

Apple Tax Case

and the Implications for Ireland

by Jim Stewart

# **Upsetting the Apple Cart**

Tax-based industrial policy in Ireland and Europe

David Jacobson





## **Apple Tax Case and the Implications for Ireland**

### **By Jim Stewart**

**Draft Chapter for the forthcoming Book:** 

**Upsetting the Apple Chart** 

Tax-Based Industrial Policy in Ireland and Europe

**FEPS – TASC Project** 

#### **Abstract**

The focus of this chapter is on tax strategies that stem from aspects of Ireland's corporate tax regime. The chapter deals in particular with Apple tax strategies, and the European Commission ruling on Apple. The chapter critically examines the Irish Government's and Apple's case against the European Commission ruling. Finally the chapter considers more broadly the case against the European Commission State aid cases from the United States Government perspective that the decision creates additional uncertainty in tax with considerable adverse implications for economic growth.

#### Introduction

Taxation of large corporations has moved centre stage. In part, this shift relates to concern about taxation of the digital economy. This is important because, as noted by the EU (European Commission, 2017a, p. 5), "Digitalisation affects all businesses, but to varying degrees". That is to say, it is a continuum and not a dichotomy. For example aircraft travel and tourism has a very large digital element – payment, marketing and provision of some services, but would not generally be recognized as being part of the digital economy.

In association with taxation, regulation of large firms in the 'digital age' has also become a central issue. Particular problems have received extensive publicity, for example, using digital platforms to interfere in the U.S. and other elections. These problems stem from a concentration of power. This concentration of power "creates a new set of gatekeepers, allowing a handful of platforms to control which ideas and opinions are seen and shared" (Berners-Lee, 2018).

Dominance of key sectors by MNEs has been a recurring theme. For example, the dominance of what were known as 'the seven sisters' in oil production for three decades preceding the 1973 oil crisis (Sampson, 1975). Likewise, the dominance of U.S.-owned companies has long attracted interest (Servan Schreiber, 1967).

Ireland is central to the tax strategies of several major U.S. corporations such as Apple and Google. This chapter deals in particular with Apple tax strategies, including recent disclosures from the 'Paradise Papers', and the EU ruling on Apple. The chapter critically examines the Irish Government and Apple case opposing the EU ruling. The chapter then considers the U.S. Government case against the European Commission state aid ruling, a decision that creates additional uncertainty in tax with considerable adverse implications for economic growth. Issues relating to a possible windfall gain of more than two times tax revenues for Ireland and possible revenue losses for the U.S. are not discussed.

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

The chapter is structured as follows: the first section discusses the role of FDI in Irish economic growth and recovery; the next section discuss the European state aid cases and their implications; this is followed by a discussion of Apple and its tax strategies and effective tax rates; then the Commission Apple Decision and appeals are then considered; then a consideration of the arguments of the U.S. Government that State aid cases have created uncertainty in tax positions. Finally, the chapter considers some policy recommendations for industrial strategy.

#### (1) FDI and Irish economic growth and recovery<sup>1</sup>

Figure (1) shows the recent fall in Irish GDP followed by recovery. The figure shows GDP change for three other bailout countries. It also shows that all four bailout countries have experienced growth in recent years. Irish economic growth was a spectacular 26.5% in 2015. Some reasons for this improvement will be discussed later.

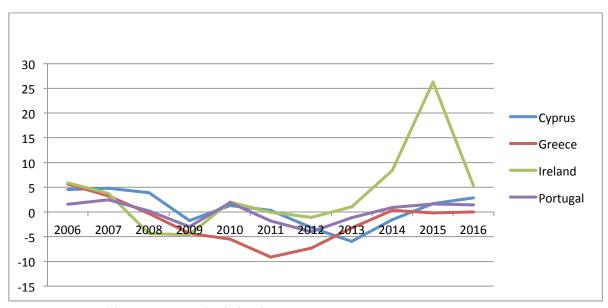


Figure (1): GDP Change 2006-2016

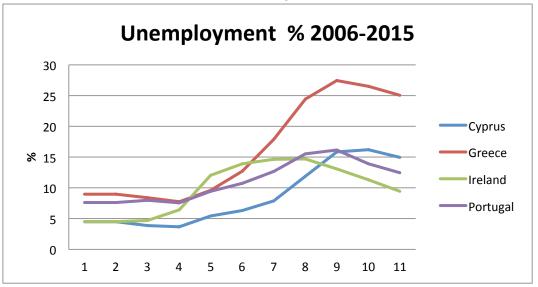
Source: IMF World Economic Outlook database

Figure (2) shows rising rates of unemployment followed by a fall in all countries. Again, Ireland experienced the steepest decline in unemployment rates. Similar to other 'bailout countries', there has was net migration from 2009 to April 2015, but also growth in employment. An important question: was the fall in employment due to Ireland's industrial policy to attract FDI?

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<sup>&</sup>lt;sup>1</sup> All charts are from The IMF World Economic Outlook database available at http://www.imf.org/external/pubs/ft/weo/2016/02/weodata)

Figure (2)



Source: IMF World Economic Outlook database

#### What explains Ireland's recent economic success?

#### (a) Reasons for the recovery

Ireland's very favorable corporate tax regime and the role of FDI are often cited as the main reasons for the economic recovery in Ireland. However, GDP growth is an unreliable indicator of economic health, as interpreting Irish national account figures has become increasingly difficult due to the effects of MNE tax strategies such as switching profits to Ireland via transfer pricing. The recent growth in GDP (and growth in corporate tax payments) may be largely explained by MNE tax strategies. The level of direct investment, excluding the Irish Financial Services Centre, rose from €168 billion in 2013 to €560 billion in 2016.<sup>2</sup> This increase is mostly explained by inflows of intellectual Property (IP). The increased value of IP has in turn led to an increase in profits and corporate tax payments. Trading profits increased from €95.3 billion in 2014 to €141.7 billion in 2015. At the same the value of capital allowances increased from €2.6 billion in 2014 to €26.8 billion in 2015 (Tancred, 2016, p. 8), reflecting the large increase in IP tax credits. So that while trading profits increased by €46 billion corporate tax payments increased by €2.2 billion to €6.87 billion between 2014 and 2015. Capital allowances on the value of IP, plus interest deductions on the financing of IP, are an integral part of the recent tax strategy of Apple as discussed later.<sup>3</sup>

The U.S. Bureau of Economic Analysis (BEA) has consistently reported larger net income of U.S.-owned investment in Ireland than is compatible with published Irish economic data (see Table 1). One reason for this was because a small number of firms were 'stateless', such as Apple. These

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<sup>&</sup>lt;sup>2</sup> CSO, Dublin, Quarterly International Investment Position and External Debt, Table (4).

<sup>&</sup>lt;sup>3</sup> The European Commission Working Chapter no. 71 states (p. 12):- "Ireland stands out as the Member State with the highest net royalty payments (as a percentage of GDP), which is consistent with a potential ATP (Aggressive Tax Planning) channel using royalty payments.

firms were not regarded as resident in Ireland for tax purposes and their profits were not recorded in Irish economic data. In fact, Apple famously declared to the U.S. Senate subcommittee on investigations that they were not resident anywhere for tax purposes.<sup>4</sup>

Similarly, profits of MNE subsidiaries that use a 'double Irish' tax strategy (Google is an example), were allocated in Irish economic data to where they were deemed to be 'managed and controlled', or rather where they were resident for corporate tax purposes (often locations such as Bermuda or the Cayman Islands).

The recent increase in measured GDP reflects the incorporation of previously earned profits in Irish resident but not tax-resident subsidiaries, in Irish economic data. It is no longer possible for Apple to remain stateless for tax purposes, and around 60 per cent of the value of Apples Group profits are declared in Ireland, so that Apple is now one of the largest payers of corporate tax in the country.<sup>5</sup>

Table (1) shows that profits of U.S. MNEs increased between 2014 and 2015, although the increase was not as great as that shown in Irish statistics. Table (1) also shows that nearly 68% of total profits earned by U.S. firms within the EU are earned within three countries: the Netherlands, Ireland and Luxembourg, where tax rates are low (under 3 % for 2015) and have fallen in recent years in the case of Ireland and the Netherlands.

Table (1)

Net Income of U.S. MNEs in Various Countries (\$ billions)

	1	1	ı	T		1	1	1	ı
	2013	2013	2013	2014	2014	2014	2015	2015	2015
Low tax	Net	Tax	Tax Rate	Net	Tax	Tax Rate	Net	Tax	Tax Rate
Countries	Income	Paid	%	Income	Paid	%	Income	Paid	%
Netherlands	134.1	3.7	2.7	152.6	5.6	3.5	186.5	3.8	2.0
Luxembourg	112.7	0.4	0.4	124.4	0.8	0.6	81.6	0.8	1.0
Ireland <sup>1</sup>	106.8	3.6	3.3	115.3	4.0	3.3	131.6	4.0	2.9
Bermuda	76.5	0.2	0.2	84.2	n.a.	n.a.	70.4	0.7	1.0
Switzerland	64.5	2.9	4.3	70.6	2.8	3.8	69.9	3.1	4.2
UK Islands	49.6	0.9	1.7	74.2	0.7	0.9	63.0	0.6	0.9
Caribbean									
Others									
France	6.8	3.5	33.9	2.4	4.1	63.0	7.9	3.5	30.1
Germany	16.9	3.9	18.7	23.0	6.7	22.6	21.1	4.9	18.8
UK	72.3	8.6	10.6	9.7	9.1	48.4	11.8	7.1	37.6
E.U.	483.2	32.0	6.2	544.3	40.3	6.9	585.8	32.6	5.3
Total World	1044.6	138.9	11.7	1166.2	160.6	12.1	1065.8	91.2	7.9

Source: U.S. Bureau of Economic Analysis various issues

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<sup>&</sup>lt;sup>4</sup> Apple famously stated to the Senate subcommittee (2013) that "Apple has not made a determination regarding the location of AOI's central management and control. Rather, Apple has determined that AOI is not managed and controlled in Ireland"

<sup>&</sup>lt;sup>5</sup> Tim Cook wrote in 2016 "we have become the largest taxpayer in Ireland ", see http://www.apple.com/ie/customer-letter

#### (b). What about employment?

Discussions of the impact of FDI sometimes refer to the total number employed in foreign-owned firms. For example, the Department of Jobs, Enterprise and Employment (2014, p. 1) states:

"Foreign Direct Investment (FDI) has been a key contributor to Ireland's economic development and growth through providing rewarding employment for over 250,000 people directly, knowledge transfer, and transformation of the enterprise base."

The CSO estimated the total number of those employed in foreign-owned firms to be 297.7 thousand in 2012 and 305.9 thousand in 2015, an increase of 7,200 thousand. Table (2) shows that total employment increased between these two dates by 18,500. This growth seems to indicate that employment in foreign owned firms, while important, is not the most significant contributor to recovery.

Rather than total employment in foreign-owned firms, which includes Tesco (14,500 employees)<sup>6</sup> and Lidl (4500 employees)<sup>7</sup> Marks and Spencer (2300 employees)<sup>8</sup>, etc. Most analysis focuses on what are described as 'agency-supported' foreign-owned firms, in particular U.S.-owned firms. Thus total employment in foreign-owned firms likely overstates the extent to which FDI, as conventionally understood, has driven employment growth during the recovery.

Indeed, according to the Industrial Development Authority (IDA) there were 111,600 employees in U.S. companies in Ireland in 2012 and 137,700 in 2015, an increase in employment of 26,100. However CSO data for employment amongst U.S. companies shows a much smaller increase of 6,100 during the same period.

Table (2) Employment by U.S. firms in Ireland

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

- (1). Majority-owned foreign affiliates. (2) IDA Annual Report and accounts
- (2) IDA Annual Report and Accounts
- (3) CSO (2015) defined as 'location of owner and referred to as "United States".

The data refers to ". Foreign affiliates with voting rights resident in the U.S. CSO (2015) Table 3.3. Location refers to the location of the Ultimate Controlling Parent,

Definitions:- Although 10 % ownership of the voting power is recommended as the lower threshold for FDI, the Benchmark Definition (BMD4) follows the OECD Handbook on Economic Globalisation

<sup>&</sup>lt;sup>6</sup> See http://www.top1000.ie/tesco.

<sup>&</sup>lt;sup>7</sup> See http://jobs.lidle.ie.

<sup>&</sup>lt;sup>8</sup> See http://www.top1000.ie/marks-and-spencer.

Indicators in recommending that the Activities of Multinational Enterprises (AMNE) should be compiled for the controlled subset of foreign affiliates. The controlled subset is defined as part of the Foreign Direct Investment Relationship, as the subsidiaries of the parent. Subsidiaries are entities in which a direct investor owns more than 50% of the voting power Source http://www.cso.ie/en/releasesandpublications/ep/p-fdi/fdi2015/ae/ Table 3.3.

(4) Defined as "regional location of owner" referred to as "America". Source http://www.cso.ie/en/releasesandpublications/ep/p-fdi/fdi2015/ae/ Fig. 3.1

This publication presents employment data based on administrative data sources, namely the Revenue Commissioners' P35L dataset of employment. Employment, for the purposes of this section, is defined as the number of permanent employees in an enterprise in a given year. This includes both full-time and part-time employees. In order to include temporary employees and employees who commence/finish work during the year, a number of temporary employees whose cumulative insured weeks amount to a full year, are counted as one employee.

Source:- CSO:- Foreign Direct Investment in Ireland 2015.

Table (3) thus shows most employment growth in the period between Q3 2011 and Q4 2015 came from sectors other than those dominated by U.S. MNEs. <sup>9</sup> The table also shows that employment in these sectors continued to grow between Q4 2015 and Q4 2016, but that employment has yet to reach a pre-recession peak of 2.146 million.

Table (3)
Employment by Sector ('000)

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

Source:- CSO, Quarterly National Household Survey, Q3 2016, Table 2, and Q 4 2008, Table 2b.

#### (2). State aid cases

On a global basis, the widespread use of tax havens and tax avoidance strategies has resulted in considerable adverse comment due to the growth and size of assets held offshore (Henry 2012, p. 36), and as a result of increased tax avoidance. Losses due to corporate tax avoidance alone are

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<sup>&</sup>lt;sup>9</sup> Reported employment by firms such as Apple often varies for the same period for different sources. For example The Irish Examiner (July 19<sup>th</sup> 2012) reports that Apple had 3000 employees, Testimony of Apple inc. before the Permanent Subcommittee on Investigations US Senate, May 31, 2013 states (p. 2), that there Apple "employs nearly 4000 people" whereas the Senate Subcommittee report (2013, footnote, 103) states there were 2452 employees.

estimated at \$100-\$240 billion per annum by the OECD (2015a, Table 3.3), while other estimates are much higher (Oxfam, 2016, pp. 12-13).

Low tax policies have been subject to criticism from the OECD BEPS program, from EU initiatives and also from State aid cases. State aid cases have played an important part in reforming corporate tax within the EU, as have OECD and European Commission proposals for increased information exchange and an anti tax avoidance directive. <sup>10</sup>

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

Similar to the aims of the OECD, a key motivation of EU policy is to prevent 'unfair tax competition'. A second key objective is to ensure that "income is attributed to where value is created" as in proposals for a common tax base (European Commission, 2016b, p. 2). The Directive on Tax rulings is also designed to "deter tax authorities from offering selective tax treatments to companies" (European Commission press release on Tax Transparency 6 October, 2015). The EU Competition Directorate has been investigating tax rulings of member states since 2013 on the basis that tax rulings have resulted in granting "selective tax advantages" that constitute state aid (Almunia, 2014).<sup>12</sup>

Decisions that tax rulings constituted illegal State aid have been made against the Belgian Government, Luxemburg in relation to Fiat, and the Netherlands in relation to Starbucks (European Commission Press Release, January 11, 2016). In these latter cases, tax repayments will amount to €20-30 million. The Commission has required Ireland to reclaim a far larger sum of €13 billion in illegal State aid plus €6 billion in interest from Apple. This constitutes a total of almost three times its annual corporate tax receipts (European Commission Press Release, August 30, 2016a). Preliminary findings of illegal State aid have also been made in relation to Amazon and McDonalds in Luxembourg, IKEA in the Netherlands (EU Commission, State aid: Commission opens in-depth investigation into the Netherlands' tax treatment of Inter IKEA, 18 December 2017) and further investigations of other companies are possible. <sup>13</sup>

Prior to publication of the Commission rulings, the Governments of four countries issued similar statements that suggested they expected to be exonerated. In relation to Apple, the Irish Minister

https://ec.europa.eu/taxation\_customs/business/company-tax/anti-tax-avoidance-package.

<sup>&</sup>lt;sup>10</sup> See European Commission "Anti Tax Avoidance"

<sup>&</sup>lt;sup>11</sup> See Stewart and Doyle (2017) for a discussion of the tax benefits of 'section 110' firms.

<sup>&</sup>lt;sup>12</sup> See EU " "State aid: Commission investigates transfer pricing arrangements on corporate taxation of Apple (Ireland) Starbucks (Netherlands) and Fiat Finance and Trade (Luxembourg), Brussels, 11<sup>th</sup> June 2014.

<sup>&</sup>lt;sup>13</sup> See Gaspard Sebag and Aoife White, "Microsoft Taxes Said to Face Scrutiny as EU Quizzes Luxembourg', Bloomberg, July 4, 2014; Jim Brunsden and Josh Noble, "European Commission to examine Google's UK tax deal", Financial Times, January 28 2016.

for Finance stated that "Ireland is confident that there is no state aid rule breach in this case". Even though Ireland would benefit from any tax payments the Minister also stated that "we will defend all aspects vigorously". <sup>14</sup> After publication of the Commission findings, all four countries appealed the Commission decisions to the European courts, as did Starbucks, Fiat and Apple.

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

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

There are a number of reasons given why the Irish Government is appealing the Apple decision. To begin with, Ireland seeks to "challenge the encroachment of EU state aid rules into the sovereign Member state competence of taxation". Other motivations will be discussed later. The next section discusses some key features of Apple and its tax strategy.

It is also of interest that the Irish Government finally agreed terms to collect sums due and announced the fund manager in March 2018, after the Commission initiated a case against Ireland.<sup>16</sup>

#### 3. Key features of Apple

Table (4) below shows values for Apple using different criteria. The table shows that market values are approximately twice the Balance Sheet values, and that the largest valued item in the Balance sheet is not fixed assets but rather cash and near cash. In this case, all non-cash assets (buildings, machinery, inventories) are under 15 per cent of market values for each year 2012-2016.

(4) Apple values (\$ billion)

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

This asset structure is similar to new economy and internet-based firms such as Google and Facebook and has key implications for tax strategies. A central aspect of Apple tax strategy is in the location of its intangible capital, which includes intellectual property. In tax planning, this

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<sup>&</sup>lt;sup>14</sup> See Department of Finance Press Release 11th June 2014.

<sup>&</sup>lt;sup>15</sup> The U.S. Treasury (2016) has also published a detailed critique of Commission state aid cases.

designation can be extremely important, as location can be ambiguous (Bryan et al, 2017). Bryan et al. argue that "it is increasingly possible to unbundle assets in terms of their legal protection, their tax jurisdiction and the location for registering revenue streams that they generate " (Bryan et al 2017, p. 67). This means that Apple IP assets may be owned in the U.S. with strong patent protection, but income from this IP may be transferred to Ireland with low effective tax rates.

The Apple Group has seven (identified) subsidiaries incorporated in Ireland; three (AOI, ASI and AOE) are not resident for tax purposes, and all are organized as unlimited companies.

There are a number of reasons for the success and high profitability of Apple and other U.S. companies. U.S. MNES's often establish a dominant market position for a variety of reasons. Their organisational structure and competencies are prticularly well-suited to take advantage of the single market. For example :

- a. **Organisation specific competencies:** the ability to outsource production and to produce with no reduction in quality, as in the case of Apple; the development and use of 'enabling technology', in the case of Facebook and Google.
- b. **Organisational structure:** in particular the use of value chains and 'shell companies' (for example unlimited companies in Ireland, Dutch Partnerships); the location of key subsidiaries in tax havens/low tax jurisdictions such as Jersey enables widespread use of tax avoidance strategies and further distorts competition. 'Shell' companies may have billions in assets, revenues and profits, and yet have no employees.
- c. **First mover advantages**: the use of marketing and extensive litigation to protect market position, for example in the case of the 'smart phone wars', and to develop market dominance.
- d. **Regulatory arbitrage.** U.S. firms have particular advantges in exploiting differences in regulation across countries. An example is in data collection and transmission, and also within countries where absence of regulation enables firms to behave as companies without being regulated as one, such as in the provision of accommodation without regulatory requirements faced by hotels.<sup>17</sup>

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

Organizational competencies include 'factory-less production' (contract manufacturing). For example, Apple's subsidiary in Cork, ASI, contracts with a firm in China to produce finished products. These products are then shipped from China to the final market. While en route ASI pays for the goods. The U.S. Senate Report states (2013, p. 27): "Once ASI took initial title of the finished goods, it resold the goods to the appropriate distribution entity, in most cases without taking physical possession of the goods in Ireland." Through this scheme, ASI has earned substantial income.

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<sup>&</sup>lt;sup>17</sup> There are other examples of regulatory arbitrage as an oganisational competence by non-U.S. companies, for example Ryanair and the rather elastic concept of 'self employed'.

Apple has built considerable market power through bundled technologies and products that are not compatible with rival producers (i.e. marketing, obsolescence in products through continuous software updates, enhanced features, and far greater memory and computing capacity.<sup>18</sup>

Mazzacuto (2015, p. 210) states:

"Apple's success did not hinge on its ability to create novel technologies; it hinged on its designing, operational and organizational capabilities in integrating, marketing and selling those low-hanging technologies."

Once Apple gained control of these technologies, it has been involved in lawsuits over several years where Apple has been sued by rivals such as Nokia (Waters and Dye, 2016), and has in turn sued other firms such as Samsung (Gibbs, 2015). These lawsuits have been widely reported and are referred to as the "patent wars" (Waters and Dye, 2016)<sup>19</sup>.

#### 4. Effective tax rates and Apple

As noted, Apple's opperations in Ireland are very important for the company's profitability and tax structure. Since 2013, the Apple Form 10K has stated:

"Substantially all of the Company's undistributed international earnings...were generated by subsidiaries organized in Ireland".

It should be noted that Form 10K income' is in general shown by broad geographic area. For example, Europe is shown as a whole, and pre-tax profits are not broken down by country or even by region.

Prior to 2013, Apple had no reference to Ireland and its tax position in Form 10K. Although Apple had numerous subsidiaries throughout the world, its 2012 Annual Report refers to only four, three of which are in Ireland. In 2010-2011, its annual report referenced three subsidiaries (two were in Ireland), and prior to 2009, it referenced only two subsidiaries (one was Ireland). In fact, Apple currently has seven longstanding subsidiaries in Ireland.

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

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<sup>&</sup>lt;sup>18</sup> See 'Apple investigated by France for 'planned obsolescence', BBC news, Jan. 8th 2018.

<sup>&</sup>lt;sup>19</sup> Because of the need to protect IP and perhaps more important expensive litigation Apple also has strict secrecy rules and rarely gives interviews to journalist. Stone and Vance writing in the New York Times (June 22, 2009) state," Few companies, indeed, are more secretive than Apple, or as punitive to those who dare violate the company's rules on keeping tight control over information".

The low tax rate for ASI is explained by:

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

Table (5) shows profits and the tax charge for ASI for the years 2004-2011, and 2014.

Table (5) Profits and Taxes Paid (\$ billions) for Apple Sales International (ASI) 2004-2014

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

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

Table (6) shows various measures of ETR for Apple for the period 2006-2015. One measure of ETR based on cash flows (cash tax payments/pre-tax profits, ETR 2, column 8), is considerably lower at 17.0% than the ETR reported in company accounts of 25.6% (calculated as the tax charge/pre-tax profits, ETR1 column 7).

The table shows that while the Apple group pays corporation tax, little corporation tax is paid outside the U.S. (columns 2 and 5). The foreign tax charge on overseas earnings (non-U.S. tax charge/non-U.S. earnings) amounted to 5.2% for 2016 (ETR4, Table 4). A similar pattern exists for other U.S. MNE's in the study.

An alternative measure shows an even lower ETR of 3.4% for 2016, although up from 1.2% in 2011 (ETR 5 Table 6).<sup>20</sup> This measure estimates tax paid on unremitted earnings as the difference between the U.S. statutory rate of 35% and tax shown as due if remitted as disclosed in Form 10K (Donohoe, et al, 2012). In contrast to Apple, most U.S. firms do not disclose tax due on unrepatriated earnings, because as stated in accounts 'it is not practicable' to do so.

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

Table (6)

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

<sup>&</sup>lt;sup>20</sup> This increase in overseas tax payments means that Apple is now 'the largest tax payer in Ireland', Letter from Tim Cook to Apple customers, April, 30<sup>th</sup> 2016 available at http://www.apple.com/ie/customer-letter.

	Group	Tax	Cash	Foreign	Tax on	Forei	ETR	ETR2	ETR3	ETR4	ETR5
Year	Pre-tax	shown	Tax	earning	Foreig	gn	1	%	%	%	%
	profits	in	Paid	S	n	Tax	%				
	(1)	income	(3)		Earnin	Savin		(8)	(9)	(10)	(11)
		stateme		(4)	gs	gs	(7)				
		nt			(5)	(6)					
		(2)									
2016			1044								
	61372	15685	4	41100	2138	5582	25.6	17.0	14.5	5.2	3.4
2015			1325								
	72515	19121	2	47600	2938	6470	26.4	18.3	15.8	6.2	3.3
2014			1002								
	50483	13973	6	33600	1489	4944	26.1	18.7	16.3	4.4	2.4
2013											
	50155	13118	9128	30500	1133	4614	26.2	18.2	16.0	3.7	1.8
2012	55763	14030	7682	36800	713	5895	25.2	13.8	13.0	1.9	1.3
2011	34205	8283	3338	24000	602	3898	24.2	9.8	9.3	2.5	1.2
2010	18540	4527	2697	13000	-93	2125	24.4	14.5	13.8	-0.7	n.a.
2009	12066	3831	2997	6600	310	647	31.8	24.8	15.4	4.7	n.a.
2008	8947	2828	1267	4600	200	500	32	14.2	13.4	4.3	n.a.
2007	5008	1512	863	2200	87	297	32	17.2	16.2	4.0	n.a.
2006	2818	829	194	1500	84	224	29	6.9	6.4	5.6	n.a.

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

Notes to Table (6)

ETR 1, 2 and 3 are defined as for Table (2)

ETR 4 = is defined as in Table (4)

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

Apart from Apple, the number of Irish incorporated entities that are not resident in any country for corporate tax purposes is unknown.<sup>21</sup> The ability to remain incorporated in Ireland but not resident for tax purposes in any country was ended by the Finance Act 2014.

#### (5) The commission Apple decision

#### The role of the branch structure and profit split

In the Commission Apple decision, the Commission (European Commission 2016b) states:

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

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<sup>&</sup>lt;sup>21</sup> Reasons given for non-disclosure are "confidentiality" and the "small number of companies involved" (Minister for Finance Parliamentary answer 25<sup>th</sup> June 2013).

tax in Ireland. The remaining vast majority of profits were allocated to the "head office", where they remained untaxed.

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

The Commission made fundamental errors by failing to recognise that the applicants' profitdriving activities, in particular the development and commercialisation of intellectual property (Apple IP), were controlled and managed in the United States. The profits from those activities were attributable to the United States, not Ireland.

The Commission wrongly considered only the minutes of the applicants' board meetings and ignored all other evidence of activities.

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

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

#### Why should ASI and AOI be regarded "as non-resident companies"?

Apple and Ireland claim (Commission Decision, par. 113):

That critical business activities conducted by or for ASI and AOE are conducted outside of Ireland, for example through Apple Inc. employees or the board of directors of ASI and AOE.

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

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

ASI and AOI were regarded by Revenue as not tax-resident in Ireland (European Commission, 2016a, par. 50) because:

ASI and AOE had a trading activity in Ireland through their respective branches and were managed and controlled outside Ireland (Commission Apple decision, p. 50).

Furthermore both companies were not resident in any other jurisdiction The Commission Decision, (par. 52) states:

During the time that the contested tax rulings were in force, ASI and AOE could therefore be best described as "stateless" for tax residency purposes.

The 'central management and control test' is applied on "the basis of fact and precedent" (Revenue, 2013, p. 1). Importantly, these "facts" cannot include the location of fixed assets or employees. The Revenue report found that board meetings were mostly conducted in the U.S. (Senate subcommitte Report (2013, p. 22, 24), but that those meeting minutes did not indicate that the Board of Directors performed 'active and critical roles'.

One difference between Apple's tax approach and that of companies that used a 'double Irish tax strategy' is that the latter group had identifiable addresses, often in Bermuda, for example. As noted, the Apple decision is important for corporate tax change within the EU and especially for Ireland. The Department of Finance summary of the basis of Ireland's Appeal 22 does not refer to the fact that ASI and AOI are registered companies in Ireland, but rather refers to the 'Irish branches' of ASI and AOI.

There are several important legal requirements for Irish incorporated companies that are different from branches. The country of incorporation has assumed greater significance as a result of European Court of Justice Rulings that established the registered office (the place of incorporation) as the 'centre of main interests' (CoMI), as well as the place where the firm should be liquidated even though the subsidiary may have no employees and no fixed assets (Judgement of the Court of Justice in Case C-34/04 Eurofood IFSC 2 May 2006).

In relation to the tax jurisdiciton of dual residents, the proposed multilateral convention to implement tax treaty changes to implement BEPS proposals states:

...its place of effective management, the place where it is incorporated or otherwise constituted and any other relevant factors. <sup>23</sup>

#### The postal address of ASI and AOE

The addresses of ASI and AOE on cost sharing agreements are consistely Irish (Commission Decision, footnote 254). For example, a 2008 marketing services agreement between Apple Inc. and ASI lists ASI's address as Cork (par. 133 of Commission decision). The address is important because Apple advisors and Revenue agree that ASI has two component branches and that the larger of these branches is not tax-resident in Ireland.

The Commission (par. 281) argues that:

Based on the facts presented to the Commission, it appears that during the period the contested tax rulings were in force the head offices of ASI and AOE existed on chapter only, since ASI and AOE had no physical presence or employees outside of Ireland during that period.

<sup>22</sup> 'Explanation of the main lines of argument in Ireland's annulment application lodged with the General Court of the European Union on 9 November 2016', published on 19th December, 2016.

<sup>&</sup>lt;sup>23</sup> See OECD, 2016, Multilateral Convention to Implement Tax Treaty Related Measures to Prevent BEPS, article 4 available at :- http://www.oecd.org/tax/beps/beps-actions.htm

It is important here to note that if the overseas branches of ASI and AOE have no fixed assets, employees, nor addresses abroad, it is difficult to envisage what the "facts" were that led to Revenue's decision.

In contrast, Double Irish or Bi-Location Tax strategy is a tax strategy in which a subsidiary is deemed to be located in another jurisdiction, such as at an address abroad. In a number of cases, the foreign address used was that the law firm Conyers Dill and Pearman (Stewart, 2014).

#### Ireland as a tax collector for the rest of the world?

One of the often-heard criticisms of the Commission Decision on Apple was that Ireland would become a "tax collector for the rest of the world".

The Commission press release of 30<sup>th</sup> August 2016 states:

The amount of unpaid taxes to be recovered by the Irish authorities would be reduced if other countries were to require Apple to pay more taxes on the profits recorded by Apple Sales International and Apple Operations Europe for this period.

The Commission Decision refers to two cases, one in Italy and another in an unamed country, where this scheme has happened (par. 99). The transfers were not direct transfers from the Irish state. Such reallocation of profit from Ireland to other countries (mostly EU countries) has become common. In fact, around 100 such adjustments have taken place since 2005 (Stewart, 2018). These adjustments resulted in a reduction in profits declared in Ireland, a consequent repayment of Irish corporate tax of around €900 million, and an associated increase in reported profits and corporate tax payments in other countries. It is also likely that the increase in reallocated profits will make up for the fall in Irish corporate tax receipts because of the already high rates of corporate tax.

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

Revenue in commenting on the decision to appeal the Apple decision stated:

MNE's should pay tax on profits and it is not the function of revenue to defend the use of international tax law by multinationals.

By appealing this case, the Irish Government appears to be doing just that. For example, the Irish Government has spent considerable sums in defending the Apple case and there will be further expenditures in the future. Without these expenditures Apple expenditures are likely to be much higher. It is telling that the words "Apple" and "Ireland" are consistently conjoined in the Commission Decision, giving the impression both cases are identical. For example, (par. 53) states:

Ireland and Apple provided descriptions of the functions performed by the Irish branches of ASI and AOE, which were used as a basis to present and support Apple's estimates of the taxable profit of those companies for Irish corporation tax purposes.

#### (6) Tax certainty and the arguments against Commission state aid rulings

The U.S. Treasury (24th August 2016) published a white chapter that was highly critical of EU Competition Directorate decisions on illegal state Aid (See: https://www.treasury.gov/resource-center/tax-policy/treaties/Documents/White-Chapter-State-Aid.pdf).

The U.S. Government (and Apple) have argued that the Apple decision (the 11<sup>th</sup> Plea in Law) violates "the principles of legal certainty and non-retroactivity" and in (Plea 14) that the commission violated legal certainty by ordering recovery under an unforeseeable interpretation of State aid law."

However, critics of the EU decision (Hufbauer and Lu, 2016, p. 5) say:

Retroactive changes in tax law are not forbidden [in the US] but they are regarded as bad public policy, because retroactivity creates doubt about legal stability, upsets financial plans, and prompts firms to seek higher "hurdle rates" before undertaking an investment.

In most jurisdictions, not only is retroactive collection of taxes not illegal, it is often noramlized in cases of 'aggressive tax avoidance' that are found to be illegal.<sup>24</sup>

This chapter is highly critical of EU policies in relation to state aid and maintains that the U.S. Government is acting as an advocate on behalf of affected US companies. For example, by devoting considerable resources to building the case against the Comission's three recent decisions on illegal State aid.

#### The White Chapter states:

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

It should be noted that, historically, retrospective recovery is a long-established principle in relation to cartel cases (and sometimes for very large amounts) that have taken up by the Directorate General for Competition. Retrospective recovery is also a long-established principle of tax law in which a particular tax or elements of a tax strategy has been found by the courts to be illegal.

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

The competition directorate may often initiate investigations following complaints. Indeed U.S. firms are sometimes the initiator of these complaints as seen in the case by Microsoft vs. Google in relation to the dominance of the Google search engine.

 $<sup>^{24}</sup>$  See for example the case of Huitson and HMRC invoving retrospection. Source BBC news , Will retrospective taxs affect us all ? BBC news 5th Feb, 2010.

#### (7) Apple tax strategy: From stateless income to Jersey.

As noted earlier in this chapter, a number of firms moved IP assets to Ireland in 2014 and 2015 in response to the announced ending of the 'Double Irish', as well as new, valuable tax concessions. The new tax scheme enabled the cost of IP and financing purchased abroad to be offset by Irish corporate tax. The EU Apple decision refers to new structures put in place in 2015 (Apple decision pp. 128-129), structures that were revealed in the 'Paradise Chapters'. <sup>25</sup>

Apple operations in Ireland consisted of five companies, three of which were stateless: ASI, AOI and AOE. AOE obtained a domicile in Ireland, while ASI and AOI moved theirs to Jersey. It is worth noting that ASI and AOI hold the bulk of Apple's cash (\$250 billion) and that ASI owns Apple IP, which it sells to AOE in Ireland. AOE then licenses the IP and earns large profits in addition to getting substantial tax write offs from the newly acquired IP. AOE also borrowed money from recently redomiciled Apple subsidiaries in Jersey companies to finance the purchase of IP assets. The interest on this borrowed money was used as deductible against ASI profits in Ireland. Thus, the Jersey-based companies now hold large cash assets, which they earn interest on, mostly from ASI operations.

#### (8). Conclusion: Irish corporate tax policies are not a model for sustainable growth

Industrial policy in Ireland emphasises keeping tax rates low to attract FDI (specifically U.S. FDI). This policy is fequently described as the "cornerstone of industrial policy". However, as this chapter illustrates, this policy model is a risky one. The most attractive aspect of tax incentives offered by Ireland is not the tax rate itself, but an Irish tax regime that regularly criticised by Governments of other countries, NGO's and increasingly by the public. As a result, policies that discourage 'aggressive tax strategies' have been introduced through the OECD BEPS Programme and from the European Commission. This initiatives have increased disclosure (courty by country reporting) and exchange of information on tax planning.

The value of tax incentives may also change because of proposals to introduce CCTB, CCCTB. A proposal to introduce a type of digital tax on companies could also pose a threat to the operations

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address is given as Cork. Previously the address of the company secretary had been the U.S.

<sup>&</sup>lt;sup>25</sup> See 'Paradise Chapters: Apple's secret tax bolthole revealed' BBC Panorama, 6 November 2017; Hopkins and Bowers, 'Apple secretly moved parts of empire to Jersey after row over tax affairs', Guardian Newschapter, 7th November, 2017. The only clue available in documents lodged with Companies Registration Office in Ireland to these organizational changes is the appointment of a company secretary to AOE whose

<sup>&</sup>lt;sup>26</sup> See Budget Statement 14th October 2014;

<sup>&</sup>lt;sup>27</sup> Ireland has been ranked 6<sup>th</sup> in the world in terms of corporate tax havens, see Oxfam, (2016), Tax Battles, The dangerous global Race to the Bottom on Corporate Tax, p. 13, Available at ttps://www.oxfam.org/en/research/tax-battles-dangerous-global-race-bottom-corporate-tax

of MNE's in Ireland.<sup>28</sup> The relative value of tax incentives could also change because of 'tax competition'. For example, the Trump administration has introduced a corporate tax rate of 21 per cent and the U.K. prime minister has stated that Britian will have "the lowest corporate tax rate in the G20" (Financial Times, November 21, 2016). It is likely that such changes will trigger reductions in corporate tax rates in other countries.

Table (1) shows that 55% of U.S. MNEs' profits earned outside the U.S. is earned in the EU. The EU is thus a very profitable location for U.S. firms and proposed increases in taxation are unlikely to affect their location within the EU. However, while these firms are highly likely to continue to operate within the EU, they may not necessarily continue to operate within low-tax jurisdictions such as Ireland.

An industrial policy for Ireland that is less dependent on tax incentives needs to be developed and implemented. Balanced growth requires a greater empahasis on indigenous firms. Here, Ireland has an advantage, as the devaluation of the Euro was of enormous value to the Irish indigenous sector. Likewise, there is no other country in the Eurozone as trade dependent on a non-Euro member, particularly in trade within the indigenous sector. Hence, fluctuations in the Sterling/Euro exchange rate cannot impact other Eurozone countries to the same extent. This dependence also poses risks, however, because a devaluation of the Sterling post-Brexit could work to the extreme disadvantage of indigenous Irish.

This chapter holds that State support for indigenous firms is vital as is finance, particularly in the case of small and medium-sized enterprises. But as noted by Mazzucato (2013), it is not just the supply of finance that is missing, but also the demand "from private firms willing to engage with the difficult uncertain worlds of innovation". Mazzacutto argues that an emphasis on competitiveness in terms of unit labour costs is misplaced. For example, he posits Germany is competitive because of a strong innovation system, patient capital, for example from the KfW, strong science and industry links, for example through the Frauenhofer institutes, and high spending on research and development.

This tale, however, is a cautionary one. Further risks arise because, as a result of Brexit, Ireland is likely to seek important concessions from its EU partners, as well as emergency economic measures for certain sectors. It is unfortunate that in two major areas, the introduction of CCTB and CCCTB, and the Apple case, Ireland is in dispute with the Commission. The CCTB, CCCTB and digital tax proposals are supported by a majority of governments in the EU and by other groups, such as those advocating tax reform.

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<sup>&</sup>lt;sup>28</sup> See Mehreen Khan, Alex Barker and Rochelle Toplensky "Google, Facebook and Apple face 'digital tax' on EU turnover Proposed Brussels levy will target big-tech revenues rather than profits". , Financial Times March 15 2018

See CSO (2016), Brexit: Ireland and the UK in numbers, Tables 14 a and 14b, available at :http://www.cso.ie/en/media/csoie/releasespublications/documents/statisticalpublications/Brexit.pdf
Mazzucato, M. in David Jacobson (ed.), The Nuts and Bolts of Innovation, Glasnevin Publishing, 2013.

#### References

Bryan, D. Rafferty, M. and Wigan, D. (2017) Capital Unchained: finance, intangible assets and the double life of capital in the offshore world, Review of International Political Economy, vol. 24, no. 1 pp. 56-86.

Citizens for Justice (2016), Offshore Shell Games, available at http://ctj.org.

CSO (2017), Foreign Direct Investment in Ireland 2015. Dublin: CSO. Department of Finance, (2013), Ireland's International Tax Strategy. Dublin: Department of Finance.

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

Ernst & Young (2017), EY Attractiveness survey 2017.

European Commission (2018), Aggressive Tax Plabbing Indicators, Final Report, Taxation Chapters, Working Chapter, no. 71 -201, TAXUD/2016/DE/319 FWC No. TAXUD/2015/CC/131.

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

European Commission (2017b), Tax Uncertainty: Economic evidence and Policy Responses. Taxation ppares Working Chapter no. 67.

European Commission (2016a), Final Commission Decision of 30.8.2016 on State Aid SA 38373 (2014C), implemented by Ireland to Apple, 30.8.2016 C (2016) 5605.

European Commission (2016b), "State Aid: Ireland gave illegal tax benefits to Apple worth up to \$13 billion", European Commission – Press release, 30 August.

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

https://www.taoiseach.gov.ie/eng/Publications/Publications\_2014/GrantThornton\_.pdf, accessed 16/03/2018.

Jaafar, A., and Thornton, J. (2015), Tax Havens and Effective Tax Rates: An Analysis of Private versus Public, European Firms, *The International Journal of Accounting* 50, pp. 435–457.

Gibbs (2015), "Facebook, Google, Dell, HP, eBay back Samsung in patent war with Apple", Guardian Newschapter, 21<sup>st</sup> July.

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

Mazzacuto, M. The Enrepreneurial State, London: Anthem Press.

OECD (2017), Tax Certainty, IMF/OECD Report for the G20 Finance Ministers, March 2017, OECD: Paris.

Oxfam (2015), Ending The Era of Tax Havens Why the UK government must lead the way, available at: http://www.taxjustice.net/2016/03/14/oxfam.

Sampson, A. (1974), The Seven Sisters, Bantam Books.

Servan-Schreiber, Jean-Jacques (1967), The American Challenge, Paris: Versilio.

Senate sub-Committee in Investifations (2013), Offshore Profit Shifting and the U.S. Tax Code - Part 2 (Apple Inc.).

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

Stewart J. (2018), Ireland, US multinationals to face new tax landscape in 2018, MNE Tax, January 19, 2018.

Stewart J and Doyle C. (2017), The Measurement and Regulation of Shadow Banking in Ireland, Journal of Financial Regulation and Compliance vol. 25, no. pp. 396-412.

Stewart, J. (2017), MNE Tax Strategies and Ireland, Critical Perspectives on International Business.

Stewart, J. (2017), Statement to the Joint Committee on Finance, Public Expenditure and Reform, and Taoiseach, 7<sup>th</sup> February, 2017.

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

U.S. Treasury (2016), "The European Commission's Recent State Aid Investigations of Transfer Pricing Rulings".

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