that it calls marketing and a tiny Ireland-based sales staff.'

<sup>750</sup> OECD, *ARTICLES OF THE OECD MODEL TAX CONVENTION ON INCOME AND ON CAPITAL*, OECD Publishing (29 April 2000) Articles 7 & 12 <www.oecd.org> at 10 April 2013.

<sup>751</sup> Michael Devereux and Ben Lockwood, above n 275.

<sup>752</sup> Glenn R. Simpson, above n 118.

<sup>753</sup> *Addressing Base Erosion and Profit Shifting*, above n 21, Annex C, 74.

Appendix III provides a detailed discussion of the OECD tax planning structure depicted above in Figure 23.

A scenario similar to Microsoft Corporation unfolded in Australia when the James Hardie company relocated overseas, initially to the Netherlands. One of the major motivating factors, aside from distancing itself from the Australian asbestos fund, was to reduce the company's U.S. tax liability on overall sales in the U.S. market, which accounted for approximately 75% of its net sales.<sup>754</sup> James Hardie relocated from the Netherlands to Ireland. The relocation was motivated by a 2006 revision of a tax treaty between the U.S. and the Netherlands. While 'the US Internal Revenue Service has been arguing that James Hardie does not qualify for the beneficial tax treatment,'<sup>755</sup> the company has been quoted as saying 'it prevailed in recent disputes with the IRS.'<sup>756</sup> The company stated that 'it does not want to face the prospect of continuing battles with the American authorities,'<sup>757</sup> and believes relocation from the Netherlands to Ireland will achieve the desired effect.

## Summary

This chapter aggregated information from anecdotal accounts of MNEs' behaviour, searches of MNEs' patent portfolios, examination and analysis of patent law in multiple jurisdictions, examination and analysis of taxation law in multiple jurisdictions, examination and analysis of treaties and their effects on MNEs engaged in patent related relocation, and corporate income tax filings; to understand jurisdictional arbitrage and create a structural model of an MNE exploiting this phenomenon. In brief, the highlights of this chapter are specified below.

- The creation of a structural model of jurisdictional arbitrage, as implemented by MNEs exploiting this phenomenon
- A detailed analysis and examination of the Microsoft Corporation's structure demonstrating consistency with the structural model developed in this chapter

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<sup>754</sup> ABC News Online, *James Hardie to try its luck in Ireland* (2009) <<http://www.abc.net.au/news/2009-06-24/james-hardie-to-try-its-luck-in-ireland/1330302>> at 10 September 2010.

<sup>755</sup> Ibid.

<sup>756</sup> Ibid.

<sup>757</sup> Ibid.

- An analysis of a hypothetical example employing the fundamental concepts of the structural model of this chapter, while paying particular attention to the U.S. and Irish taxation statutes to verify the efficacy of the structural model

## CHAPTER 10 – TRIPARTITE MODEL

Chapters 1 and 2 introduced the global phenomenon that is at the heart of this research. Chapters 3 through 7 introduced the legal aspects of this phenomenon, including a quantification of such terms as legal compatibility, legal complexity and legal compliance. The ability to quantify such abstract terms provides the basis of legal metrics that are required to develop a quantitative model of the phenomenon. Chapter 8 introduced the business aspects of the phenomenon. A quantification of the business aspects of the phenomenon was presented as three classes of independent business indicators. These indicators provide the basis of the business metrics required in this chapter's model. Finally, Chapter 9 developed the structure of corporations engaged in this phenomenon. A real world example was presented, which focused on the economics of the phenomenon. This chapter develops the law, business and economic metrics from the above information and creates a quantitative model based on these metrics.

### Introduction

The model, while deferring the definition of model for the moment, is a significant component of the scientific enquiry process.

It's a slow, painstaking business unlocking the secrets of the Universe. But occasionally an inspired individual makes sense out of confusion - and comes up with a theory or invention that changes the world and our understanding of how it works.<sup>758</sup>

Typically, the process of scientific enquiry (the scientific method<sup>759</sup>) complies with a hierarchy of well-defined characteristic steps, functions or processes, with model being one of these. The typical hierarchy is provided below.

- The Science
- The Method
- The Model

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<sup>758</sup> ABC Online, *Big Questions The Nature of Scientific Enquiry on ABC Schools TV* (2005) <<http://www.abc.net.au/schoolstv/BIGQUESTIONSTHENATUREOFSCIENTIFICENQUIRY.htm>> at 16 October 2011.

<sup>759</sup> Wikipedia, *Scientific Method* <[http://en.wikipedia.org/wiki/Scientific\\_method](http://en.wikipedia.org/wiki/Scientific_method)> at 12 July 2009.

- The Metrics
- The Analytics

The **science** or discipline in this study is a very narrow region where law intersects with both economics and business, as discussed in previous chapters. The **method** employed in this study is a quantitative method based on empirical data that facilitates a comparative analysis of the results. The comparative analysis referred to in comparative law studies is typically doctrinal research, not empirical research. Doctrinal research ‘is library-based, focusing on a reading and analysis of primary [such as legislation and case law] and secondary materials [such as legal dictionaries, textbooks, journal articles, case digests and legal encyclopedias]’.<sup>760</sup> Although doctrinal research ‘is regarded as the most accepted [legal] research paradigm’,<sup>761</sup> Ohlin,<sup>762</sup> Getman<sup>763</sup> and Teitelbaum<sup>764</sup> would most likely agree that an empirical approach that aids in quantification is best suited for this study. The **model** in this study conforms with definitions from both the Oxford English Reference Dictionary (second definition) – ‘a simplified (often mathematical) description of a system etc., to assist calculations and predictions’<sup>765</sup> – and Merriam-Webster’s Thesaurus – ‘something set or held before one for guidance or imitation.’<sup>766</sup> A simpler definition is a functional one, a series of steps and/or procedures used to describe a system in conformance with, and enabling, the specified method. The model, therefore, should advance the scientific enquiry from method to model thus providing a framework for obtaining results to complete the method. A model may be used to obtain results from the descriptions of various systems. This is accomplished by providing the model with a set of data that characterizes the specific system. This configuration data is typically referred to as a set of system-specific metrics. In this study, the **metrics** represent the empirical data of a specific jurisdiction regarding that jurisdiction’s legal, economic and business characteristics. Once the model is

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<sup>760</sup> Mike McConville and Wing Hong Chui, ‘Quantitative Legal Research’ in Mike McConville and Wing Hong Chui (eds), *Research Methods for Law* (Edinburgh University Press, 2007) 46, 47.

<sup>761</sup> Ibid.

<sup>762</sup> Ohlin, above n 83.

<sup>763</sup> Getman, above n 85.

<sup>764</sup> Teitelbaum, above n 3.

<sup>765</sup> Judy Pearsall and Bill Trumble (eds), *Oxford English Reference Dictionary* (2<sup>nd</sup> ed, 2003) 928.

<sup>766</sup> Merriam-Webster, Inc., *The Essential Thesaurus* (2004) 394.

configured from the supplied metrics then results from the model are obtained. The **analytics** dictate the use of the model and the interpretation of the resultant data from the model. The next chapter is devoted to the analytics in this study.

Models exist in the literature that provide insight into one or more aspects of this study. However, the inadequacies of current models found in the literature appear to stem from an attempt to model this complex behaviour based solely on single discipline models, such as tax law,<sup>767</sup> patent law,<sup>768</sup> or market size.<sup>769</sup> For example, Griffith, Miller and O’Connell from the UK’s Institute for Fiscal Studies created a model to aid the UK government in determining whether or not to institute a “Patent Box” in the UK.<sup>770</sup> The current UK proposal gradually reduces the tax rate on income from patents, and other intellectual property, from 28% to 10% beginning in 2013 and arriving at 10% in 2015. The UK proposal is designed to stem the tide of outflowing innovation from the UK. The referenced model focused on the reduced tax rate and attempted to determine what the effects would be if the proposal were made law. The referenced model is arguably the best econometric model regarding the location of patents and their associated taxation. Unfortunately, two major issues exist with the referenced model. First, many jurisdictions do not require patents to be located, or legally owned, in the jurisdiction to benefit from the reduced tax rates afforded intellectual property holders. Therefore, the notion of location and/or relocation of IP holdings has little or no meaning in these jurisdictions. Irish law, for example, defined a term referred to as a ‘qualifying patent’ that allows the exploitation of a patent located in another jurisdiction as long as Irish content is involved – meaning Irish labour and materials, as indicated below.

*"a qualifying patent"* means a *patent* in relation to which the research, planning, processing, experimenting, testing, devising, designing, developing or similar activity leading to the invention which is the subject of the patent was carried out in the State<sup>771</sup>

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<sup>767</sup> Rachel Griffith, Helen Miller and Martin O’Connell, above n 212.

<sup>768</sup> Golden, above n 39.

<sup>769</sup> James Bessen and Eric Maskin, above n 51.

<sup>770</sup> Rachel Griffith, Helen Miller and Martin O’Connell, above n 212.

<sup>771</sup> *Finance Act 1973* (1973) s 34(1).

Any patent from any jurisdiction, as indicated above, is termed a qualifying patent as long as the requisite research, testing, etc. is performed within Ireland. Belgium, Netherlands and Luxembourg currently provide ‘Patent Box’<sup>772</sup> income from patents that is taxed at substantially lower rates – Belgium 6.8% v. 34%, Netherlands 10% v. 25%, Luxembourg 5.9% v. 39%. Each of these jurisdictions follows a philosophy similar to that of Ireland regarding the legal ownership of patents and other intellectual property. The referenced model is based on data requiring the patent, legal ownership of the patent, be located in the specified jurisdiction, which distorts model results. Second, the referenced model is based on domestic corporate tax rates and domestic laws regarding income from CFCs.<sup>773</sup> CFC regimes are in place for many jurisdictions,<sup>774</sup> but not all.<sup>775</sup> Furthermore, motivation to locate patents in jurisdictions providing access to large markets is absent in the referenced model. Further complicating the referenced model is the lack of specificity regarding the flow of royalty income from an MNE’s portfolio of technology patents. Did the referenced model apportion the royal across the source jurisdiction of the royalty income, the destination jurisdiction of the royalty income, and the use jurisdiction of the technology patent or the headquarter jurisdiction of the MNE? This question emphasizes the inadequacies of current models, and illustrates some of the potential difficulties in properly accounting for royalty income from patents when viewed strictly as a source-destination proposition. The model, as presented below, addresses these issues.

### **Conceptualization**

The concept of law is typically described in terms of the attributes associated with law or the effects of law on society.<sup>776</sup> Seldom, if ever, does the conceptualization of law evoke a mental spatial image with well-defined axes. The model presented in this chapter formalizes a three-dimensional space with the three axes being law,

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<sup>772</sup> See generally, <[http://www.hm-treasury.gov.uk/consult\\_patent\\_box.htm](http://www.hm-treasury.gov.uk/consult_patent_box.htm)> at 16 October 2011.

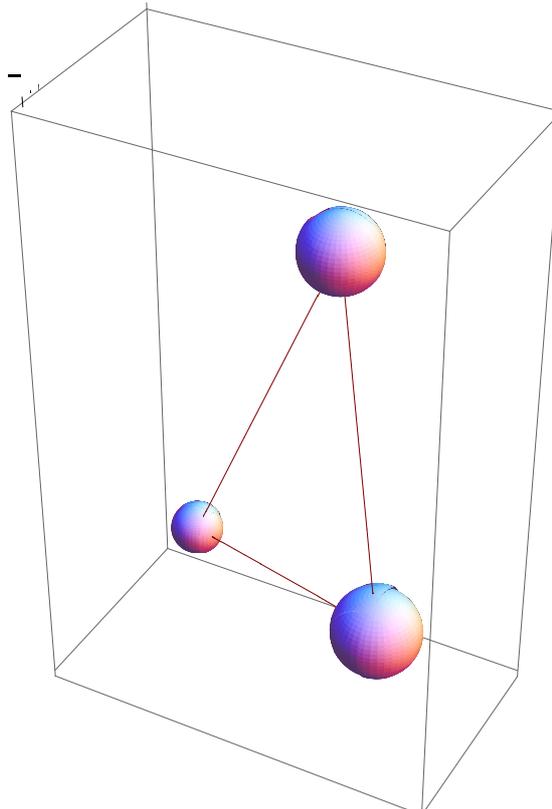
<sup>773</sup> Australia Taxation Office, Continued focus on international issues (1988) <<http://www.ato.gov.au/content/75052.htm>> at 16 October 2011.

<sup>774</sup> OECD, *Economic Effects of and Social Responses to Unfair Tax Practices and Tax Havens* (2000) <[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=PAC/AFF/LMP\(2000\)5&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=PAC/AFF/LMP(2000)5&docLanguage=En)> at 16 October 2011.

<sup>775</sup> OECD, *Towards Global Tax Co-operation* (2000) <<http://www.oecd.org/dataoecd/9/61/2090192.pdf>> at 16 October 2011.

<sup>776</sup> Reimann et al., above n 89, 342.

economics and business. Each jurisdiction examined in this study is represented as a point in this three-dimensional space with its position determined by its legal, economic and business characteristics (metrics). After conceptualizing such a three-dimensional space and populating that space with jurisdictions (j1, j2 and j3), it is possible to render that three-dimensional space visually. Figure 24 below depicts that space.



**Figure 24: Jurisdictions J1, J2 and J3 positioned in the three-dimensional space defined by Law, Economics and Business.**

The natural next step is to determine the relationships between the various jurisdictions. The most important of these relationships in this three-dimensional space is that of distance. Put another way, the notion of proximity, closeness or similarity is paramount in this study. For example, how close or similar is the law in jurisdictions J1 and J2? This question is answered by determining the distance between jurisdiction J1 and jurisdiction J2 on the legal axis of Figure 24, which appears to be 10. A similar relationship is formed by the following question. Are laws of jurisdictions J1 and J2 more similar than the laws of jurisdictions J1 and J3?

Again, the answer to this question is obtained by determining the distance, the conceptual distance, between the various jurisdictions.

### **Subtraction**

Subtraction is an operation that results in the difference of two items. Attorneys are well aware of the value of subtraction. For example, during contract negotiations draft contracts are passed from side to side. Of paramount importance in this process is the determination of what changes were made between the previous draft and the current draft. This determination is referred to as redlining, which is the result of a word processor subtracting one version of the draft from the other enabling the differences, the redlines, to be identified. Similarly, when the two items involved in the subtraction process are positions in a well-defined space then subtraction results in the distance between those two items.

### **Distance**

The notion of distance, as obtained through subtraction, may have many variations. The form of distance employed in this model is that of Euclidean Distance.<sup>777</sup> Euclidean Distance provides the geometric distance between two points in a Euclidean Space,<sup>778</sup> which is exactly what is depicted in Figure 24 – jurisdictions J1, J2 and J3 organized in a three-dimensional space with legal, economic and business axes. Furthermore, since J1, J2 and J3 are represented by their specific legal, economic and business characteristics, their respective positions in space, then the distance between any two points, such as J1 and J2, is determined by the following equation:

$$\text{Euclidean Distance} = \sqrt{(l_1 - l_2)^2 + (e_1 - e_2)^2 + (b_1 - b_2)^2}$$

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<sup>777</sup> Wikipedia, *Euclidean Distance* <[http://en.wikipedia.org/wiki/Euclidean\\_distance](http://en.wikipedia.org/wiki/Euclidean_distance)> at 16 October 2011.

‘Euclidean distance or Euclidean metric is the "ordinary" distance between two points that one would measure with a ruler, and is given by the Pythagorean formula.’

<sup>778</sup> Wikipedia, *Euclidean Space* <[http://en.wikipedia.org/wiki/Euclidean\\_space](http://en.wikipedia.org/wiki/Euclidean_space)> at 16 October 2011.

‘In mathematics, Euclidean space is the Euclidean plane and three-dimensional space of Euclidean geometry, as well as the generalizations of these notions to higher dimensions. The term “Euclidean” distinguishes these spaces from the curved spaces of non-Euclidean geometry and Einstein's general theory of relativity, and is named for the Greek mathematician Euclid of Alexandria.’

where, l represents the legal characteristics of the specified jurisdiction (the subscript), e represents the economic characteristics of the specified jurisdiction, and b represents the business characteristics of the specified jurisdiction – denoted as (l, e, b).

### **Legal Metrics**

The legal metrics that characterize a specific jurisdiction represent the distillation of the various legal characteristics, the legal empirical data, of a specific jurisdiction. Of significance in this study are the legal characteristics of both the patent laws and the taxation laws of the studied jurisdictions. Therefore, the legal metrics are divided into two groups: patent law metrics and taxation law metrics. Each of these two groups comprises a set of metrics specific to the designated group – patent law or taxation law. Each metric is presented and discussed below.

### **Number Of Legislated Patent Statute Words**

Many believe the counting of legislated words in statutes is less dignified than should be allowed in legal research papers. In contrast, Julius G. Getman, a Professor of Law at the University of Texas School of Law and a preeminent scholar in the field of labour law, where he pioneered empirical studies and continues to do extensive field work recognized that ‘[t]he amount of time one needs to invest to do [empirical] research is enormous compared to the amount of time one invests in writing traditional law review articles’.<sup>779</sup> Getman did, however, observe that ‘[m]any of my jurisprudentially minded colleagues think of it as rather low level.’<sup>780</sup> Warren Weaver and Claude Shannon, as Getman, would strongly disagree with the seemingly low level nature of empirical research.<sup>781</sup> Shannon, the father of modern information theory upon which our electronic world depends, proposed the concept of information entropy – the theoretical limit to how small an information source can become and still possess the entirety of the original message. What does entropy have to do with legal statutes? Legal statutes are the legal message communicated through written form and must be analyzed in that basic form. Weaver, while commenting on Shannon’s work, suggests the following:

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<sup>779</sup> Getman, above n 85.

<sup>780</sup> Ibid.

<sup>781</sup> Claude E. Shannon and Warren Weaver, *The Mathematical Theory of Communication* (1963).

The concept of information developed in this theory [Shannon's] at first seems disappointing and bizarre – disappointing because it has nothing to do with the meaning, and bizarre because it deals not with a single message [a statute] but rather with the statistical character of a whole ensemble of messages, bizarre also because in these statistical terms the two words *information* and *uncertainty* find themselves to be partners.

I think, however, that these should only be temporary reactions; and that one should say, at the end, that this analysis has so penetratingly cleared the air that one is now, perhaps for the first time, ready for a real theory of meaning.<sup>782</sup>

Therefore, we perform the mundane to illuminate the astonishing.

The first of the legal metrics required by the model is the number of legislated words comprising the jurisdiction's patent law. The number of legislated words in the various jurisdictions' patent laws is provided in Table 26 below.

	<b>Australia</b> <sup>783</sup>	<b>Ireland</b> <sup>784</sup>	<b>U.S.</b> <sup>785</sup>
<b># of Words</b>	51,469	48,382	59,971

**Table 26: Number of Legislated Words in the Patent Law (by Jurisdiction).**

The values in Table 26 were not obtained using the embedded word counting mechanism of the word processor. The word counting mechanism built into word processors indiscriminately counts words. Therefore, words comprising commentary are counted equally with words comprising sections of statutes. In order to avoid this situation, the word processor was augmented with a statute aware counting mechanism.

### **Number of Legislated Patent Statute Sections**

The second legal metric required by the model is the number of legislated sections comprising the jurisdiction's patent law. The number of legislated sections in the various jurisdictions' patent laws is provided in Table 27 below.

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<sup>782</sup> Ibid 27.

<sup>783</sup> *Patents Act 1990* (Cth).

<sup>784</sup> *Patents Act 1992*.

<sup>785</sup> Title 35 – 35 *U.S.C.*

	<b>Australia</b> <sup>786</sup>	<b>Ireland</b> <sup>787</sup>	<b>U.S.</b> <sup>788</sup>
<b># of Sections</b>	268	132	148

**Table 27: Number of Legislated Sections in The Patent Law (by Jurisdiction).**

Utilizing the word counting capability previously discussed and a mechanism capable of determining the start and end points of a section within the designated jurisdiction's patent statute, the values contained in Table 27 above were obtained. This section aware mechanism augmented the word processor's native capabilities and the statute aware features described above. One seemingly inconsequential observation appears to be the lack of a standard format for legal statutes across jurisdictions. In a rapidly globalizing world where WTO Member States are required to publish their laws and regulations<sup>789</sup> one might expect a uniform standard format for such legal documents. The lack of standard formats for jurisdiction specific statutes greatly impedes the progress of quantitative research efforts and significantly increased the effort required in this investigation.

#### **Number of Ratified Patent Treaties**

Chapter 4 introduced and discussed the WIPO managed intellectual property treaties. Of the 14 treaties related to patents, as described in that chapter, Table 28 indicates the number ratified by each of the jurisdictions in this study.

	<b>Australia</b> <sup>790</sup>	<b>Ireland</b> <sup>791</sup>	<b>U.S.</b> <sup>792</sup>
<b># of Treaties</b>	12	12	11

**Table 28: Number of Patent Treaties Ratified (by Jurisdiction).**

<sup>786</sup> *Patents Act 1990* (Cth).

<sup>787</sup> *Patents Act 1992*.

<sup>788</sup> Title 35 – 35 *U.S.C.*

<sup>789</sup> *The General Agreement on Tariffs and Trade 1994* (1994) Art. X (1).

'Laws, regulations, judicial decisions and administrative rulings of general application, made effective by any contracting party, pertaining to the classification or the valuation of products for customs purposes, or to rates of duty, taxes or other charges, or to requirements, restrictions or prohibitions on imports or exports or on the transfer of payments therefor, or affecting their sale, distribution, transportation, insurance, warehousing inspection, exhibition, processing, mixing or other use, shall be published promptly in such a manner as to enable governments and traders to become acquainted with them.'

<sup>790</sup> WIPO, *Summary Table of Membership of the World Intellectual Property Organization (WIPO) and the Treaties Administered by WIPO, plus UPOV, WTO and UN* (2010) WIPO <<http://www.wipo.int/treaties/en/summary.jsp>> at 4 July 2011.

<sup>791</sup> *Ibid.*

<sup>792</sup> *Ibid.*

Chapter 4 described that WTO Member States accepted an obligation to make their domestic law conform to the precepts articulated in, at a minimum, the WIPO managed *TRIPS Agreement*. Other WIPO managed treaties further obligated the signatories to make their domestic patent law conforming. What can the metrics tell us about the effect of the WIPO managed treaties on the researched jurisdictions? By adding up the number of legislated words in the three jurisdictions and then dividing each of the jurisdiction's number of legislated words by the total number of words the following percentages are produced: Australia: 32.2%, Ireland: 30.3% and U.S.: 37.5% of the total legislated patent law words. These are quite astonishing percentages when considering the dramatic variations in the jurisdictions' domestic characteristics, i.e., population, economy and similar characteristics. Basically, the mundane metrics coupled with an averaging process indicates that there is only 7% variation in the total size of the separate jurisdictions' patent laws. The significance of this statement becomes more apparent in just a few paragraphs.

#### **Number of Legislated Taxation Statute Words**

The fourth legal metric, and first of the metrics from the taxation group of metrics, required by the model is the number of legislated words comprising the jurisdiction's taxation law. The number of legislated words in the various jurisdictions' taxation law is provided in Table 29 below.

	<b>Australia</b> <sup>793</sup>	<b>Ireland</b> <sup>794</sup>	<b>U.S.</b> <sup>795</sup>
<b># of Words</b>	1,332,103	857,773	2,336,696

**Table 29: Number of Legislated Words in the Income Taxation Law (by Jurisdiction).**

Obtaining the values in Table 29 was similar to obtaining the number of legislated words in patent law. However, both the size and format of the taxation law differed somewhat from that encountered in the patent law. Modifications to the statute detection mechanism, previously discussed, were made to obtain the above values.

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<sup>793</sup> *ITAA 1997*.

<sup>794</sup> *TCA 1997*.

<sup>795</sup> Title 26 – 26 *U.S.C.*, also referred to as the United States Internal Revenue Code – U.S. IRC.

## Number of Legislated Taxation Statute Sections

The fifth legal metric required by the model is the number of legislated sections comprising the jurisdiction's patent statute. The number of legislated sections in the various jurisdictions' patent law is provided in Table 30 below.

	<b>Australia</b> <sup>796</sup>	<b>Ireland</b> <sup>797</sup>	<b>U.S.</b> <sup>798</sup>
<b># of Sections</b>	3,818	1,104	1,875

**Table 30: Number of Legislated Sections in the Income Taxation Law (by Jurisdiction).**

The values in Table 30 were obtained in a similar fashion to the values representing the number of legislated sections in patent law. The process of obtaining these values was hampered in a similar fashion as described above. Both the size and format of the taxation law sections differed from that of the patent law. Modifications to the section aware mechanism, previously discussed, were made to resolve these issues and obtain the above values. An interesting observation concerns the relatively large number of Australian tax law sections with respect to the other jurisdictions. Section 55 of the *Commonwealth of Australia Constitution Act*,<sup>799</sup> as presented below, may provide insight into this conundrum.

Laws imposing taxation shall deal only with the imposition of taxation, and any provision therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.<sup>800</sup>

When interpreted correctly, section 55 of the *Commonwealth of Australia Constitution Act* requires a section of the taxation law to address the imposition of a tax and another section to define the amount of the tax levied. Therefore, Australian taxation law should exhibit nearly twice the number of sections as would be expected, which appears to be the case, as indicated in Table 30 above.

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<sup>796</sup> *ITAA 1997*.

<sup>797</sup> *TCA 1997*.

<sup>798</sup> Title 26 – 26 *U.S.C.*, also referred to as the United States Internal Revenue Code – U.S. IRC.

<sup>799</sup> *Commonwealth of Australia Constitution Act* (Cth) (1900).

<sup>800</sup> *Commonwealth of Australia Constitution Act* (Cth) (1900) s 55.

## Number of Ratified Taxation Treaties

Chapter 5 introduced and discussed the jurisdiction specific taxation treaties. As indicated by the values in Table 31 below, there are considerably more ratified taxation treaties than ratified patent treaties for each of the three jurisdictions.

	<b>Australia</b> <sup>801</sup>	<b>Ireland</b> <sup>802</sup>	<b>U.S.</b> <sup>803</sup>
<b># of Treaties</b>	45	62	58

**Table 31: Number of Tax Treaties Ratified (by Jurisdiction).**

One might assume that with a larger number of ratified taxation treaties than ratified patent treaties, the variance in the domestic taxation law would decrease proportionally. However, performing the same procedure as described using the number of legislated words of patent law only substituting the number of legislated words of taxation law provides the following percentages: 29.4%, Ireland: 18.9% and U.S.: 51.6% of the total legislated taxation law words. As astonishing as a 33% variation is, does not compare to the fact that a simple calculation on mundane metrics proves that taxation treaties are merely tax relief instruments and not tax normalization instruments. In brief, patent treaties require core domestic patent laws to conform, whereas taxation treaties avoid core domestic taxation items, such as levies. The core domestic taxation issues remain the sovereign domain of the jurisdiction. It is interesting that a simple calculation is capable of illuminating such a deep seeded principle of taxation law. The significance of the above patent metrics calculation, revealing the harmonizing effect of the WIPO managed treaties, should be evidence enough to rebut Getman's colleagues that 'do not believe that empirical research requires the type of intellect necessary, for example to develop a model of human rights ...',<sup>804</sup>

## Composite Legal Metric

Having described the six metrics constituting the legal metric, it is possible to now aggregate the six metrics into a single legal metric in the following manner. First, the three patent law metrics are combined, as indicated below.

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<sup>801</sup> *Australian Tax Treaties*, above n 337.

<sup>802</sup> *Tax Treaties*, above n 338.

<sup>803</sup> *United States Income Tax Treaties - A to Z*, above n 339.

<sup>804</sup> Getman, above n 85.

$$pLawMetric_{i,j} = ((\#Words_i - \#Words_j)^2 + (\#Sections_i - \#Sections_j)^2 + (\#Treaties_i - \#Treaties_j)^2)$$

Second, a similar calculation is performed to produce the aggregation of the taxation metrics, as indicated below.

$$tLawMetric_{i,j} = ((\#Words_i - \#Words_j)^2 + (\#Sections_i - \#Sections_j)^2 + (\#Treaties_i - \#Treaties_j)^2)$$

Finally, the legal metric defining the legal distance between any two jurisdictions (i and j) in the legal, economic and business space is calculated, as indicated below.

$$LegalMetric_{i,j} = \sqrt{a * pLawMetric_{i,j} + b * tLawMetric_{i,j}}$$

The introduction of the coefficients a and b into the equation allows the asymmetrical weighting of the patent law metrics and the taxation law metrics. This becomes useful when dealing strictly with WTO members where there is little variation between the patent law metrics, i.e., they may be virtually removed from the equation.

### **Economic Metrics**

The economic metrics of a particular jurisdiction provide valuable insight into a jurisdiction's size and financial capabilities. Crudely put, economic metrics tell "how big one's house is" and "what type of car one drives" only on a vastly different scale. The importance of such information is critical because patents relate to products and products are not purchased if the population does not have the resources to purchase the products. The following three metrics were selected to achieve, in principle, the goal of accurately assessing a jurisdiction's potential for generating patent royalty income.

### **GDP**

GDP is an indicator of the amount of products produced in a jurisdiction. This should not be confused with a jurisdiction's level of imports and exports. The level of jurisdictional imports and exports may allow one to determine trade balances, but do

not provide insight into whether or not a jurisdiction is amenable to patented product production. A jurisdiction's GDP is a rough indicator of the jurisdiction's acceptance of such patent related activities, as indicated in Table 32 below.

	<b>Australia</b> <sup>805</sup>	<b>Ireland</b> <sup>806</sup>	<b>U.S.</b> <sup>807</sup>
<b>GDP</b>	USD 1.24T	USD 204.30B	USD 14.6T

**Table 32: Gross National Product (GDP) (by Jurisdiction).**

A jurisdiction's GDP is often used to compute a GDP per capita value as an indicator of the relative wealth of the jurisdiction. In this study, a similarly important indicator is the acceptance level of a jurisdiction to an outside entity. The following section addresses this issue.

### **Inward Foreign Direct Investment**

Inward Foreign Direct Investment (FDI) is an indicator of foreign entities' level of confidence and potential opportunity in a jurisdiction. A jurisdiction's FDI may also indicate whether the jurisdiction's domestic economy is closed to foreign investors. Table 33 indicates the inward FDI for the specified jurisdictions, as indicated below.

	<b>Australia</b> <sup>808</sup>	<b>Ireland</b> <sup>809</sup>	<b>U.S.</b> <sup>810</sup>
<b>FDI</b>	USD 447.1B	USD 2.53T	USD 2.58T

**Table 33: Inward Foreign Direct Investment (FDI) (by Jurisdiction).**

Utilizing the values provided from Table 33, FDI as a percentage of jurisdiction GDP produced the following: Australia = 36.05%, Ireland = 1,238.37% and U.S. = 17.67%. Arguably, these percentages indicate that Ireland is a significant magnet for foreign investment. This supports the examples presented in previous chapters and suggests that FDI is a very important economic metric for inclusion in this model.

<sup>805</sup> *Statistical Yearbook – 54<sup>th</sup> Issue*, above n 357, 143.

<sup>806</sup> *Ibid* 150.

<sup>807</sup> *Ibid* 159.

<sup>808</sup> United Nations, *UNCTAD Handbook of Statistics 2010* (2010) United Nations Conference On Trade And Development, 422  
<<http://www.unctad.org/Templates/webflyer.asp?docid=14293&intItemID=5771&lang=1&mode=downloads>> at 5 November 2011.

<sup>809</sup> *Ibid*.

<sup>810</sup> *Ibid*.

## Population

Population is the ultimate indicator, or some derivative thereof, when discussing markets. In this study, a jurisdiction's market size or market potential is derived from that jurisdiction's population. Population is, therefore, of great importance and must be included in the model. The population for each of the studied jurisdictions is provided in Table 34 below.

	<b>Australia</b> <sup>811</sup>	<b>Ireland</b> <sup>812</sup>	<b>U.S.</b> <sup>813</sup>
<b>Population</b>	21,770,000	4,670,000	313,232,000

**Table 34: Domestic Population (by Jurisdiction).**

From the relative magnitudes of the populations provided in Table 34, if taken alone, the only market would be that of the U.S. However, the phenomenon described throughout this thesis indicates a very strong attraction to the jurisdiction with the smallest population – just 1.5% of the population of the most populated jurisdiction. Therefore, care must be taken when incorporating a value that differs by multiple orders of magnitude across the jurisdictions under study.

## Composite Economic Metric

An aggregated economic metric is computed in a similar fashion to the computation performed to obtain the legal metric. First, the three economic metrics are combined, as indicated below.

$$eMetric_{i,j} = (c * (GDP_i - GDP_j)^2 + d * (FDI_i - FDI_j)^2 + e * (POP_i - POP_j)^2)$$

Next, the economic metric defining the economic distance between any two jurisdictions (i and j) in the legal, economic and business space is calculated, as indicated below.

$$EconomicMetric_{i,j} = \sqrt{eMetric_{i,j}}$$

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<sup>811</sup> *Statistical Yearbook – 54<sup>th</sup> Issue*, above n 357.

<sup>812</sup> *Ibid* 30.

<sup>813</sup> *Ibid* 26.

The introduction of the coefficients c, d and e into the equation allows scaling of the values. Scaling is necessary to avoid the relative magnitude of GDP or population to dominate the value of the aggregated economic metric.

## Business Metrics

The business metrics in the model appear to be an odd lot with seemingly nothing in common. Closer inspection, however, reveals that these three metrics represent age-old business fundamentals – number of patents represents product development, opportunity represents product marketing, and tax rate represents product costs and overhead. Viewed in these terms, the three selected business metrics appear to deserve inclusion into the model.

## Corporate Tax Rate

Corporate tax rates have consumed a considerable amount of Chapters 1, 2, 8 and 9. The literature is replete with example after example touting the level of corporate tax rates as either a daemon or a saviour. The magnitude of participation corporate tax rate plays in jurisdictional arbitrage cannot be determined without proper analysis. Therefore, inclusion of corporate tax rate in the model is mandatory and may prove instrumental in confirming or debunking current theories proffered in the literature. Table 35 below provides the statutory corporate tax rates for the indicated jurisdictions.

	<b>Australia</b> <sup>814</sup>	<b>Ireland</b> <sup>815</sup>	<b>U.S.</b> <sup>816</sup>
<b>Tax Rate (Corp)</b>	30%	12.5%	39%

**Table 35: Corporate Income Tax Rate (by Jurisdiction).**

An example of how important corporate tax rates are viewed in the literature was provided in the introductory section of this chapter. In that example, corporate tax rate was the focal point of the research and attempts were made to determine in which jurisdictions patents would be located if changes occurred to the corporate tax rate.<sup>817</sup> Marco Fantini, quantitative analyst of taxation and section head of the European

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<sup>814</sup> *ITAA 1997.*

<sup>815</sup> *TCA 1997.*

<sup>816</sup> *26 U.S.C. § 1(a) – (e) and § 1(i)(2).*

<sup>817</sup> Rachel Griffith, Helen Miller and Martin O’Connell, above n 212.

Commission' Taxation and Customs Union in a presentation on the Taxation Trends Report for 2011 noted a sharp decline in corporate tax rates, nearly 14%, in response to the GFC.<sup>818</sup> Curiously, the sharp decline in corporate tax rates was intended to stimulate growth even as GDP plummeted and tax revenues dwindled.

### Opportunity Size

The previous section referred to a study that attempted to correlate the change, or level thereof, in corporate tax rates with where patents are located. Arguably, corporate tax rates are viewed in the literature as a major component of an MNE's decision-making process. This, however, is not the only component of an MNE's decision-making process. A SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis is an industry standard approach to ongoing business endeavours.<sup>819</sup> Regarding this study, the opportunities portion of the SWOT analysis provides justification for inclusion of opportunity in the model. Table 36 indicates the opportunity in terms of dollar value for each jurisdiction, as indicated below.

	<b>Australia</b>	<b>Ireland</b>	<b>U.S.</b>
<b>Opportunity</b>	USD 12.4B	USD 2.04B	USD 146.00B

**Table 36: Business Opportunity or Potential (by Jurisdiction).**

The obvious question Table 36 evokes is where did these numbers come from? A 2008 research project conducted for the European Commission regarding the value of patents in today's society determined that '[t]he aggregate value of patents is around 1% of GDP for EU-8.'<sup>820</sup> EU-8 comprises the European countries of Denmark, France, Germany, Hungary, Italy, the Netherlands, Spain and the UK.<sup>821</sup> The OECD provides similar data for a much larger group of countries supporting the value of patents at around the 1% of GDP level.<sup>822</sup> Some, however, feel that the value of

<sup>818</sup> Marco Fantini, *Taxation Trends* (2011) 17 <<http://ec.europa.eu/taxtrends>> at 16 October 2011.

<sup>819</sup> Australia, *BizGuide – Business Plan* (2011) business.gov.au – The Australian Government's Principle Business Resource, 13 <<http://www.smallbusiness.wa.gov.au/assets/BIZguides/bizguide-business-plan-template.doc>> at 5 November 2011.

<sup>820</sup> Alfonso Gambardella, Paola Giuri and Myriam Mariani, *Study on evaluating the knowledge economy what are patents actually worth?* (2008) 6.

<sup>821</sup> Ibid 5.

<sup>822</sup> OECD, *Science, Technology And Industry Scoreboard* (2011) Directorate for Science, Technology and Industry, 119 <<http://www.oecd.org/sti/oecdsciencetechnologyandindustryscoreboard2011innovationandgrowthinknowledgeeconomies.htm>>.

patents is much greater than 1% of GDP when considering ‘that intangible assets now account for around two-thirds of stock market value, although it is nearly impossible to measure them directly.’<sup>823</sup> The controversy over the value of patents in these studies arises from the manner in which the patents are valued. For example, the studies utilize a value for the patents themselves without regard to the value of the patented products produced, currently being produced and to be produced of which none would be produced but for the existence of the patents.

### Number of Patents

A model attempting to reproduce a patent induced phenomenon without accounting for patents would be sheer folly. Table 37 provides the number of patents in force in the specified jurisdictions, as indicated below.

	<b>Australia</b> <sup>824</sup>	<b>Ireland</b> <sup>825</sup>	<b>U.S.</b> <sup>826</sup>
<b># of Patents</b>	107,699	78,816	1,872,827

**Table 37: Number of Patents in Force (by Jurisdiction).**

Utilizing the values from Table 37 and the number of patents per capita value for each jurisdiction, a calculation was performed to determine the patents in force in each jurisdiction with results normalized to avoid the disparity in population size. The results as a percentage of the number of patents in force in the U.S. yielded the following percentages: Australia = 82.74% and Ireland = 282%. These percentages indicate that Australia is roughly equivalent to the U.S. in terms of the number of patents in force. Ireland, on the other hand, out paces both Australia and the U.S. by nearly three times. The stark contrast in the number of patents in force tends to indicate a high possibility of jurisdictional arbitrage within the jurisdiction. Based on this indicator, it is important to include this metric in the model.

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The source of the data used in this study was the OECD’s Technology Balance of Payments (TBP) Database.

<sup>823</sup> Brian Kahin, above n 272.

<sup>824</sup> WIPO, *World Intellectual Property Indicators 2010* (2010) Intellectual Property Statistics, 67 <[http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/pdf/941\\_2010.pdf](http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/pdf/941_2010.pdf)> at 4 July 2011.

<sup>825</sup> Ibid.

<sup>826</sup> Ibid.

### Composite Business Metric

An aggregated business metric is computed in a similar fashion to the computation performed to obtain an economic metric. First, the three business metrics are combined, as indicated below.

$$bMetric_{i,j} = (f * (TaxRate_i - TaxRate_j)^2 + g * (Opportunity_i - Opportunity_j)^2 + h * (\# Patents_i - \# Patents_j)^2)$$

Next, the business metric defining the business distance between any two jurisdictions (i and j) in the legal, economic and business space is calculated, as indicated below.

$$BusinessMetric_{i,j} = \sqrt{bMetric_{i,j}}$$

The introduction of the coefficients f, g and h into the equation allows scaling of the values. Scaling is necessary to avoid the relative magnitude of opportunity or number of patents to dominate the value of the aggregated business metric.

### Jurisdiction Position

The position of any jurisdiction in the three-dimensional space with legal, economic and business axes is defined by the three composite metrics developed above, i.e., *LegalMetric*, *EconomicMetric* and *BusinessMetric* represented as (*LegalMetric*, *EconomicMetric*, *BusinessMetric*). Therefore, the distance between any two jurisdictions in this three-dimensional space is determined by the following.

$$law = i * (LegalMetric_i - LegalMetric_j)^2$$

$$economics = j * (EconomicMetric_i - EconomicMetric_j)^2$$

$$business = k * (BusinessMetric_i - BusinessMetric_j)^2$$

$$Distance_{i,j} = \sqrt{law + economics + business}$$

## **Forces Of Attraction/Repulsion**

The previous sections provide the means to analyze the legal, economic and business characteristics of a specific jurisdiction and then position that jurisdiction into a three-dimensional space governed by law, economics and business, as depicted in Figure 24. Figure 24 exhibits an interesting property in relation to the size of the spheres representing points J1, J2 and J3. It would be convenient if the size of the spheres represented the magnitude of the force of attraction between the various points (spheres) – the greater the force of attraction the larger the sphere and *vice versa*. The size of the spheres denoting J1, J2 and J3 in Figure 24, in fact, represent the force of attraction between the selected jurisdiction and the other two spheres.

The ability to represent a specific jurisdiction in terms of its force of attraction on, or appeal to, another jurisdiction with regards to income from royalties begins with the fundamental market size (population) of the jurisdiction. The market size is altered based on the potential market opportunity discussed above. The combination of these two metrics forms the basis of a jurisdiction's initial force of attraction, visualized as the size of a particular sphere in Figure 24. There are, however, other significant factors that reduce the force of attraction, as described below.

## **Legal Compatibility**

The discussion of patent law metrics indicated there was a small variance in the jurisdictions' patent law, by sheer volume, due in large part to the treaty obligations of each jurisdiction. In other words, there appears to be a large degree of commonality and/or compatibility between the jurisdictions due to the treaty obligations entered into by each of the jurisdictions. The treaty obligations of each jurisdiction do not constitute the operating patent law in each jurisdiction, but demand that each jurisdiction bring the jurisdiction's domestic patent law to an acceptable level of conformance with the treaty defined level. Therefore, the level of participation in patent treaties (the number of patent treaties ratified by each jurisdiction) becomes an indicator regarding the level of legal patent compatibility of each jurisdiction.

## Legal Complexity

The discussion of taxation law metrics indicated there was a large variance in the jurisdictions' taxation law, by sheer volume, due in large part to a lack of treaty obligations required to normalize the core domestic taxation landscape between jurisdictions. In other words, there appears to be a large degree of variance and/or incompatibility between the jurisdictions due to a lack of treaty obligations entered into by each of the jurisdictions. Absent these normalizing taxation treaties, the magnitude of a jurisdiction's attracting force is diminished in proportion to the legal complexity of the jurisdiction's taxation law. In other words, an MNE that benefits from a moderate level of taxation law, by volume, in one jurisdiction is less likely to enter another jurisdiction stifled by an inordinate level of taxation law. Therefore, the size of a jurisdiction's domestic tax law is an indicator of the legal complexity within that jurisdiction and may be viewed negatively by MNEs.

## Legal Compliance

One of the most important parameters, if not the most important parameter, in the model is the legal compliance metric. Patents are very valuable property with some saying 'that intangible assets now account for around two-thirds of stock market value, although it is nearly impossible to measure them directly.'<sup>827</sup> Patents are also jurisdiction specific and require jurisdictional protection of the patents issued within, or registered in, that jurisdiction. However, certain jurisdictions consider patent abuse as a valid and fundamental business right. In January of 2009, the USTR spokesperson Sean Spicer recalled that '[i]n 2001, USTR called Taiwan "a haven for pirates."<sup>828</sup> The 2001 comment made by the USTR about Taiwan was in response to IPR treaty obligation abuses, as indicated below.

Pursuant to Section 182 of the Trade Act of 1974, as amended by the Omnibus Trade and Competitiveness Act of 1988 and the Uruguay Round Agreements Act (enacted in 1994), under Special 301 provisions, USTR must identify those countries that deny adequate and effective protection for IPR or deny fair and equitable market access for persons that rely on intellectual property protection. Countries that

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<sup>827</sup> Brian Kahin, above n 272.

<sup>828</sup> U.S., *USTR Announces Conclusion of the Special 301 Out-of-Cycle Review for Taiwan* (2009) United States Office of the United States Trade Representative <<http://www.ustr.gov/about-us/press-office/press-releases/2009/january/ustr-announces-conclusion-special-301-out-cycle-re>> at 5 November 2011.

have the most onerous or egregious acts, policies, or practices and whose acts, policies, or practices have the greatest adverse impact (actual or potential) on relevant U.S. products must be designated as "Priority Foreign Countries."

USTR has created a "Priority Watch List" and a "Watch List" under the Special 301 provisions. Placement of a trading partner on the Priority Watch List or the Watch List indicates that particular problems exist in that country with respect to IPR protection, enforcement, or market access for persons relying on intellectual property.<sup>829</sup>

The U.S. produces an annual Special 301 Report in compliance with the U.S. treaty obligations, as previously discussed.

The Legal Compliance metric is a throttling mechanism used to decrease the force of attraction of a jurisdiction engaging in IPR abuses. Information from the U.S. Special 301 Report coupled with data from the WTO's DSB<sup>830</sup> that handles WTO Member States' disputes regarding the *TRIPS Agreement*<sup>831</sup> form the legal compliance metric. The legal compliance metric not only addresses the Taiwanese situation previously discussed, but also addresses situations similar to that of India when India 'directly contravened Article 27 of the TRIPS Agreement'<sup>832</sup> regarding obligatory modifications to India's domestic patent law, *The Patents Act* (1970).<sup>833</sup> Specifically, the force of attraction of a specific jurisdiction, or size of that jurisdiction's sphere in the three-dimensional space, is proportional to the jurisdiction's legal compliance metric.

### **Investment Climate Indicators**

Chapter 8 detailed three specific business indicators: (1) Transparency International's Corruption Perceptions Index,<sup>834</sup> (2) The Heritage Foundation's Index of Economic Freedom,<sup>835</sup> and (3) The World Bank Doing Business rankings.<sup>836</sup> Each of these

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<sup>829</sup> Ibid.

<sup>830</sup> See generally, WTO Dispute Settlement <[http://www.wto.org/english/tratop\\_e/dispu\\_e/dispu\\_e.htm](http://www.wto.org/english/tratop_e/dispu_e/dispu_e.htm)> at 4 July 2011.

<sup>831</sup> *TRIPS Agreement*, above n 148.

<sup>832</sup> Prabhu Ram, above n 441, 1.

<sup>833</sup> *The Patents Act 1970*.

<sup>834</sup> See generally, <<http://www.transparency.org/>> at 8 April 2013.

<sup>835</sup> See generally, <<http://www.heritage.org/index/>> at 8 April 2013.

<sup>836</sup> See generally, <<http://www.doingbusiness.org/>> at 8 April 2013.

three indicators represents a jurisdictional environmental variable effecting business in a specified jurisdiction. First, TI ranks the U.S. in the 86<sup>th</sup> percentile for controlling corruption, generally. Australia has a moderate number of bribery cases and is ranked by TI in the 96<sup>th</sup> percentile for controlling corruption. Finally, TI considers Ireland to be a non-enforcing OECD Member State without any active cases. Second, the Heritage Foundation ranks Australia in the 82<sup>nd</sup> percentile for economic freedom. Ireland is ranked in the 75<sup>th</sup> percentile and the U.S. in the 76<sup>th</sup>. Third, the World Bank Doing Business ranks Australia in the 84<sup>th</sup> percentile for ease of doing business in that jurisdiction. Ireland is ranked in the 80<sup>th</sup> percentile and the U.S. in the 84<sup>th</sup>.

An aggregate of these three indicators for each of the jurisdictions is computed from the above percentages. This metric, the investment climate metric, reduces the force of attraction for each jurisdiction due to the idealized scale adopted by the three organizations producing the indicators. Since jurisdictions never achieve a score, or indicator value, of 100%, it follows that the investment climate metric calculated is also less than 100%, in other words less than 1. The force of attraction computed in the model is, therefore, multiplied by the investment climate metric to reduce the force of attraction based upon the business investment climate of the jurisdiction.

## **Summary**

The model developed in this chapter advances the discussion from the abstraction to the specific, from the conceptual to the visual, and from the metric back to the science. The functional decomposition of a complex multi-disciplinary phenomenon into a comparative methodology utilizing normative values produced from a model conceptualizing this complex multi-disciplinary phenomenon into a three-dimensional space governed by law, economics and business was achieved through the definition and application of a limited number of mundane metrics. Each metric utilized in the model was identified and explained with respect to its overall participation in the model.

In brief, the following list summarizes the highlights of this chapter.

- Identification of the relationship of models to the process of scientific enquiry

- Conceptualization of the model as a representation of jurisdictions positioned in a three-dimensional space with the following three dimensions governing the spatial positioning of the jurisdictions:
  - Jurisdictional Law
  - Jurisdictional Economics
  - Jurisdictional Business
- Identified the metrics contributing to the legal, economic and business components of the model
- Developed a distance formula for determining how close two jurisdictions are in terms of law, economics and business characteristics regarding patents and patent-related issues
- Developed the notion of force of attraction between two jurisdictions
- Developed the notion of repelling forces limiting the force of attraction

## CHAPTER 11 – TRIPARTITE MODEL RESULTS

The previous chapter developed a model with promises of three-dimensional visualization. The visualization in this chapter makes it appear, at times, more of a picture book than a textual narrative. Through the use of modern visualization techniques vast amounts of information may be rendered visually evoking the natural human tendency of visual comparison. Thus, the reader in a single glance performs the most natural of comparative analysis, comparing similarities and contrasting differences. This approach of comparative analysis does not obviate the need for commentary. However, the commentary is significantly reduced and serves only to guide the visual focus of the reader.

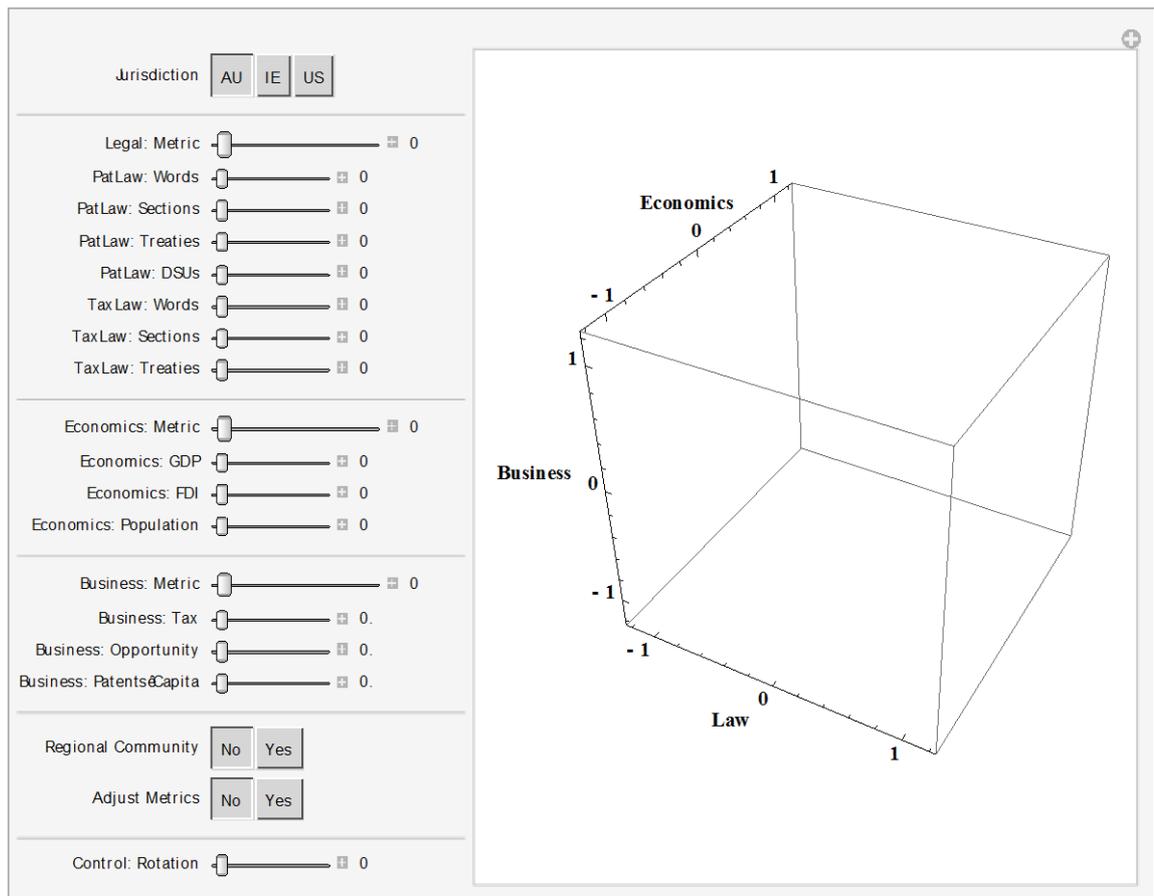
### Introduction

The phrase ‘One look is worth a thousand words,’<sup>837</sup> was later changed to ‘a picture is worth a thousand words.’<sup>838</sup> These phrases are appropriate introductions to what follows. A visualization program created the three-dimensional renderings in this chapter. The visualization program is an implementation of the model described in the previous chapter. The implementation of the model in Chapter 10, along with all of the metrics and metric values presented in that chapter are realized in the visualization program. Figure 25 below depicts the display screen for the visualization program. The visualization program interface is divided into two parts: the control and the display space. The control portion of the interface is located on the left side of the screen and represents each of the metrics presented in Chapter 10. The right side of the screen depicts the three-dimensional space consisting of a legal axis, an economic axis and a business axis in which the jurisdictions are rendered.

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<sup>837</sup> Frederick R. Barnard, *Printer's Ink* (1921).

<sup>838</sup> See generally, <<http://www.phrases.org.uk/meanings/a-picture-is-worth-a-thousand-words.html>> at 5 November 2011.



**Figure 25: Visualization Program Interface.**

The visualization program allows the selection of a specific jurisdiction, as indicated at the top of the control section, which causes all of the jurisdictions to be displayed in relationship to the jurisdictions' proximity or closeness to the selected jurisdiction. This allows the comparative analysis focus to be placed on specific jurisdictional pairings, while observing the interaction with other jurisdictions. The first jurisdictional pairing presented below focuses on Australia and Australia's patent related interactions with Ireland. The second jurisdictional pairing focuses on the U.S. and the U.S.' patent related interactions with Ireland. Of particular importance is the determination of the magnitude of the force of attraction from the Irish jurisdiction to the selected jurisdiction. If, for example, the Irish force of attraction is large then Australian patent related activities may benefit significantly from the Irish jurisdiction. Similarly, if the Irish force of attraction is small then there is little gained from locating and/or relocating Australian MNE's patent holdings to Ireland.

## **Australia**

Referring back to the populations of Australia and Ireland, as presented in the previous chapter, one notices that Australia is roughly four times the size of Ireland. At first glance, one might be convinced that any Australian patent related activity in Ireland would be counter-productive due to the relatively small population of Ireland. The following paragraphs intend to validate or invalidate this preconceived notion.

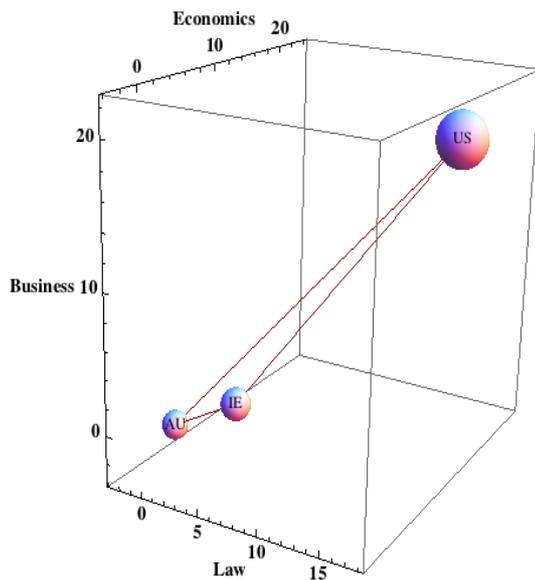
### **Patent Related Interactions with Ireland**

Ireland is a Member State of the EU.<sup>839</sup> However, Figure 26 below utilizes only Ireland's specific jurisdictional metrics without regard to membership in the EU. Figure 27 below utilizes the same jurisdiction specific information as used in Figure 26 and allows Ireland to benefit from membership in the EU by being a portal to the entire EU, all 502,519,978 people,<sup>840</sup> while maintaining a domestic corporate tax rate of 12.5% on sales within the EU. Chapters 1 through 3 described in detail MNEs' access to the EU market through Ireland. The example of Microsoft Corporation establishing an EMEA licensing and distribution point in Ireland, as described in Chapter 9, capitalizes on the benefit Ireland derives from membership in the EU. Once the regional community benefits of Irish membership in the EU are factored into the model then Ireland becomes as attractive as, or even more attractive than, the U.S. for patent related activities, as indicated by the respective sizes of the spheres representing the three jurisdictions. These results are consistent with the behaviour of jurisdictional arbitrage, as described in previous chapters.

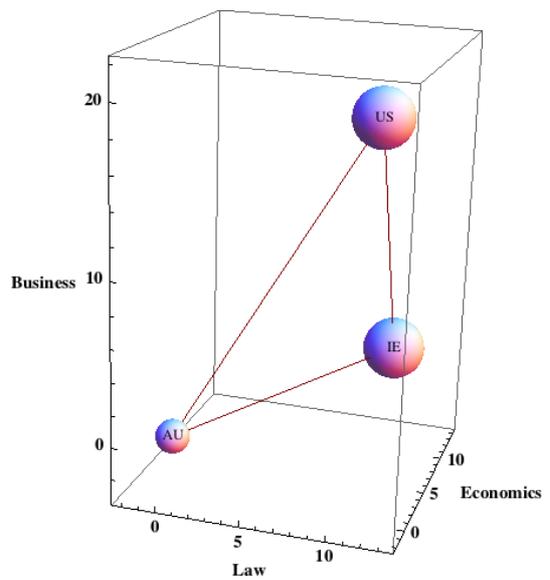
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<sup>839</sup> See generally, <[http://europa.eu/about-eu/27-member-countries/index\\_en.htm](http://europa.eu/about-eu/27-member-countries/index_en.htm)> at 5 November 2011.

<sup>840</sup> See generally, <[http://europa.eu/index\\_en.htm](http://europa.eu/index_en.htm)>.



**Figure 26: Australia Interacting With A Non-Regional Community Ireland.**



**Figure 27: Australia Interacting With A Regional Community Ireland.**

Ireland, a small country with a population of less than 5 million inhabitants,<sup>841</sup> plays a significant role in worldwide flows of income from patent royalties motivated largely by the size of the opportunity depicted in Figure 27. It is important to recognize that patent and patent related activities in Ireland benefit from a low corporate tax rate, 12.5%, and access to one of the world's largest regional community markets.<sup>842</sup>

## **U.S.**

U.S. MNEs are similarly motivated by Ireland's force of attraction even though the populations of the U.S. and Ireland, as presented in the previous chapter, are roughly sixty-seven times different. Intuitively, one might be convinced that any U.S. patent related activity in Ireland would be limited due to the differential in sizes between the two jurisdictions. The following paragraphs attempt to provide insight into whether or not such a preconception is valid.

<sup>841</sup> *Statistical Yearbook – 54<sup>th</sup> Issue*, above n 357.

<sup>842</sup> See generally, <[http://europa.eu/index\\_en.htm](http://europa.eu/index_en.htm)>.

## Patent Related Interactions with Ireland

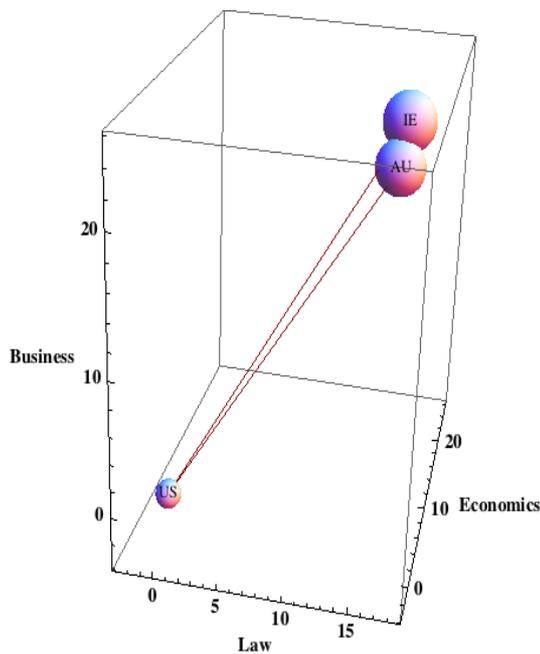
Ireland, as mentioned above, is a Member State of the EU.<sup>843</sup> Figure 28 below depicts only Ireland's specific jurisdictional metrics without regard to membership in the EU. Figure 29 below utilizes the same jurisdiction specific information as used in Figure 28, but allows Ireland to benefit from membership in the EU by being a portal to the entire EU, all USD \$15,947,795,200,000.00 of its economy (GDP),<sup>844</sup> while maintaining a domestic corporate tax rate of 12.5% on sales within the EU. Previous chapters addressed this topic and discussed its limitations.<sup>845</sup> Of primary concern, as in the Microsoft example of Chapter 9, to benefit from Ireland's domestic tax scheme an MNE must avoid establishing a permanent establishment within the EU's Member State to avoid being subjected to the Member State's tax regime. Once the regional community benefits of Irish membership in the EU are factored into the model then Ireland becomes far more attractive than Australia for patent related activities, as indicated by the respective sizes of the spheres representing the three jurisdictions. These results are consistent with the behaviour of jurisdictional arbitrage, as described in previous chapters.

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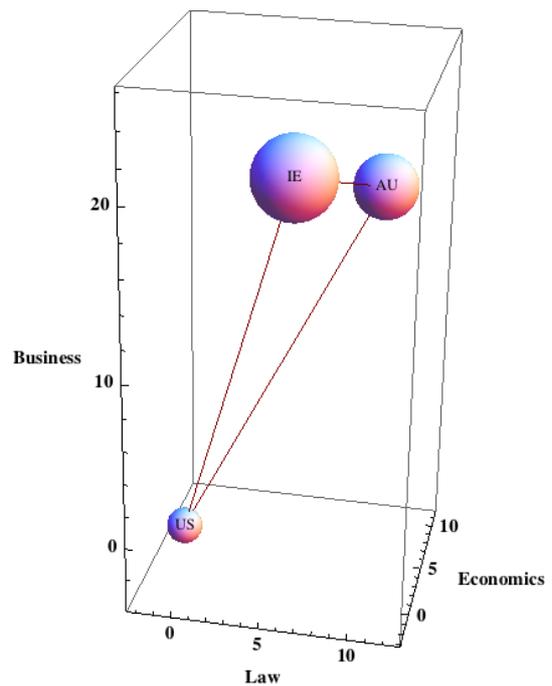
<sup>843</sup> See generally, <[http://europa.eu/about-eu/27-member-countries/index\\_en.htm](http://europa.eu/about-eu/27-member-countries/index_en.htm)> at 5 November 2011.

<sup>844</sup> See generally, <[http://europa.eu/index\\_en.htm](http://europa.eu/index_en.htm)>.

<sup>845</sup> *European Community Treaty*, Article 226.



**Figure 28: The U.S. Interacting With A Non-Regional Community Ireland.**

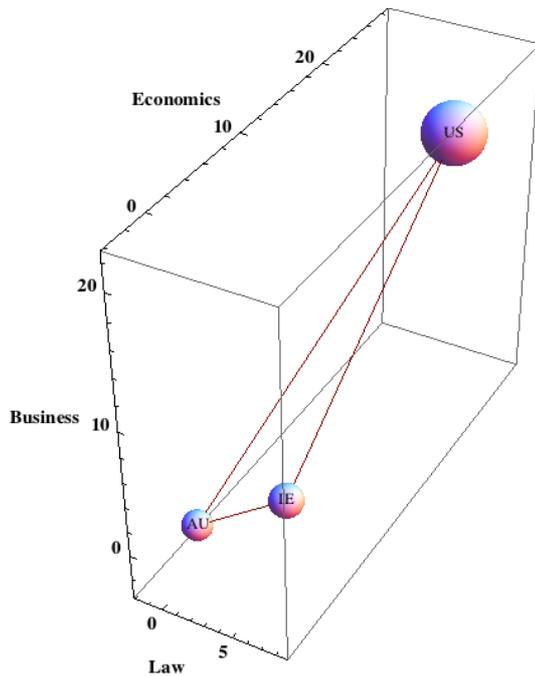


**Figure 29: The U.S. Interacting With A Regional Community Ireland.**

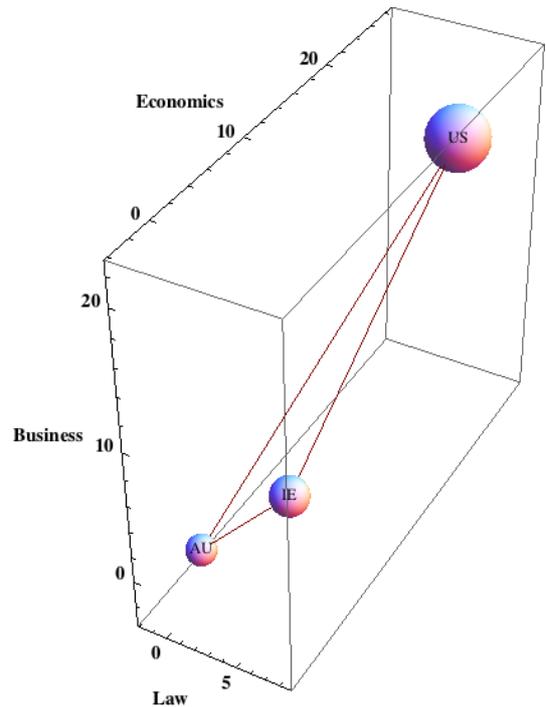
### **Regional Community Size v. Corporate Tax Rates**

Reiterating that it is important to recognize that MNEs’ patent and patent related activities in Ireland benefit from a low corporate tax rate of 12.5% and access to one of the world’s largest RECs, the EU.<sup>846</sup> It is equally important to understand the potential contribution of each of these benefits to the success of MNEs’ business strategies. Generally speaking, market size drives business, as indicated in previous chapters. Assuming this statement is true, then the trade-off between expanding an MNE’s market size by multiple factors or reducing the tax paid in an MNE’s current market with a fixed size; suggests bigger returns with the former rather than the latter alternative. The following two figures, Figure 30 and Figure 31 below, depict Australia as the selected jurisdiction engaging with the other two jurisdictions.

<sup>846</sup> See generally, <[http://europa.eu/index\\_en.htm](http://europa.eu/index_en.htm)>.

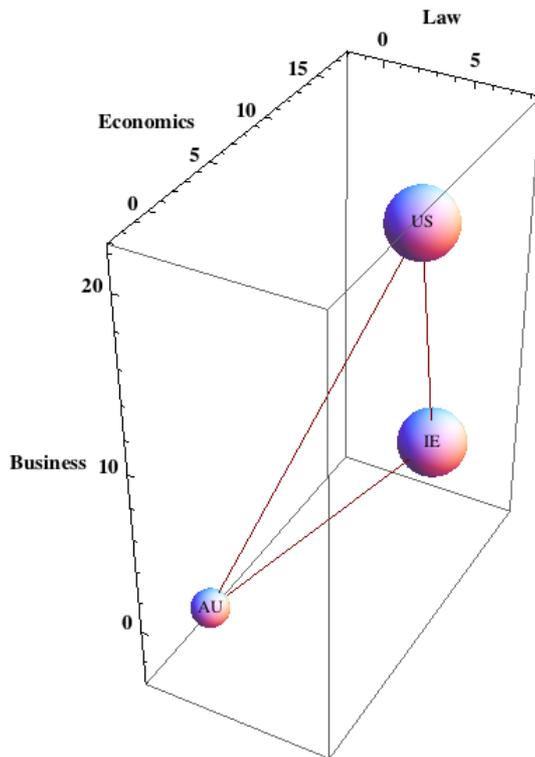


**Figure 30: Maintaining Irish Corporate Tax Rate Of 12.5% And Ireland Without Regional Community Membership.**

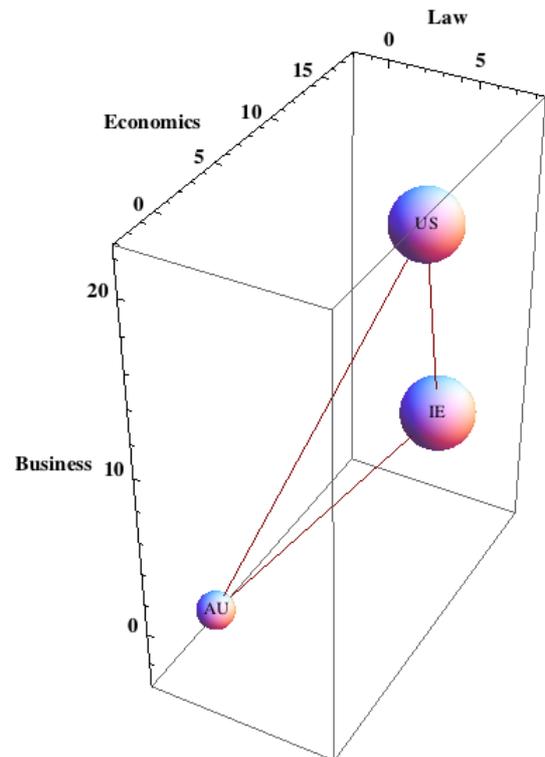


**Figure 31: Reducing Irish Corporate Tax Rate To 0.0% And Ireland Without Regional Community Membership.**

The results depicted in Figure 30 were obtained using Ireland’s normal corporate tax rate and without allowing Ireland to claim the benefits afforded it as a Member State of the EU. The results depicted in Figure 31 were obtained while forcing Ireland’s corporate tax rate to 0.0% and without allowing Ireland to claim the benefits afforded it as a Member State of the EU. As expected, the sphere representing Ireland in Figure 31 marginally increased in size. The increase in size due to the decrease in the Irish corporate tax rate, however, was substantially less of an increase than that observed when allowing Ireland to benefit from its membership in a regional community, as indicated in Figure 26 and Figure 27. Figure 32 and Figure 33 illustrate further substantiation of this fact below wherein each figure represents Australia interacting with Ireland as a member of the EU.



**Figure 32: Maintaining Irish Corporate Tax Rate 12.5% And Ireland As A Regional Community Member.**



**Figure 33: Reducing Irish Corporate Tax Rate To 0.0% And Ireland As A Regional Community Member.**

The only difference between the two figures above is the change in the Irish corporate tax rate used in the calculation. Consistent with the previous two figures, only marginal benefit is achieved by lowering the corporate tax rate when compared with the benefits obtained through membership in a regional community – increased market size.

### **The Next Celtic Tiger?**

The results section of any thesis should contain some surprising revelations that were never conceived of, or intended, during the research effort – they simply appeared. This subsection documents such a scenario that occurred as a result of the outcomes presented in this chapter. Once the notion of small jurisdictions being portals, access vehicles, into larger regional communities was firmly planted; then considering other such jurisdictions, similar in nature to Ireland, was an obvious logical progression. In brief, do such portals to the U.S. exist? One such portal, Puerto Rico was once used as a manufacturing location for Microsoft Corporation for these very reasons.<sup>847</sup>

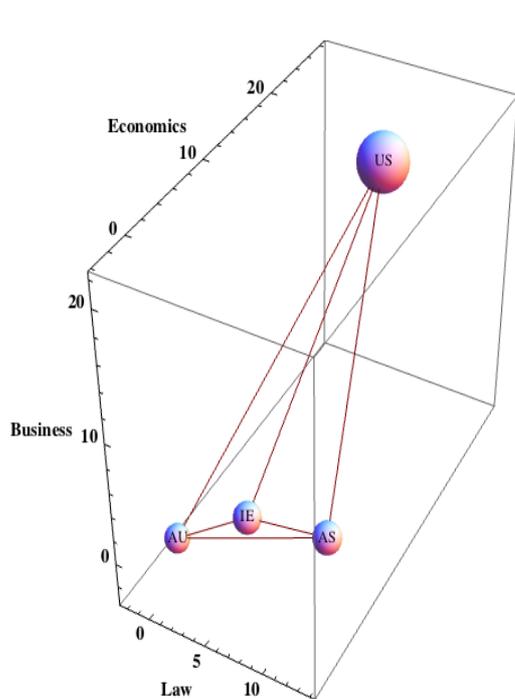
<sup>847</sup> *Microsoft Corporation (Petitioner) v. Commissioner of Internal Revenue (Respondent)*, above n 252.

Puerto Rico is, however, not the surprising revelation referred to in the opening paragraph of this subsection. American Samoa is that surprise revelation. Indeed, few, if any, consider the jurisdiction of American Samoa in patent law, taxation law or even international trade law. The fact remains that American Samoa is a territory of the U.S. and benefits from the U.S. in the same fashion as Ireland benefits from the EU.

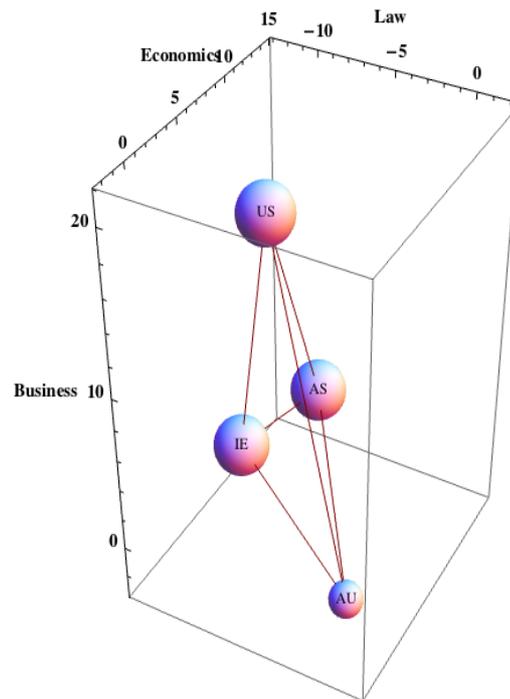
<b>Metric</b>	<b>Value</b>
<b># Patent Words</b>	59,971
<b># Patent Sections</b>	148
<b># Patent Treaties Ratified</b>	0
<b># Taxation Law Words</b>	28,146
<b># Taxation Law Sections</b>	126
<b># Taxation Treaties Ratified</b>	0
<b>GDP</b>	462,200,000
<b>FDI</b>	138,000,000
<b>Population</b>	67,242
<b>Corporate Tax Rate</b>	15%
<b>Business Opportunity</b>	4,622,000
<b># Patents</b>	0

**Table 38: Metrics For American Samoa.**

Figure 34 and Figure 35 below depict the results of adding American Samoa to the quantitative model with the values (metrics) contained in Table 38. More specifically, Figure 34 depicts the force of attraction between the selected jurisdiction of Australia and American Samoa without any regional community benefits. Figure 35 indicates the relative magnitude of the force of attraction when American Samoa is viewed as member of a regional community – U.S. territories.



**Figure 34: American Samoa Treated Independently.**



**Figure 35: American Samoa Treated As A Regional Community Member.**

American Samoa adopted U.S. patent law and U.S. taxation law as far as American Samoa Code does not amend it.<sup>848</sup> However, American Samoa Legal Code or simply American Samoa Code (A.S.C.) Title 11 Chapter 16 referred to as *A.S.C. § 11.1601*<sup>849</sup>

<sup>848</sup> *A.S.A.C. § 06.01* (American Samoa) American Samoa Administrative Code, Title 6 Chapter 1.

‘The income tax rules of the United State Government, in force on 1 Jan 78 and thereafter adopted, where not clearly inapplicable or incompatible, are effective in American Samoa in accordance with 11.0403(a) ASCA.’

<sup>849</sup> *A.S.C. § 11.1601*.

(a) In order to establish a firm foundation for self-government and to assist the people of American Samoa in improving their living standards and prospects for employment, it is the policy of the government to promote economic development and capital investment in American Samoa by tax incentives.

(b) A temporary exemption from the payment of some or all taxes, duties, business license fees, and similar charges imposed or levied by the government may be granted for the establishment or expansion of a qualifying industrial or business enterprise as provided in this chapter.

(c) No exemption may be granted with respect to income derived from or activities carried on outside of American Samoa. No exemption from a tax, fee, duty, or levy not enumerated shall be implied. A tax exemption certificate issued to a processor of fish may exempt from some or all taxes on the owners or operators of fishing vessels, motherships, reefer transports, and supply vessels which supply the processor with fish, subject to such conditions and limitations as the Governor deems appropriate.

(d) In no event shall the original period of tax exemption exceed 10 years, and no extensions of the original period may be granted. The tax exemption may be made to terminate earlier if the cumulative amount of taxes forgiven equals 200% of noncurrent investment.

provides exemption from some or all corporate taxes, as indicated in subsection (a). Therefore, utilizing the fundamentals espoused in this thesis, American Samoa provides the same level of benefit to MNEs<sup>850</sup> attempting to access the U.S. market as Ireland provides to MNEs attempting to access the EU market. Furthermore, access to the U.S. market from U.S. MNEs through American Samoa provides zero taxation within the same jurisdiction independent of the level of the U.S. corporate tax rate.

The U.S. territory of American Samoa may be considered a ‘tear’ in the domestic legal fabric of the U.S. These ‘tears’ in the domestic fabric of a jurisdiction are typically associated with what the UN refers to as an LDC. Chapters 2 and 7 referred to Ireland as an impoverished State that was provided special consideration from the European Community. Therefore, a ‘tear’ in the European Community’s legal fabric was created when Ireland was designated as an LDC. Article 66 of the *TRIPS Agreement*<sup>851</sup> provides for special treatment of LDCs, even to the point of creating such ‘tears’ in the domestic legal fabric of jurisdictions, as indicated below.

Developed country Members shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least-developed country Members in order to enable them to create a sound and viable technological base.<sup>852</sup>

The international community encourages more developed nations to afford LDCs special dispensations to encourage and stimulate the economic growth and wellbeing within the LDCs’ jurisdictions, as indicated above. Another demonstration of the international community’s desire to assist LDCs occurred in 1971 when Article XXV of *GATT 1994* was employed to waive the otherwise obligatory non-discrimination article, Article I of *GATT 1994*, ‘which allowed tariff preferences to developing countries.’<sup>853</sup>

The legal, economic and business similarities between American Samoa and Ireland are not coincidental. In fact, if the James Hardie companies had fully understood these similarities when the James Hardie company relocated its headquarters outside

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<sup>850</sup> See generally, <[www.asbar.org](http://www.asbar.org)> at 5 November 2011.

<sup>851</sup> *TRIPS Agreement*, above n 148, Article 66.

<sup>852</sup> *Ibid.*

<sup>853</sup> Michael Pryles et al., above n 317, 731-732.

Australia then it is conceivable that the James Hardie company may have established itself in American Samoa to service the U.S. and Ireland to service EMEA.

## **Summary**

The results chronicled in this chapter culminate the assimilation of volumes of information, theories and data leading to the distillation of such in the form of an operational model capable of reproducing outcomes similar to those encountered in the literature's empirical data. Both expected and unexpected results were obtained from the model producing the following highlights of this chapter, as indicated below.

- A novel visualization technique was employed that allows four specific characteristics of a jurisdiction (legal, economic, business, and force of attraction) to be visualized with respect to other jurisdictions in a single three-dimensional rendering.
- The results produced from the model regarding Australian MNEs' transactions involving Ireland proved consistent with observed empirical data in the literature, especially the attraction of Australian MNEs to Ireland regarding patent related activities.
- The results produced from the model regarding U.S. MNEs' transactions involving Ireland proved consistent with observed empirical data in the literature, especially the attraction of U.S. MNEs to Ireland regarding patent related activities.
- The results produced from the model explains the misguided emphasis on corporate tax rate as the primary factor in patent location and/or relocation, thus answer the question posed in Chapter 1 – Why the referenced MNEs did not choose jurisdictions with lower corporate tax rates (Isle of Mann, Cyprus, etc.) for the site of their patent portfolio relocation.
- Extrapolating the results obtained from the model for transactions regarding the jurisdictions under study led to the identification and examination of a relatively unknown jurisdiction, American Samoa, that when modeled exhibits many of the same behaviours as those of Ireland – the next Celtic Tiger or Samoan Shark.

## CHAPTER 12 – CONCLUSION

### Introduction

The focus of this research effort was arbitrage of a jurisdictional nature, not simply what the literature refers to as patent arbitrage, financial arbitrage or regulatory arbitrage. In brief, this research was based on three pillars: law, economics and business. The necessity to treat these three pillars collectively led to the following hypothesis. It is important, even imperative, to have a model derived from sound legal, economic and business principles to perform a comparative analysis of the treatment of income from patent royalties in cross-border transactions, including Australia, Ireland and the U.S. The proof of the hypothesis was provided in two parts throughout the thesis: (1) the necessity to address the treatment of income from patent royalties in cross-border transaction in a multidisciplinary fashion, and (2) the necessity to develop a model capable of addressing the complexity of the multidisciplinary approach. As a corollary to (2), it was necessary to prove the model was capable of providing results consistent with empirical data from the literature.

The first necessity was proven by documenting that the jurisdiction with the lowest corporate tax rate did not become the jurisdictional home of the largest number of relocated IP portfolios. Similarly, the jurisdiction with the largest market size did not become the jurisdictional home of the largest number of relocated IP portfolios. Likewise, the richest jurisdiction did not become the jurisdictional home of the largest number of relocated IP portfolios. Furthermore, the jurisdiction with the most established legal system did not become the jurisdictional home of the largest number of relocated IP portfolios. Accepting the limitations of a single disciplinary approach coupled with results from previous research efforts from the literature, proved a multidisciplinary approach to be the only remaining approach for addressing the treatment of income from patent royalties in cross-border transactions.

The second necessity was proven by the use of combinatorics, as indicated in the Hypothesis section of Chapter 1. As an example, assuming a taxable event consisting of patent portfolio royalty income in the amount of A originates from source jurisdiction S, when A is repatriated to the legal owner of the patent portfolio in

jurisdiction D then the tax liability in jurisdiction D is a simple tax calculation based on jurisdiction D's domestic tax law. If, however, a taxable event consisting of patent portfolio royalty income in the amount of A originates from source jurisdiction S, and only a percentage of the amount,  $(p * A)$ , is repatriated to the legal owner of the patent portfolio in jurisdiction D then the tax liability in jurisdiction D for that percentage of the amount is also a simple tax calculation based on jurisdiction D's domestic tax law. However, the location of the remaining  $(100\% - p)$  percentage of the original source amount A is indeterminate. Identification of potential jurisdictions providing favourable sites for some portion of the original sourcing amount A and having treaty obligations with the source jurisdiction S reduces the indeterminism in the treatment of royalty income from patents in cross-border transactions. The number of possible combinations of potential outcomes is nearly incalculable. Not only does this example prove the necessity of a model to address this level of complexity, but it also suggests the need for the model to calculate the exact force of attraction that each jurisdiction creates with respect to another jurisdiction's IP portfolios.

Based on the work of others, as documented in the literature, the content of the body of this thesis, and the two identified necessities above; the hypothesis is true. Furthermore, the results of the model are an accurate representation of empirical data found in the literature. Therefore, the proof of this hypothesis leads to the ability to properly assess the treatment of income arising from patent related activity in Australian-Irish and U.S.-Irish jurisdictions by understanding the flow of such income. The following paragraphs retrace the significance of each chapter of the thesis in proving the hypothesis.

Chapters 1 and 2 introduced and provided a detailed introduction to the problem, the phenomenon, which appears to defy the accepted tax treatment rules governing the income from patent related activities. In essence, Chapter 2 defined the scope of uncertainty regarding the three pillars addressed herein. In so doing, the patent related intersection of international law, domestic law, economics and business identified from these three very large research disciplines resulted in a manageable research endeavour. Both international law and domestic law were further identified as having two contributing legal components regarding the research topic – patent law

and taxation law. The patent related intersection of the three pillars thus became the epicenter of the research effort.

Chapter 3 investigated the international legal aspects of patents and the associated international organizations involved. Examination and analysis of patent related treaties and the charters establishing the international organizations entrusted with their maintenance were performed. The size of MNEs was presented, which augmented the magnitude of MNEs' interest in patented related activities presented in a previous chapter.

Chapter 4 examined and analyzed existing multilateral patent treaties. It was found that the *TRIPS Agreement*<sup>854</sup> provided a normalizing effect on international patent related activities, in particular those regarding patent protection across jurisdictions. The normalizing effect on international patent related activities, its scope and relative magnitude, was quantified for inter-jurisdictional harmonization of patent and patent related protection. It was also found that the international oversight organization for world trade, the WTO, exerted significant force in rectifying imbalances existing in non-conforming jurisdictions. In brief, resolving intellectual property, patents in particular, disputes that arise from non-compliance with the *TRIPS Agreement*.

Chapter 5 examined and analyzed existing multilateral taxation treaties and bilateral taxation treaties related to the jurisdictions under study. Efforts were made to find a harmonization effect for taxation as was found for patent protection. However, no such effect was found that promulgates through the international community.

Chapter 6 analyzed the domestic patent law of each of the jurisdictions under study. It was found that the *TRIPS Agreement* provided a normalizing effect on jurisdictions' domestic patent law and related activities, in particular those regarding patent protection across jurisdictions. This domestic patent law normalization effect was quantified for the jurisdictions under study. Drawing on the analysis of Chapter 4 the effects of the international community's harmonization efforts on domestic patent law within each of the jurisdictions under study was verified.

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<sup>854</sup> *TRIPS Agreement*, above n 148.

Chapter 7 analyzed the domestic taxation law of each of the jurisdictions under study drawing on the analysis of Chapter 5. The scope and magnitude of the international community's harmonization efforts on domestic taxation law was quantified. Unfortunately, even after an examination and analysis of the Model Taxation Conventions and the bilateral Avoidance of Double Taxation Treaties derived from these MTCs for the jurisdictions under study, the volume and variability observed in domestic taxation laws lacked inter-jurisdictional harmonization. This is of major concern, as evidenced by the OECD's presentation to the G20 leaders in St. Petersburg, Russia in September of 2013.<sup>855</sup> The lack of harmonization in domestic taxation law led to the legal complexity metrics developed in Chapter 10.

Chapter 8 investigated, examined and analyzed a wide range of documents, reports and models providing insight into the business and economic aspects of the effect of globalization on patents and patent related activities. The results developed into the conceptualization of the relationship between markets, market size and business opportunity. The quantification of these relationships formed the basis of the business metrics for the model developed in Chapter 10.

Chapter 9 drew on the analysis from the previous chapters and presented an example of jurisdictional arbitrage, while identifying the essential components and aspects of the example. The identified components and aspects of the example were synthesized in the form of a model representing the phenomenon's fundamental characteristic behaviour. A real world example of the phenomenon at work was presented and compared with the hypothetical corporate structure conducive to the phenomenon that was developed in this chapter.

Chapter 10 distilled the essence of Chapters 2 through 9, in particular the specifics of the structural corporate model proposed in Chapter 9 – not to be confused with the model developed in this chapter, into a model defined by 12 specific metrics from the patent related intersection of international law (Chapters 4 and 5), domestic law (Chapters 6 and 7), economics (Chapter 9), and business (Chapter 8). These 12 metrics were obtained from empirical and statistical data involving multiple domestic and international organizations, governments and governmental bodies, as presented

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<sup>855</sup> *OECD Secretary – General Report To The G20 Leaders*, above n 70.

in previous chapters. The resultant metrics, and the values for each of these metrics for each of the jurisdictions under study, were combined to form an operational model. The operational model being capable of producing outcomes and behaviours consistent with the empirical data gleaned from the literature regarding jurisdictional arbitrage.

Chapter 11 employed the model developed in Chapter 10 proving the hypothesis by producing outcomes and behaviours consistent with the empirical data gleaned from the literature regarding jurisdictional arbitrage for the jurisdictions under study. The efficacy of the model was further proven by illuminating jurisdictional relationships and potential interactions incapable of detection prior to the existence of the model. Ultimately, however, the ability to determine the jurisdictional force of attraction may provide insight into bilateral treaty negotiation needs.

### **Theoretical Implications**

The thesis provides a quantitative method of legal analysis augmented by principles of economics and business, and model, not normally found in legal research. As with all research methods involving models, the model will develop over time to suit the needs of the researcher. As a first approximation, this model shows promising results consistent with empirical data collected from other research efforts.

### **Practical Implications**

Results from this study identify the likelihood of the flow of income from patent and patent related activities arriving in a specified jurisdiction by computing the force of attraction between the source jurisdiction and other jurisdictions. Knowing where patent royalty income flows is nearly as important as why patent royalty income flows. The results of this research answer in part the reasons why patent royalty income flows. A significant outcome of this thesis is the identification of the most likely jurisdictions in which deferral schemes may delay the repatriation of income from patent royalty sources. In essence, the model developed serves as a locator of potentially untaxed royalties.

In a broader sense, the fact that access to regional community markets is a more significant factor than a jurisdiction's corporate tax rate in attracting patent related activity. This may indicate a need to readdress a jurisdiction's bilateral treaty strategy

and possibly the contents thereof. Arguably, if access points to regional communities are excluded or eliminated by convention then the rapid proliferation of tax related treaties may be abated with the same overall effect. Is this approach viable? One superficial approach may be to develop a protocol excluding such rights from non-Member State MNEs that relocate to jurisdictions that serve as access to larger regional communities. Clearly, Member States of a regional community participate in the orderly operation of the regional community and if the Member States deem special dispensations should be offered to LDCs within their membership then so be it. However, if attempts are made to exploit access to the regional community through these LDCs receiving special dispensations by entities outside the membership of the regional community then the exclusion may not be enforced. In either case, the results of this thesis, including the model, provide the tools to identify potentially harmful access points to regional communities. Identification of these potentially harmful access points may lead to the development of a model treaty, a template, which limits the benefits of these LDC portals or access points to regional communities. The model treaty could exclude the benefits from non-members of the regional community. The development of a model treaty reflecting this exclusionary language could easily be developed, if not included in existing Limits on Benefits sections of existing treaties. This approach would limit a regional community's exposure to jurisdictional arbitrage and avoid exploitive abuse attempts by foreign MNEs. Obviously, the non-discrimination and most favoured nation aspects of treaties involved would need to be examined to determine if regional community access control is truly a viable alternative in combating this phenomenon.

### **Future Research**

The model developed in this study focused on the force of attraction between jurisdictions regarding income from patent related activities. More specifically, the model addresses source income jurisdictions and not subsequent jurisdictions that may be used to defer some or all of that income. The model could be altered to account for withholding taxes and other related MTC topics in jurisdictions under study. Similarly, the focus on patent treaties could be changed to focus on existing taxation or similar treaties between jurisdictions under study. Such model changes could enable identification of likely intermediary jurisdictions involved in complex deferral schemes of royalty income.

There are several other areas that could benefit from further research including the following.

- Expand the scope of the existing model to include legal areas beyond patent and tax law
- Expand the scope of the existing model to include more sophisticated economic and business modeling techniques such as econometric elasticity
- Expand the model to include more jurisdictions
  - OECD Member States
  - EU Member States (28)
  - UN Member States (193)
- Expand the model from lexical to syntactic metrics
- Expand the model from syntactic to semantic metrics
- Expand the model from semantic to ontological metrics
- Expand the model from ontological to doctrinal metrics
- Employ more sophisticated Natural Language Processors and associated topical ontologies for processing legal texts and legislation

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<www.un.org/en/documents/charter/index.shtml>  
<www.unctad.org>  
<www.unctad.org/Templates/Page.asp?intItemID=3204&lang=1>  
<www.unctad.org/en/Pages/DIAE/World%20Investment%20Forum/Search-by-countryeconomy.aspx>  
<www.uspto.gov>  
<www.ustr.gov>  
<www.ustr.gov/Trade\_Agreements/Bilateral/Section\_Index.html>  
<www.ustr.gov/trade-agreements/free-trade-agreements>  
<www.wipo.org>  
<www.wipo.int/ipstats/en/>  
<www.worldbank.org>  
<www.wto.org>  
<www.wto.org/english/tratop\_e/region\_e/region\_e.htm>  
<www.wto.org/english/tratop\_e/dispu\_e/dispu\_e.htm>

## APPENDIX I – APPLICABLE U.S. STATUTES

Table 39 demonstrates the areas of U.S. tax law, and the areas’ associated statutes, pertinent to this thesis. More precisely, Table 39 indicates the areas of the U.S. IRC that are most susceptible to tax avoidance schemes.

TITLE	SUBTITLE	CHAPTER	SUBCHAPTER	
TITLE 26 – INTERNAL REVENUE CODE (IRC)	Subtitle A – Income Taxes	Chapter 1 – Normal Taxes and Surtaxes	Subchapter B. Computation of taxable income	
			Subchapter C. Corporate distributions and adjustments	
			Subchapter E. Accounting periods and methods of accounting	
			Subchapter G. Corporations used to avoid income tax on shareholders	
			Subchapter N. Tax based on income from sources within or without the United States	
			Subchapter O. Gain or loss on disposition of property	
	Subtitle F – Procedure and Administration	Chapter 61 – Information and returns	Subchapter A. Returns and records	
			Chapter 66 – Limitations	Subchapter A. Limitations on assessment and collection
				Subchapter A. Additions to the tax and additional amounts
			Chapter 68 – Additions to the tax, additional amounts, and assessable penalties	
	Chapter 79 – Definitions			

**Table 39: U.S. Intangible Property Tax Statutes.**

Table 39 above lists the structure of the U.S. tax code related to intangible property, e.g., patents. The above table is a tree, from root to branch, proceeding left to right in the table. Each branch of the statutory tree depicted above is a separate tax initiative constructed by U.S. legislation to contain would be beneficiaries of intangible property tax avoidance schemes. The force and magnitude of the U.S. legislative initiatives to fight tax avoidance schemes is contained in two statutory categories: (1)

Subtitle A – Income Taxes, and (2) Subtitle F – Procedure and Administration. Regarding the first statutory category, it comprises nine subcategories of more specificity, as follows: (a) Amortization of goodwill and certain other intangibles,<sup>856</sup> (b) Foreign Corporations – Transfers of property from the United States,<sup>857</sup> (c) Allocation of income and deductions among taxpayers,<sup>858</sup> (d) Personal Holding Companies (‘PHC’s),<sup>859</sup> (e) Controlled Foreign Corporations (‘CFC’s),<sup>860</sup> (f) Limitation on taxpayer's basis or inventory cost in property imported from related persons,<sup>861</sup> (g) Special allocation rules for certain asset acquisitions,<sup>862</sup> (h) Gain from certain sales or exchanges of patents, etc., to foreign corporations,<sup>863</sup> and (i) Sale or exchange of patents.<sup>864</sup> Table 40 below depicts the first statutory category, Subtitle A.

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<sup>856</sup> 26 U.S.C. §197.

<sup>857</sup> 26 U.S.C. §367.

<sup>858</sup> 26 U.S.C. § 482.

<sup>859</sup> 26 U.S.C. Subtitle A, Chapter 1, Subchapter G, Part II.

<sup>860</sup> 26 U.S.C. Subtitle A, Chapter 1, Subchapter N, Part III, Subpart F.

<sup>861</sup> 26 U.S.C. §1059A.

<sup>862</sup> 26 U.S.C. §1060.

<sup>863</sup> 26 U.S.C. §1249.

<sup>864</sup> 26 U.S.C. §1235.

CHAPTER	SUBCHAPTER	PART	SUBPART/SECTION
Chapter 1 – Normal Taxes and Surtaxes	Subchapter B. Computation of taxable income	Part VI. Itemized deductions for individuals and corporations	§ 197. Amortization of goodwill and certain other intangibles
	Subchapter C. Corporate distributions and adjustments	Part III. Corporate organizations and reorganizations	Subpart D. Special Rule; Definitions § 367. Foreign corporations
	Subchapter E. Accounting periods and methods of accounting	Part III. Adjustments	§ 482. Allocation of income and deductions among taxpayers
	Subchapter G. Corporations used to avoid income tax on shareholders	Part II. Personal holding companies	Table 41
	Subchapter N. Tax based on income from sources within or without the United States	Part III. Income from sources without the United States	Subpart F. Controlled Foreign Corporations (Table 42)
	Subchapter O. Gain or loss on disposition of property	Part IV. Special Rules	§ 1059A. Limitation on taxpayer's basis or inventory cost in property imported from related persons
			§ 1060. Special allocation rules for certain asset acquisitions
Subchapter P. Capital gains and losses	Part IV. Special rules for determining capital gains and losses	§ 1235. Sale or exchange of patents	
		§ 1249. Gain from certain sales or exchanges of patents, etc., to foreign corporations	

**Table 40: Normal Taxes and Surtaxes Statutes.**

The PHCs subcategory of statutes and the CFCs subcategory of statutes are the most substantial of the nine subcategories of Subtitle A with respect to this research. The emphasis on PHCs in Table 40 is well deserved. Apparently, there is not a major consulting and/or accounting firm (KPMG,<sup>865</sup> E&Y,<sup>866</sup> PwC,<sup>867</sup> etc.) that does not suggest the formation of some form of holding company (PHC) when attempting to

<sup>865</sup> See generally, KPMG <www.kpmg.com>.

<sup>866</sup> See generally, Ernst & Young <www.ey.com>.

<sup>867</sup> See generally, Price Waterhouse Cooper <www.pwc.com>.

effectively manage Intellectual Property, as indicated in the following excerpt from a KPMG brochure.<sup>868</sup>

**Set up an Intangible Holding Company [PHC]**

An intangible holding company (IHCo) structure is a tax strategy designed to help U.S. multinationals (with significant value in intangibles) defer U.S. income tax on profits generated from foreign product sales until such profits are repatriated to the United States.

Under the IHCo structure, the IHCo will own the foreign rights to product intangibles and assume all risks associated with foreign product sales. Since the IHCo will own the foreign rights to the underlying product intangibles and assume all the risks associated with foreign product sales, the profits from such sales should be attributable to the IHCo, a foreign subsidiary domiciled in a low tax jurisdiction. The USCo [United States Company] should then be able to defer U.S. income tax on profits from foreign product sales until such profits are repatriated.<sup>869</sup>

Legal structures, as indicated in the preceding excerpt, require the U.S. Department of the Treasury to closely monitor all intangible activities related with such structures. The PHC statutes of Part II of Subchapter G comprise the 540 series of Title 26, as indicated below in Table 41.

PART	SECTION
Part II. Personal Holding Companies	§ 541. Imposition of personal holding company tax
	§ 542. Definition of personal holding company
	§ 543. Personal holding company income
	§ 545. Undistributed personal holding company income

**Table 41: Personal Holding Company Statutes.**

Although Table 41 emphasizes the personal side of holding companies, the intent is the same with all holding companies used to structure intangibles and, in some cases, obfuscate the business dealings regarding held intangibles.

The CFC statutes constitute a number of significant “long-arm” statutes of U.S. IRC that levy taxes on U.S. legal entities’ activities in other jurisdictions. These statutes comprise the 950 and 960 series of Title 26, as indicated below in Table 42.

<sup>868</sup> *Management of Strategic and Tax Opportunities – Enhancing Organizational Success by Unlocking the Value of Intellectual Property* (2000) KPMG <www.kpmg.com> at 28 October 2008.

<sup>869</sup> KPMG, *Management of Strategic and Tax Opportunities – Enhancing Organizational Success by Unlocking the Value of Intellectual Property* (2000) <www.kpmg.com> at 28 October 2008.

SUBPART	SECTION
Subpart F. Controlled Foreign Corporations	§ 951. Amounts included in gross income of United States shareholders
	§ 952. Subpart F income defined
	§ 953. Insurance income
	§ 954. Foreign base company income
	§ 955. Withdrawal of previously excluded subpart F income from qualified investment
	§ 956. Investment of earnings in United States property
	§ 957. Controlled foreign corporations; United States persons
	§ 958. Rules for determining stock ownership
	§ 959. Exclusion from gross income of previously taxed earnings and profits
	§ 960. Special rules for foreign tax credit
	§ 961. Adjustments to basis of stock in controlled foreign corporations and of other property
	§ 962. Election by individuals to be subject to tax at corporate rates
	§ 963. Repealed
	§ 964. Miscellaneous provisions
	§ 965. Temporary dividends received deduction

**Table 42: Controlled Foreign Corporations (CFCs) Statutes.**

CFC statutes represent legal control mechanisms in the globalization of intangibles and their associated jurisdictional taxation. These mechanisms are used to unilaterally control the potential beneficial tax scheme opportunities for jurisdictional residents afforded them in foreign jurisdictions. Some believe these tax containment policies violate the fundamental rights of MNEs and have begun to test these policies in court. *Cadbury Schweppes plc, Cadbury Schweppes Overseas Ltd v Commissioners of Inland Revenue*<sup>870</sup> ‘is the first case before the ECJ in respect of a member state’s CFC regime and large amounts of money are at stake across Europe.’<sup>871</sup> Cadbury Schweppes, et al. (‘CS’) had established permanent establishments (‘PE’) in Ireland to take advantage of Ireland’s reduced corporate income tax rate, which was 10% for CS at the time of the dispute. The U.K.’s Inland Revenue commissioners demanded a substantial payment of back taxes owed. CS litigated this demand and during the

<sup>870</sup> *Cadbury Schweppes plc, Cadbury Schweppes Overseas Ltd v Commissioners of Inland Revenue*, ECJ Case C-196/04 (2006) <<http://curia.europa.eu/jurisp/cgi-bin/form.pl?lang=en&newform=newform&alljur=alljur&jurcdj=jurcdj&jurtpi=jurtpi&jurtfp=jurtfp&alldocrec=allldocrec&docj=docj&docor=docor&docop=docop&docav=docav&docsom=docsom&docinf=docinf&alldocnorec=allldocnorec&docnoj=docnoj&docnoor=docnoor&typeord=ALL&docnodecision=docnodecision&allcommjo=allcommjo&affint=affint&affclose=affclose&numaff=196%2F04&ddatefs=&mdatefs=&ydatefs=&ddatefe=&mdatefe=&ydatefe=&nomusuel=&domaine=&mots=&resmax=100&Submit=Submit>> at 27 November 2008.

<sup>871</sup> Bill Dodwell and Carolyn Serrau, *Cadbury Schweppes: the future of CFC legislation* Tax Advisor (July 2006) 27 <[www.tax.org.uk/attach.pl/4545/4747/027\\_TA\\_0706.pdf](http://www.tax.org.uk/attach.pl/4545/4747/027_TA_0706.pdf)> at 27 November 2008.

litigation process the Special Commissioners of Income Tax stayed the proceedings and referred the following question to the ECJ.<sup>872</sup>

Do Articles 43 EC, 49 EC and 56 EC preclude national tax legislation such as that in issue in the main proceedings, which provides in specified circumstances for the imposition of a charge upon a company resident in that Member State in respect of the profits of a subsidiary company resident in another Member State and subject to a lower level of taxation?

Avoiding the legality issue of Britain's CFC statutes, the ECJ ruled in the following manner.

Articles 43 EC and 48 EC must be interpreted as precluding the inclusion in the tax base of a resident company established in a Member State of profits made by a controlled foreign company in another Member State, where those profits are subject in that State to a lower level of taxation than that applicable in the first State, unless such inclusion relates only to wholly artificial arrangements intended to escape the national tax normally payable. Accordingly, such a tax measure must not be applied where it is proven, on the basis of objective factors which are ascertainable by third parties, that despite the existence of tax motives that controlled company is actually established in the host Member State and carries on genuine economic activities there.<sup>873</sup>

The ECJ (Grand Chamber) 'in Luxembourg said that national laws restricting the ability of a company to set up a foreign subsidiary in a lower-tax country were justified only when those operations were "wholly artificial arrangements."<sup>874</sup> The situation in the U.S. regarding CFCs is no less tumultuous than within the EU. As previously quoted, 'large amounts of money are at stake'<sup>875</sup> and that makes taxing authorities nervous.

The second statutory category, Subtitle F, of legislative initiatives consists of the U.S. statutes regarding Procedure & Administrative. Effective CFC statutes, and their enforcement, require the U.S. Department of the Treasury to obtain sufficient evidence to investigate and file complaints against alleged transgressors. The

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<sup>872</sup> *Cadbury Schweppes plc, Cadbury Schweppes Overseas Ltd v Commissioners of Inland Revenue*, above n 870, 28.

<sup>873</sup> *Ibid* 76.

<sup>874</sup> Dan Bilefsky, *International Herald Tribune*, *The New York Times*, *European Court Sets Limits on Countries' Taxing Power* (13 September 2006).

<sup>875</sup> Bill Dodwell and Carolyn Serrau, above n 871, 27.

information required for such is acquired, in large part, through the Procedure & Administrative statutes depicted as Subtitle F in Table 39. Subtitle F consists of four subcategories: (1) Returns and Records,<sup>876</sup> (2) Limitations on Assessment and Collection,<sup>877</sup> (3) Additions to the Tax and Additional Amounts (Penalties),<sup>878</sup> and (4) Definitions.<sup>879</sup> A more detailed view of these four subcategories and the statutes comprising them is provided in Table 43 below.

<b>SUBCHAPTER</b>	<b>PART</b>	<b>SUBPART</b>	<b>SECTION</b>
Subchapter A – Returns and Records	Part III – Information Returns	Subpart A – Information Concerning Persons Subject to Special	§ 6038. Information reporting with respect to certain foreign corporations and partnerships
			§ 6038A. Information with respect to certain foreign-owned corporations
			§ 6038B. Notice of certain transfers to foreign persons
			§ 6038C. Information with respect to foreign corporations engaged in U.S. business
Subchapter A – Limitations on Assessment and Correction	No Part	No Subpart	§ 6503. Suspension of running of period of limitation
Subchapter A – Additions to the Tax and Additional Amounts	Part II – Accuracy-related and Fraud Penalties	No Subpart	§ 6662. Imposition of accuracy-related penalty on underpayments
			§ 6662A. Imposition of accuracy-related penalty on understatements with respect to reportable transactions
			§ 6663. Imposition of fraud penalty
			§ 6664. Definitions and special rules
No Subchapter	No Part	No Subpart	§ 7701. Definitions

**Table 43: Chapters 61, 66, 68 and 79.**

The significance of the above four subcategories of statutes within the Procedure & Administration branch of Table 39 is best presented subcategory by subcategory.

<sup>876</sup> 26 U.S.C. Subtitle F, Chapter 61, Subchapter A.

<sup>877</sup> 26 U.S.C. Subtitle F, Chapter 66, Subchapter A.

<sup>878</sup> 26 U.S.C. Subtitle F, Chapter 68, Subchapter A.

<sup>879</sup> 26 U.S.C. Subtitle F, Chapter 79.

First, Returns and Records, of Table 43 indicate how the 1988 White Paper's recommendations regarding information and records were implemented.<sup>880</sup> Parallel with the U.S.'s extensive legislative effort is an increased U.S. bilateral treaty effort intending to provide greater financial disclosure between the signatories.<sup>881</sup> Second, Limitations on Assessment and Collection, literally stops the clock from running on the U.S. government's time to investigate and collect from wrongdoers. Many, both in the U.S. and abroad, are under the impression that U.S. tax-related issues must surface and be addressed within a statutory period of seven (7) years. Clearly, that is not the case, especially with regard to intangible property transactions.<sup>882</sup> Third, penalties provide the incentive to disclose information quickly and completely. Of particular significance in this regard is the set of regulations<sup>883</sup> accompanying 26 U.S.C. 6662(e)<sup>884</sup> – Substantial valuation misstatement under chapter 1. The penalty-related statutes are significant and reasonably complete. However, the addition of volumes of regulations governing these statutes clearly indicates the importance of this subject matter. In other words, the legislative body agreed to allow rapid changes governing these penalty statutes to be placed in the hands of the U.S. Department of the Treasury, i.e., the U.S. Internal Revenue Service. In brief, the penalty related statutes might change at a legislative pace, while the regulations associated with those statutes may literally change on a daily basis. Fourth and final, Definitions,<sup>885</sup> 26 U.S.C. §7701 provides the definition *de jure*.

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<sup>880</sup> 26 U.S.C. 6038, 26 U.S.C. 6038A, 26 U.S.C. 6038B, and 26 U.S.C. 6038C.

<sup>881</sup> See generally, <<http://www.ustr.gov/trade-agreements/free-trade-agreements>> at 10 April 2013.

<sup>882</sup> 26 U.S.C. 6503.

<sup>883</sup> 61 F.R. 4876-4885 and 68 F.R. 75119-75130.

<sup>884</sup> 26 U.S.C. §6662(e).

<sup>885</sup> 26 U.S.C. §7701.

## APPENDIX II – HYPOTHETICAL EXAMPLE

U.S. Taxpayer (T) is a U.S. corporation that is owned directly or indirectly by one, or perhaps a small number of U.S. individuals. T currently owns, or will develop in the future, certain patented and valuable intangible assets. T currently pays U.S. corporate-income tax at a minimum rate of 35% on adjusted income earned from the worldwide sale or license of its patented and valuable intangible assets.<sup>886</sup> Under U.S. tax law, T currently deducts dividends paid to its shareholders,<sup>887</sup> and other items allowed by law,<sup>888</sup> from gross income.

Given the above facts, what tax advantages are there to transferring existing intangible assets to, or developing new intangible assets at, a newly formed corporation or subsidiary in Ireland?

### Commentary

If T, for example, expects its overseas business to generate \$1,000 of profits, the U.S. (with its minimum 35% corporate income tax rate) would collect as much as \$350.<sup>889</sup> On the other hand, Ireland (with a potentially lower corporate income tax rate of 12.5%) would collect only \$125.<sup>890</sup> If T could incorporate in Ireland, either as a subsidiary or as a separate corporate entity, then T could enjoy a potential tax savings of \$225 (\$350-\$125) out of every \$1,000 earned abroad. Alternatively, perhaps T could defer enough U.S. tax to outweigh the costs of setting up and maintaining a newly formed corporate entity or subsidiary in Ireland.

The problem essentially boils down to two fundamental questions: (1) How best to get future overseas profits out of Ireland and back into the U.S., and (2) How best to get existing income-producing intangible assets out of the U.S. and into Ireland. If any U.S. tax savings is to be accomplished, each of the following obstacles must be addressed.

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<sup>886</sup> U.S. IRC Subtitle A, Chapter 1, Subchapter A.

<sup>887</sup> U.S. IRC Subtitle A, Chapter 1, Subchapter B, Part VIII.

<sup>888</sup> U.S. IRC Deduction of other items from gross income

<sup>889</sup> U.S. IRC Subtitle A, Chapter 1, Subchapter A.

<sup>890</sup> Glenn R. Simpson, above n 118.

**Trading v. Non-Trading Income:** Ireland currently has a corporate income tax scheme that involves the characterization of income into two streams: (1) “Trading income,” which is similar in some respects to active income in the U.S.,<sup>891</sup> is taxable at 12.5%,<sup>892</sup> and (2) “Non-trading income,” which is similar in some respects to passive income in the U.S., is taxable at 25%.<sup>893</sup>

T’s newly formed Irish corporate entity or subsidiary must generate “trading income,” analogous to active income versus passive income in the U.S.,<sup>894</sup> to take advantage of Ireland’s lower 12.5% corporate income tax rate.<sup>895</sup> This would require, among other items, a physical office located in Ireland and a certain number of full-time employees that are all actively engaged in the development of future intangible assets.<sup>896</sup> As royalty income from the sale or lease of patented intangible assets in the U.S. reflects generally passive income,<sup>897</sup> T’s initial hurdle would be to ensure that any profits T’s newly formed Irish corporate entity or subsidiary earned would be treated by Ireland as trading income, i.e., active income. Barring this eventuality, T’s profits from T’s newly formed Irish corporate entity or subsidiary would be taxed by Ireland at 25%, i.e., the “non-trading income” corporate tax rate.

**Ireland’s Withholding Tax:** As a general rule, Ireland has a 20% withholding tax on dividends or other profits distributed by an Ireland corporation, including specifically dividends or other profits generated from patented intangible assets.<sup>898</sup> Distributions subject to this withholding tax are allowed, however, a corresponding U.S. foreign tax credit against future taxable income applies.<sup>899</sup> For example, if T’s newly formed Irish corporate entity or subsidiary earned \$1,125 in trading income, 12.5% or \$125 would have to be paid for Ireland’s corporate income tax. If T received the remaining

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<sup>891</sup> U.S. IRC Subtitle A, Chapter 1, Subchapter E, Part II.

<sup>892</sup> *Inward Investment in Ireland – An overview of the legal, tax and business issues for investors doing business in Ireland* (2007) Matheson – formerly, Matheson Ormsby Prentice, 10-15 <<http://www.matheson.com/>> at 4 December 2011.

<sup>893</sup> Ibid.

<sup>894</sup> U.S. IRC Subtitle A, Chapter 1, Subchapter E, Part II.

<sup>895</sup> Ibid.

<sup>896</sup> Ibid.

<sup>897</sup> U.S. IRC Subtitle A, Chapter 1, Subchapter N.

<sup>898</sup> *Guide to Tax in Ireland 2007* (2007) IDA Ireland, 5 <[www.idaireland.com/](http://www.idaireland.com/)> at 9 April 2010.

<sup>899</sup> U.S. IRC §§ 901-904.

\$1,000 then 20% or \$200 of that would have to be paid to Ireland in withholding tax and the remaining \$800 would be taxable at the U.S. corporate income tax rate of 35% or \$280 in the U.S., thus leaving a total distribution in the U.S. of \$520. Of course, T would have earned a foreign tax credit of as much as \$325 to use against future taxable income, but T would only have that – a tax credit.

Ireland's 20% withholding tax on distributions generated from patented intangible assets developed in Ireland, however, may be avoided altogether if the dividends, or other profits distributed, flow through another entity in the Netherlands, Cyprus or certain other countries having a similar tax treaty with Ireland. While Ireland's withholding tax may be avoided by setting up yet another foreign corporate entity or subsidiary, any of the tax treaty countries with Ireland would still tax the dividends or other profits distributed at a rate typically in the range of between 5 and 10%. While the structure would likely have to be arranged with the assistance of both Irish and foreign counsel, T would want to carefully consider the following before moving forward.

**Ireland's Corporate Deduction:** Similar to the U.S., an Irish corporation is subject to a 20% capital-gains tax on the sale of appreciated property, but unlike the U.S., dividends or other profits distributed by an Irish corporation are never deductible by the Irish corporation. Assuming the same facts as above, T's newly formed Irish corporate entity or subsidiary could not take a corresponding deduction of the entire \$1,000 distribution. The worth, adjusted against future taxable income of \$1,000, being as much as 30% or \$300.

**Best Case Scenario:** It appears that the best that may be accomplished, subject yet to the U.S. anti-deferral rules discussed below, is by setting up a newly formed corporate entity or subsidiary in Ireland (and the associated entity in the Netherlands or Cyprus) is the indefinite deferral of U.S. tax until such time as a distribution is made to the U.S. Assume again that T's newly formed Irish corporate entity or subsidiary earned \$1,125 in overseas profits related to future intangible assets developed in Ireland. 12.5% or \$125 would be due under Ireland's corporate income tax leaving \$1,000. Assuming a lower 5% withholding rate by filtering dividends or other profits distributed through the Netherlands or Cyprus, then \$950 remains. To take full advantage of the U.S. tax savings/deferral with respect to profits earned abroad and to

achieve an overall 17.5% tax rate, the \$950 should then be reinvested back into the Irish corporate entity or subsidiary. If the \$950 is ever distributed or repatriated to the U.S., assuming again a maximum 35% tax rate, \$332.50 of the \$950 would be due in U.S. corporate income tax resulting in a final distribution of only \$617.50 and a foreign tax credit of \$175. However, under these circumstances no corresponding distribution deduction for the newly formed Irish corporate entity or subsidiary against future taxable income exists.

Again, subject to the U.S. anti-deferral rules discussed below, if overseas profits generated from intangible assets developed in Ireland were ever distributed or repatriated to the U.S., T would enjoy a slight amount of U.S. tax savings/deferral, but considering the lack of a distribution deduction in Ireland, although available in the U.S., perhaps the benefits are not enough to warrant the costs to set up and maintain two foreign corporate entities or subsidiaries.

**Selling Existing Patented Intangible Assets:** In addition to the previous question of how best to let overseas profits out of Ireland and back to the U.S., there is also the problem of how to get existing income-producing assets out of the U.S. and into Ireland. Under *26 U.S.C. § 367(a)*, the general rule is that gain is recognized on the outbound transfer of appreciated property, e.g., ‘a United States person transfers property to a foreign corporation.’<sup>900</sup>

For example, if T sold existing intangible assets worth U.S. \$1 million with a basis of \$100,000 to the newly formed Irish corporate entity or subsidiary, T would have to recognize a gain of U.S. \$900,000. *26 U.S.C. § 367(d)*, however, states ‘if a United States person transfers any intangible property (within the meaning of *26 U.S.C. § 936(h)(3)(B)*) to a foreign corporation’ then special rules apply to such transactions. *26 U.S.C. § 936(h)(3)(B)* provides a very broad definition of intangible property, as indicated below.

The term "intangible property" means any -

- (I) patent, invention, formula, process, design, pattern, or know-how;
- (ii) copyright, literary, musical, or artistic composition;

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<sup>900</sup> *26 U.S.C. § 367(a)*.

- (iii) trademark, trade name, or brand name;
- (iv) franchise, license, or contract;
- (v) method, program, system, procedure, campaign, survey, study, forecast, estimate, customer list, or technical data; or
- (vi) any similar item,

which has substantial value independent of the services of any individual.<sup>901</sup>

Under *26 U.S.C. § 367(d)(2)*, such ‘[t]ransfer of intangibles [are] treated as transfer pursuant to sale of contingent payments.’<sup>902</sup> In other words, such transfers to foreign corporations are treated as having been sold for contingent payments on the productivity, use, or disposition of the intangible assets, thus receiving annual contingent payments over the useful life of the assets. Under these conditions, T would then be required to report the U.S. \$900,000 as recognized income over the useful life of the assets, even though contingent payments may not actually be made.

*26 U.S.C. § 1249(a)* further converts the gain from the sale of certain intangible assets covered by *26 U.S.C. § 367(a)*, such as patents, to ordinary income if a U.S. seller, which includes U.S. domestic corporations, controls the foreign corporation and if the gain would otherwise be capital gain.<sup>903</sup> Likewise, *26 U.S.C. § 1235* makes an exception to *26 U.S.C. § 367(a)*. *26 U.S.C. § 1235* allows the gain on profits of patents to be treated as long-term gain, but only if the sale is to a non-related party.<sup>904</sup> *26 U.S.C. § 1249(b)* states ‘control means, with respect to any foreign corporation, the ownership, directly or indirectly, of stock possessing more than 50 percent of the total combined voting power of all classes of stock entitled to vote.’<sup>905</sup> Constructive ownership rules under *26 U.S.C. § 958(b)* are also imposed on such transactions. So, as T would have to recognize gain of U.S. \$900,000 as ordinary income, broken up over the course of the useful life of the intangible assets, it seems clear that selling the intangible assets to a related or controlled foreign corporation would negate any potential savings/deferral in U.S. tax.

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<sup>901</sup> *26 U.S.C. § 936(h)(3)(B)*.

<sup>902</sup> *26 U.S.C. § 367(d)(2)*.

<sup>903</sup> *26 U.S.C. § 1249(a)*.

<sup>904</sup> *26 U.S.C. § 1235*.

<sup>905</sup> *26 U.S.C. § 1249(b)*.

**Licensing Existing Intangible Assets:** Since selling T's intangible assets to an Irish corporate entity or subsidiary seems problematic, what about licensing existing intangible assets to a newly formed Irish corporate entity or subsidiary? If T licenses, but does not sell, certain intangible assets overseas, any income recognized would be treated as royalty income. When a U.S. corporation receives royalty payments from the transfer of intangible assets such as patents, and the transfer does not constitute a sale, the corporation may subject itself to a PHC tax. *26 U.S.C. § 541* provides that '[i]n addition to other taxes imposed by this chapter, there is hereby imposed ... a personal holding company tax equal to 15 percent of the undistributed personal holding company income.'<sup>906</sup> Undistributed personal holding company income, as defined by *26 U.S.C. § 545*, is essentially gross income adjusted by taxes paid, net operating losses, depreciation, and ordinary and necessary expenses of PHCs.<sup>907</sup> A PHC, as defined by *26 U.S.C. § 542*, is basically a corporation with more than 50% of the outstanding shares of stock owned directly or indirectly by less than 5 individuals,<sup>908</sup> and thus, is subject to an additional 15% personal holding company tax.

*26 U.S.C. § 543(d)*, however, provides an exclusion from the personal holding company tax. U.S. corporations actively engaged in the development and licensing of computer software will not be considered to receive undistributed personal holding company income.<sup>909</sup> Specifically, '[f]or purposes of this paragraph, personal holding company income shall be computed – <sup>910</sup> 'without regard to amounts described in subsection (a)(1)(C),'<sup>911</sup> i.e., 'active business computer software royalties (within the meaning of subsection (d)).'<sup>912</sup> Assuming that T, as a U.S. corporation owned by less than 5 U.S. individuals, is a personal holding company, and unless the patented intangible assets are computer software, by licensing rather than selling the intangible assets, T would have a U.S. tax of 15% on any undistributed personal holding company income earned by the T's newly formed Irish corporate entity or subsidiary.

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<sup>906</sup> *26 U.S.C. § 541.*

<sup>907</sup> *26 U.S.C. § 545.*

<sup>908</sup> *26 U.S.C. § 542.*

<sup>909</sup> *26 U.S.C. § 543(d).*

<sup>910</sup> *26 U.S.C. § 543(d)(5)(B).*

<sup>911</sup> *26 U.S.C. § 543(d)(5)(B)(i).*

<sup>912</sup> *26 U.S.C. § 543(a)(1)(C).*

Accordingly, such tax would negate any potential U.S. tax savings/deferral by licensing the existing intangible assets to a newly formed Irish corporate entity or subsidiary.

**Controlled Foreign Corporation Tax Regime:** The income of a foreign corporate entity or subsidiary of a U.S. corporation generally enjoys deferral of U.S. tax until repatriated to the U.S. The U.S. controlled foreign corporation tax regime under 26 U.S.C. §§ 951-965 (commonly referred to as Subpart F of the U.S. tax code), however, does not revoke the benefit of deferral. Subpart F does prevent a U.S. domestic corporation like T's from using a low corporate income tax country like Ireland, the Netherlands or Cyprus to shelter income earned in other foreign countries from the full U.S. tax burden. Importantly, this regime applies to profits related to both licensing existing intangible assets as well as the profits generated from future intangible assets developed overseas. Likewise, the regime also prevents a U.S. domestic corporation from using a tax haven to shelter passive investment income. A foreign corporation is a CFC if U.S. shareholders own more than 50% of the stock of the corporation, measured both by vote and value, on any day during the taxable year.<sup>913</sup> The term 'U.S. shareholder' refers to any 'U.S. person,' including but not limited to U.S. individuals and U.S. domestic corporate entities owning at least 10% of the total combined voting power of all classes of stock entitled to vote.<sup>914</sup> A set of attribution rules applies to the determination of the necessary stock-ownership tests. For example, if T owned something less than 50% of a newly formed Irish corporate entity or subsidiary, let's say 49%, and if 6 other U.S. persons owned the remaining 51% equally, or 8.5% for each, then despite the fact that all are U.S. entities or individuals the foreign entity is not owned by U.S. shareholders under 26 U.S.C. § 7701 and is not a CFC.

If T, on the other hand, establishes a newly formed Irish corporate entity or subsidiary that is a CFC, the effect is that the U.S. shareholders do not receive the benefit of deferral with respect to certain "tainted" classes of the newly formed Irish CFC's earnings. Instead, a U.S. shareholder must include its *pro rata* share of any tainted

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<sup>913</sup> 26 U.S.C. Subtitle A, Chapter 1, Subchapter N, Part III, Subpart F.

<sup>914</sup> 26 U.S.C. § 7701(a)(30).

earnings in his or her gross income as the CFC earns them.<sup>915</sup> The principal types of earnings subject to this current pro rata inclusion are ‘subpart F income.’ Subpart F income specifically includes, among other things, passive income from the CFC’s profits generated from royalties or interest with respect to patents and valuable intangible assets.<sup>916</sup>

**Multiple Anti-Deferral Regimes:** Because the U.S. maintains anti-deferral regimes, other rules under the U.S. CFC tax regime serve to prevent double correction for the effects of U.S. tax savings/deferral. If T would be required to include an amount of income under both the U.S. controlled foreign corporation tax rules and the foreign personal holding company U.S. tax rules, it is included only once. In this situation, it would be included only under the U.S. controlled foreign corporation tax rules.<sup>917</sup> Again, the “taint” of subpart F income is designed to prevent the transfer of income to offshore tax havens to defer U.S. tax and, if income is subject to a sufficiently high tax rate in a foreign jurisdiction, the income need not be “tainted.”<sup>918</sup> Under current law, the maximum U.S. corporate income tax rate is 35%,<sup>919</sup> and the controlled foreign corporation rules do not apply if the effective foreign tax rate is more than 31.5%.<sup>920</sup> T’s shareholders would then be taxed without actually receiving dividends or other profits distributed, as much as 31.5% on the profits generated from intangible assets developed abroad. Such tax would dwarf any potential U.S. tax savings/deferral in the best-case scenario discussed above.

**Arm’s Length Price:** In addition, with respect to selling or licensing existing intangible assets to a newly formed Irish corporate entity or subsidiary, T would also be subject to the complicated transfer pricing rules that demand an arm’s length price was achieved in the transaction.<sup>921</sup> 26 U.S.C. § 482 is simple and concise, consisting of only two sentences without a single word regarding arm’s length pricing. However, the regulations associated with 26 U.S.C. § 482 are some of the most

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<sup>915</sup> 26 U.S.C. Subtitle A, Chapter 1, Subchapter N, Part III, Subpart F.

<sup>916</sup> 26 U.S.C. Subtitle A, Chapter 1, Subchapter N, Part III, Subpart F.

<sup>917</sup> 26 U.S.C. Subtitle A, Chapter 1, Subchapter N, Part III, Subpart F.

<sup>918</sup> 26 U.S.C. Subtitle A, Chapter 1, Subchapter N, Part III, Subpart F.

<sup>919</sup> Effective corporate tax rate is typically above 40% due to the addition of U.S. State corporation taxes.

<sup>920</sup> 26 U.S.C. Subtitle A, Chapter 1, Subchapter N, Part III, Subpart F.

<sup>921</sup> 26 U.S.C. § 482 – Arm’s Length Transaction.

voluminous and complicated, if not the most voluminous and complicated, of all regulations associated with any particular section of the U.S. IRC.<sup>922</sup> Broadly speaking, 26 U.S.C. § 482 enables ‘the Secretary [of the U.S. Department of the Treasury]’ to ‘distribute, apportion, or allocate gross income, deductions ... between or among such organizations, trades, or businesses ... in order to prevent evasion of taxes ...’<sup>923</sup> In brief, the U.S. IRS (under the auspices of the U.S. Department of the Treasury) may re-characterize or reallocate income and deductions among and between separate taxpayers to reflect the economic reality, or the true arm’s length price, with respect to any transaction.

Recently, the U.S. Department of the Treasury sent to the U.S. Congress a mandated report on three problematic international tax issues, including the transfer pricing rules and the misuses of income tax treaties to which the U.S. is a party. The transfer pricing study focuses on issues related to the shifting of income from the U.S. through transactions between related parties, and it reviews 26 U.S.C. § 482 regulations and the effectiveness of current transfer pricing rules and compliance efforts. This review is intended to ensure that related party transactions cannot be used to improperly shift income out of the U.S. using non-arm’s length transfer pricing schemes. It is highly likely that any flexibility that exists within the domain of 26 U.S.C. § 482 through the use of creative interest payment schemes will, in the very near future, be entirely eliminated.

**Buy/Sell Agreement:** There is the possibility of utilizing a CSA whereby T and the newly formed Irish corporate entity or subsidiary jointly develop and own future intangible assets, or transfer existing intangible assets without having to technically buy or license them outright, to thereby avoid U.S. tax on any future profits from the intangible assets located and/or developed in Ireland, while also used in the U.S. Generally, if there is a *bona fide* research and development cost sharing arrangement that realistically allocates costs attributable to develop intangible assets among related parties and the income allocated among the parties reasonably reflects the actual

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<sup>922</sup> 26 CFR §§ 1.482-0 – 1.482-9.

<sup>923</sup> 26 U.S.C. § 482.

economic activity undertaken by each party, then such an agreement will be upheld, as in the case of *Microsoft v. Commissioner of Internal Revenue*.<sup>924</sup>

The problem with a cost sharing arrangement is 26 U.S.C. § 367(d), 26 U.S.C. § 482, as well as the controlled foreign corporation regime previously discussed. Reiterating points from the above discussion regarding existing intangible assets, 26 U.S.C. § 367(d) provides that on the transfer of intangible assets, or any portion thereof, by a U.S. person to a foreign corporation; the U.S. person shall be treated as having sold the intangible assets, or any portion thereof, in exchange for payments that are contingent on the productivity, use or disposition of the assets, and then receiving annually these contingent payments over the useful life of the intangible assets. The controlled foreign corporation regime would also apply to subpart F income generated by the CFC with respect to profits generated from its share of ownership of the jointly owned intangible assets.

Finally, as the allocation of profits under a cost sharing agreement will have to be proportionate to the ownership and development of the assets, the U.S. IRS will quickly impute a different cost sharing arrangement if the agreement runs counter to economic reality, i.e., classic “substance over form” doctrine under 26 U.S.C. § 482. T would want to utilize the advanced pricing agreement procedure of the regulations under 26 U.S.C. § 482 whereby, as intimated, T provides to the U.S. IRS evidence of an arm’s length price and the U.S. IRS in order to provide certainty before a costly transaction is completed, will determine in advance if it meets 26 U.S.C. § 482 requirements. Essentially, with respect to any future intangible assets develop in Ireland, any cost sharing agreement that accurately reflects the economic reality of the split, either in research and development or in any future profits, would not yield U.S. tax savings/deferral. If such an agreement did, it would also run afoul of 26 U.S.C. § 482.

## **Outcomes**

Due to the U.S. anti-deferral rules,<sup>925</sup> particularly the controlled foreign corporation regime,<sup>926</sup> T would not gain U.S. tax deferral/savings with respect to moving existing

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<sup>924</sup> *Microsoft Corporation v. Commissioner of Internal Revenue*, United States Tax Court, T.C. Memo. 1998-54 (1998).

<sup>925</sup> 26 U.S.C. Subtitle A, Chapter 1, Subchapter N, Part III, Subpart F.

patented and valuable intangible assets to a newly formed Irish corporate entity or subsidiary. Neither would T gain U.S. tax deferral/savings with respect to any profits generated from future intangible assets developed in a newly formed Irish corporate entity or subsidiary. If T were to partner, perhaps through a joint venture of some sort, with other individuals or corporations such that the U.S. controlled foreign corporation tax rules did not apply; and if T could afford for its overseas profits generated from future intangible assets developed in Ireland to remain indefinitely outside of the U.S., incorporating in Ireland might make some sense. T could expect additional costs to set up such an arrangement, with proper legal advice and expertise from Irish counsel, to run anywhere from \$30,000 U.S. dollars to \$80,000 U.S. dollars, assuming no serious issues arise.

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<sup>926</sup> U.S., *Subpart F – Controlled Foreign Corporations* (2011) Government Printing Office ('GPO') <<http://www.gpo.gov/fdsys/pkg/USCODE-2011-title26/pdf/USCODE-2011-title26-subtitleA-chap1-subchapN-partIII-subpartF.pdf>> at 9 April 2013.

## APPENDIX III – OECD TAX PLANNING STRUCTURE<sup>927</sup>

### **(The transfer of manufacturing operations together with a transfer of supporting intangibles under a cost-contribution arrangement)**

Company A is a publicly traded company, based in Country A. It is the parent of an MNE group with global operations. The Group invests heavily in research, product design, and development activities (see Figure 36).<sup>928</sup> R&D activities are carried out by the parent company, Company A. Previously, Company A owned all IP resulting from its research and development activities. It also had sole responsibility for and risks associated with the manufacture of products and sold those products through a network of sales and distribution companies in markets around the world. Company A's managers then decided to create a wholly-owned subsidiary, Company B in Country B, and assign to it IP and responsibility for the manufacture and sale of products outside of Country A. Company A retained domestic intangible property rights related to the manufacture and sale of products within Country A, and continued to carry out research and development activities for the Group.

At the same time Company B was organised, the Group organised two additional foreign subsidiaries. Each of these companies was wholly-owned by Company B.<sup>3</sup> One of these, Company C, was organised in Country C and serves as the principal company responsible for the manufacture and sale of Group products outside Company A. The other, Company D, is a manufacturing entity responsible for the production of Group products outside of Country A.

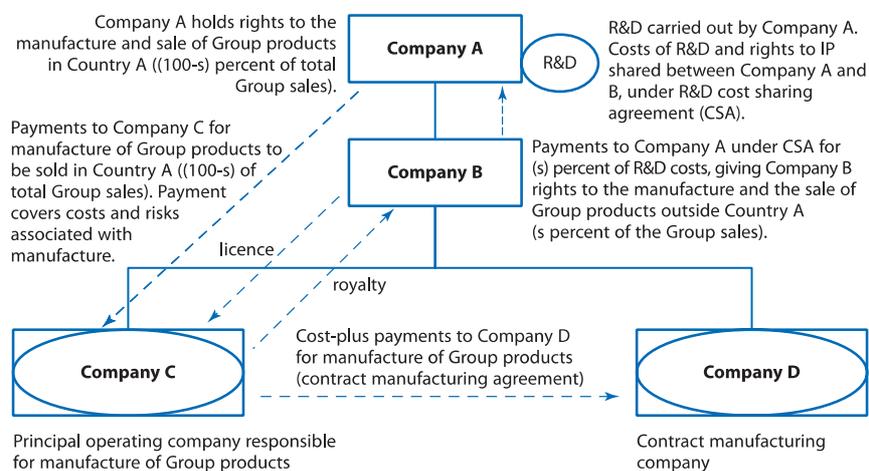
While Company C and Company D are treated as corporations under the laws of Country C and Country D, respectively, both are treated as disregarded entities under Country A's check-the-box rules. This treatment carries important implications. Transactions between these disregarded entities and Company B – including royalty and dividend payments to Company B – are disregarded for Country A tax purposes (i.e. they are viewed as transactions occurring within the same entity). Moreover,

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<sup>927</sup> OECD (2013), *Addressing Base Erosion and Profit Shifting*, OECD Publishing, Annex C <<http://dx.doi.org/10.1787/9789264192744-en>> at 14 September 2013.

<sup>928</sup> Figure 36 depicts a simplified version of Company A's Group global structure. Company A, for example, refers to the Country A parent company together with its domestic affiliates (filing a consolidated income tax return).

under the check-the-box election, Company B is viewed for Country A tax purposes as performing the activities in fact performed by Company C and Company D.



**Figure 36: Group A's Tax Planning Structure.**<sup>929</sup>

The transfer of IP from Company A to Company B is taxable in Country A. Often, but not invariably, in structures of this type the transfer would take place pursuant to a cost-sharing agreement (CSA). Under the CSA, Company C is obliged to make a buy-in payment for pre-existing IP to Company A. The buy-in payment may be structured as either a lump-sum payment or a running royalty. Company C then assumes responsibility going forward to reimburse Company A for a share of ongoing research and development expense reflecting the share of anticipated benefit Company C expects to derive from the ongoing research and development expenditures. For example, if Company C were to be responsible for 45% of global revenues and to derive 45% of global operating income, it would be expected to reimburse Company A for approximately 45% of the product area research and development costs covered under the cost sharing agreement. This effectively eliminates the current Country A tax deduction for that portion of research and development expense reimbursed by Company C under the cost sharing agreement. Despite the fact that Company C reimburses it for a percentage share of its research and development costs, Company

<sup>929</sup> *Source:* Based on “Present Law and Background Related to Possible Income Shifting and Transfer Pricing”, prepared by staff of the Joint Committee on Taxation, submitted to the US House Committee on Ways and Means, 20 July 2010, JCX-37-10, p.93.

A is entitled to an R&D tax credit in Country A for the full amount of its R&D expenditures (including the portion reimbursed by Company B).

By virtue of its buy-in payments and CSA payments, Company B is treated as the owner of the non-Country A IP rights of the Group. Company B licenses those IP rights to Company C. Company C contractually assumes responsibility for producing and selling Group products outside Country A and contractually assumes the risks associated with the business. Company C engages Company D to serve as a contract manufacturer. Under the contract manufacturing agreement, Company D manufactures Group products for a fee equal to direct and indirect costs of production plus a 5% mark-up. The manufacturing agreement between Company C and Company D specifies that Company C bears the principal risks associated with the production of the product. Actual production of products may take place in Country D or in a branch of Company D in a low-cost manufacturing country. Company D includes this fee in its taxable income.

The manufactured products are the property of Company C, which sells the products to or through related sales and marketing entities in higher tax jurisdictions around the world. The contractual arrangements between Company C and the marketing companies specify that Company C assume the principal risks related to the marketing of the products. On this basis, sales and marketing companies are compensated for their efforts on a basis reflecting their limited risk status. Such compensation would usually be computed on the basis of a target return on sales determined for transfer pricing purposes by reference to the returns earned by arguably comparable limited risk marketing and distribution companies. Company C would earn profit equal to its gross sales revenue on foreign sales, less fees paid to Company D for the manufacture of the goods, payments to any related commission-based marketing entities, and less in royalties paid to Company B. This profit is subject to corporate income tax in Country C.

Royalties paid to Company B by Company C for its foreign IP rights are deductible in the computation of the corporate tax base of Company C.<sup>4</sup> As Country C does not impose withholding tax on royalty payments, and Country B does not impose corporate income tax, the royalty is free of withholding tax upon payment, and free of income tax upon receipt. Moreover, possible Country A taxation of Company A on

royalty income received by Company B under Country A CFC rules is avoided with application of check-the-box rules under which Company C can be treated as a disregarded entity. Under check-the-box provisions in the Country A, Company C is treated for Country A tax purposes as a branch of Company B. Thus royalty payments from Country C to Company B are treated as payments within a single corporation, and thus are disregarded (not recognised) for Country A tax purposes. Allowing check-the-box provisions to apply in this way effectively allows the Group to erode the Country C tax base with deductible royalty payments and simultaneously side-step application of the Country A CFC provisions that would otherwise apply to royalty income passively received by Company B.

Similarly, dividends paid to Company B are free of tax at source, Country B does not tax dividend income, and the dividend payments are disregarded for Country A tax purposes.