

MNE Tax Strategies and Ireland *

Jim Stewart

Adjunct Professor in Finance

School of Business,

Trinity College,

Dublin

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Introduction

Tax incentives to attract foreign direct investment (FDI) have been the main tool of industrial policy in Ireland for over 50 years. Other factors including ease of incorporation and a flexible response by State agencies to the needs of FDI, have led to Ireland becoming a centre for the location of FDI, in particular from the U.S. Ireland ranked 10th amongst OECD countries in terms of absolute stock of FDI in 2014, but ranked third in terms of the stock of FDI as a % of GDP (OECD International Investment Statistics, 2014). U.S. companies are particularly important, and reported the third highest net income in Ireland in 2013, after the Netherlands and Luxembourg.¹

UNCTAD (2015, p. 192) note that a “systematic, not anecdotal assessment” of tax strategies at the firm level is difficult. This paper presents evidence for Ireland of effective tax rates and tax minimisation strategies at both an aggregate and individual firm level. The paper focuses on U.S. companies with a large presence in Ireland². These firms are more likely to undertake activities in tax havens as they are “technology intensive” with “significant levels of intangible assets” (Jones and Temouri, 2016).

Low tax policies have resulted in controversial tax minimisation strategies³. The relative high profitability of U.S. firms in Ireland is also long established (Grubert and Altshuler, 2006, p. 29). Thus Ireland is often described as a tax haven (Permanent subcommittee on Investigations, 2013, p. 21; Jaafar and Thornton, 2015; Citizens for Justice, 2016), or a secrecy jurisdiction (Shaxson, 2011, p. 17).

On a global basis the widespread use of tax havens and tax avoidance strategies has resulted in considerable adverse comment, due to the growth and size of assets held offshore (Henry 2012, p. 36), and tax avoidance. Losses due to corporate tax avoidance alone, are estimated at \$100-\$240 billion per annum by the OECD (2015a, Table 3.3). Other estimates are much higher (Oxfam, 2016, pp. 12-13). As a result firms that have subsidiaries in tax havens (defined as in OECD 2002 and excluding Ireland, Luxembourg and the Netherlands) have lower effective tax rates than those that do not (Jaafar and Thornton 2015).

The paper also considers proposed reforms to international tax, from the OECD Base Erosion Profit Switching programme (BEPS); European Commission (2015a) and

¹ See Bureau of Economic Analysis, Majority Owned Foreign Affiliates, Table II.D.1, available at:- <http://bea.gov/international/usdia2013p.htm>.

² For example Apple and Google (renamed Alphabet).

³ Some examples:- Luxleaks (<https://www.icij.org/project/luxembourg-leaks>), Panama papers (<http://panamapapers.sueddeutsche.de/articles/56febff0a1bb8d3c3495adf4/>), Bahamas corporate filings (<https://www.icij.org/blog/2016/09/icij-publishes-leaked-bahamas-info-offshore-database>). For Ireland see Jesse Drucker, “Dutch Sandwich saves Google billions in tax”, Bloomberg 10/22/2010.

investigations by the EU Competition Directorate into Apple and other companies. The paper concludes that there are considerable risks to countries using industrial strategies dependent on firms using complex tax strategies.

From 1956 the main fiscal incentives to attract FDI to Ireland were:- tax exemption on profits from exports (exports sales relief), extensive tax allowances for depreciation, and capital and current grants from state agencies. Under EU rules, grants to enterprises have been reduced in value. Export sales relief was replaced by a general 10% corporate tax rate on manufacturing in 1980, which was in turn replaced by a 12.5% corporate tax rate on all sectors. This tax rate is often described as the cornerstone or “heart of Irish industrial policy”⁴. But the best known incentives for U.S. firms to locate in Ireland have been various tax rulings, for example the ‘double Irish’, which are part of the tax code but not enacted in primary legislation.

The beneficial effect of tax incentives has long been argued in terms of increasing after tax cash flows and profitability (Brown, 1962). This analysis has been applied to foreign direct investment in tax havens (Hines and Rice, 1994). However the relationship between tax policy and foreign investment flows is complex. De Mooji and Ederveen (2003) from a survey of empirical evidence, find corporate tax and foreign direct inflows are negatively related, but with substantial variation (p. 682). The OECD point out that most studies of tax effects, ignore tax planning strategies (OECD, 2008, p. 3). Other difficult issues in empirical research relate to:- the definition of tax liability, for example average or marginal tax rates (OECD, 2008) and the effect of double taxation treaties (Blonigen, p. 13); and the data used which often relates to financial flows and not necessarily real investment (de Mooji and Ederveen, p. 674). A particular problem with using data bases such as Amadeus, is the large number of U.S. subsidiaries in Ireland that are ‘unlimited companies’ and do not file annual accounts.

UNCTAD identify 42 ‘investment hubs’ that account for over 30% of the stock of cross border investment in 2012 (UNCTAD, 2015, p. 189). Jurisdictions that act as conduits for FDI account for most of the cross border flows. Luxembourg and the Netherlands are the main examples (UNCTAD, p. 189). The key characteristics of these transit countries are:- no tax on inflows/outflows; extensive double taxation treaty networks; strong legal and regulatory frameworks; a sophisticated banking system and economic and political stability (UNCTAD, pp. 191-192). Ireland meets all of these characteristics and together with Luxembourg, the Netherlands and Switzerland have been described as the four OECD tax havens (Weyzig, 2013, p. 72).

The next section considers some aggregate effects of tax reliefs and tax strategies on the Irish economy.

⁴ Minister for Finance, Budget speech, 14th October, 2014, available at www.budget.gov.ie/Budgets/2015.

Some Aggregate Effects of Tax Strategies

Most foreign investment in Ireland consists of financial assets in the Irish Financial Services Centre (IFSC). In 2013 the aggregate value of IFSC investment was over 11 times the size of non-IFSC FDI. The value of FDI amounted to €98 billion in 2005 and increased to €400 billion in 2015, of which €266 billion consisted of non-IFSC FDI.

Fiscal incentives strongly encourage diverting profits via ‘profit switching transfer pricing’ (PSTP). Goods/services imported to a low tax area may be valued at an artificially low price and exported at an artificially high price thus maximizing value added in the low tax area. These effects are particularly pronounced in the digital economy where profits may be easily switched for example, using royalty and license payments.

PSTP results in distortions to aggregate data. Profit switching by multinational enterprises (MNE’s) is evident for Ireland in a large balance of payments trade surplus (merchandise net exports) but a deficit or small surplus on the current account because of net payments abroad for services for most years and dividend payments (Table 1). The effect of PSTP on merchandise trade is a longstanding feature of Ireland’s imports and exports (Stewart, 1989).

Table (1)

Net Exports from Ireland, Net Payments for Services and current Balance 2001-2015 (€billion)

	2001	2005	2009	2010	2011	2012	2013	2014	2015
Merchandise net exports	30.4	32.2	39.9	42.9	43.3	42.4	36.2	42.3	64.6
Services ¹	-12.4	-12.4	-15.0	-14.1	-8.6	-7.0	0.2	-7.6	19.8
Of which royalties and licenses	-10.4	-15.2	-23.8	-26.8	-29.8	-30.0	-31.7	-47.9	-56.5
Primary Income ²	-19.1	-25.9	-28.6	-26.4	-32.1	-30.3	-26.3	-25.1	-32.4
Current account Balance	-0.75	-5.80	-5.1	0.9	1.4	2.7	7.6	6.8	9.5

Notes to Table (1)

(1). Exports of services such as computer services are less than imports of services largely consisting of royalty/licence payments for every year except 2013 and 2015.

(2) For a definition of primary income, see CSO, Dublin, BOP Quarterly Statistical Compilation Methodology, updated June 2014, available at :- <http://www.cso.ie/en/releasesandpublications/er/bop/balanceofinternationalpayments> and <http://www.cso.ie/en/media/csoie/surveysandmethodologies/surveys/bop/documents/pdfs/BopBkgdnotes.pdf>.

Unusually amongst OECD countries, GNP is lower than GDP because outflows of income are greater than inflows. For the period 2005-2015 GNP varied between 79 and 87% of GDP. Luxembourg is another exception, with a GNP/GDP ratio of 42.8% for 2012.⁵ Luxembourg also has a large international financial sector. Tax minimisation strategies by MNE’s pose particular problems for national income statisticians. The inversion of several large U.S. firms to Ireland has exacerbated these distortions⁶. However Ireland’s fiscal

⁵ Defined as Gross National Income/Gross Domestic Product. Source: Eurostat and Statistics Portal Grand Duchy of Luxembourg.

⁶ See CSO, 2015a, p. 4 for an estimate of the effect of inversions on the stock of US FDI in Ireland. Separately from this effect, reported GDP increased by 26.3% in 2016 (CSO, 2016b), largely due to increased profits of MNE’s.

regime is best known for tax avoidance strategies and resulting low effective tax rates. The next section presents data on effective tax rates for individual firms.

Data Sources

Effective tax rates were calculated for 31 US intellectual property (IP) intensive MNE's with substantial operations in Ireland for the period 2006-2014⁷. The study group are also large in global terms and accounted for 11% of the net income of U.S. foreign majority owned affiliates for 2013. The study group varies over time because of the inclusion of new firms (Facebook, LinkedIn), a new firm created from divestment (Abbvie), the exclusion of firms taken-over (BMC, Dell, Forest Laboratories, McAfee), and the exclusion for 2014 of a firm that changed residence to Ireland (Medtronic). Although ownership changed for some firms, all firms had substantial or growing employees and investment in Ireland in the years 2013 and 2014. The 30 firms examined (excluding Medtronic) employed just over 48,000 in 2014⁸ with 215 identified subsidiaries. The median number of subsidiaries per firm was seven⁹.

Detailed financial data was collected from form 10K filed with the SEC, on revenues, profits and tax payments, on cash flows such as tax payments, and from notes and commentary on tax payments and geographical operations. Searches of the annual return and subsidiary accounts (if available) filed in Companies Registration Office in Ireland, were used to identify operating characteristics such as revenues, profits, tax payments, ownership structure, place of incorporation, location of registered office, directors and company secretary. The study period begins in 2006 as tax payments and tax rates were distorted by increased dividends from abroad and associated increased tax payments in 2005¹⁰.

Effective Tax Rates (ETR) for the Study Group

Several firms in the study specifically identify Ireland and the U.S. as their main tax jurisdictions. For example:-

⁷ See appendix Table (2). These firms were selected from the Industrial Development Authority lists (see <http://www.idaireland.com/business-in-ireland/company-listing/>).

⁸ Source:- <http://www.top1000.ie/companies>. This may include some working at a particular site but employed by a separate company.

⁹ Derived from filings in Companies Registration Office, Dublin. Annual Reports and 10K forms generally do not list all subsidiaries.. US Bureau of Economic Analysis data refers to 659 US affiliates operating in Ireland in 2012, excluding firms with assets, sales or net income of less than \$25 million. Assuming all 659 affiliates are independent firms, there are likely to be several thousand U.S. subsidiaries operating in Ireland.

¹⁰ For example Form 10K Abbott for 2007 (p. 35) states Abbott "remitted \$4.3 billion of foreign earnings under the American Job Creation Act of 2004 and recorded additional tax expense of \$245 million". This increased the reported tax rate by 5.3%. Pfizer annual report (2006, p. 49) states \$1.7 billion in an extra tax charge was due in 2005 associated with the repatriation of \$37 billion of foreign earnings under the Job Creation Act. This increased the reported tax rate by 15.4 % to 29.4% for 2005.

Apple (Form 10K 2015, p. 58) states :-

“Substantially all of the Company’s undistributed international earnings intended to be indefinitely reinvested in operations outside the U.S. were generated by subsidiaries organized in Ireland..”

Google (Form 10K, 2014, p. 85) states:-

“Although we file U.S. federal, U.S. state, and foreign tax returns, our two major tax jurisdictions are the U.S. and Ireland”..

Effective tax rate can be defined in a number of ways. Policy analysis is often focused on the ‘marginal effective tax rate’ or METR (Bilicka and Devereux, 2012, pp. 30-32; King and Fullerton, 1984, pp. 24-30; Congressional Budget Office 2005)¹¹. The METR is estimated using parameters such as nominal tax rates, statutory tax allowances, assumed rates of return, etc. These studies are of very limited use in estimating past effective tax rates at the firm level, or in predicting future marginal or average tax rates, as effective tax rates will depend on the history of a firm (for example losses carried forward), tax allowances used, financing structure, and reflect complex tax strategies. This is especially the case with an MNE which may not only switch revenues and profits but also switch costs and losses amongst different entities and tax jurisdictions.

In this paper effective tax rates are calculated from company accounting data. Table (2) shows effective tax rates measured in three different ways. The first measure is that shown in company accounts, and described as the ‘effective tax rate’ (ETR1) and may often be quoted by corporate management¹². This is calculated as the ‘provision for income taxes’ divided by pre-tax income shown in the income statement¹³. There can however be a considerable divergence between this measure of tax paid and other measures of ETR, because of deferred tax and tax allowances (Jaafar, and Thornton, 2015, Table 3). Hence cash tax paid (as disclosed in Form 10K consolidated statement of cash flows) used in this paper, is a more useful measure of tax payments. The second estimate is defined as cash tax paid divided by pretax profits (ETR2).

The third estimate of effective tax rates (ETR3), is defined as cash tax paid divided by (pretax profits plus accounting depreciation and amortization)¹⁴. Depreciation and amortization

¹¹ The influential Ruding Report (1992, p. 17) defines the marginal effective tax rate as the marginal effective tax wedge divided by the required pre-tax rate of return, where the marginal effective tax wedge is defined as the difference between the required pre-tax and the post-tax rates

¹² See interview with Apple's Chief Executive Tim Cook Sept. 1st 2016, who states Apple's effective tax rate is 26.4%, available at <http://www.rte.ie/news/2016/0901/813345-apple-reaction>

¹³ This is the measure used by Avi-Yonah and Lahav (2011), p. 4. Jaafar and Thornton (2015, p. 442), define effective tax rates as ‘current tax expense’/pre-tax income and ‘current tax expense’/operating cash flows.

¹⁴ Markle and Shackelford (2012) calculate effective tax rates from financial statements for 82 countries and over 11000 corporations. They use various measures of effective tax rates including those based on cash tax

reported as an expense in company accounts, is not tax deductible, in contrast to accelerated depreciation allowances, and other allowances written into the tax code. Further adjustments could be made to the tax base for example, by adding 'goodwill' which is deducted in arriving at pretax income in company accounts, but is not a tax deductible expense. Adding 'goodwill' to the tax base would have the effect of further reducing effective tax rates.

Using cash tax payments as the numerator is more objective than using the tax charge shown in the Profit and Loss account) but means that tax payments in a particular year may not reflect economic activity during that year, because tax may be paid in arrears or there may be extra tax payments/refunds following from dispute resolution with tax authorities.

Table (2) shows that if cash tax payments are used as the numerator, effective tax rates (ETR2) are lower than those published (ETR1), with the exception of the year 2010. Using a wider definition of the tax base to include accounting depreciation provisions, results in even lower measures of effective tax rates (ETR3).

Effective tax rates though variable over time are lower at the end of the period than the beginning. For two measures (ETR2 and ETR3) effective tax rates reached their lowest point in 2011.

Table (2) also shows that foreign tax savings amount to between 10 and 12% of pre-tax profits for the period examined.

Mean and median values of effective tax rates, treating each firm as a separate observation show similar patterns, except for ETR 3 which are consistently lower than average aggregate rates reported in Table (2).

payments and adjusted accounting profit defined to include depreciation and R & D expense (see pp. 497-8, and footnote 7).

Table (2)

Measures of Effective Tax Rates for the Study Group 2006-2015 (\$ million)

Year	No. of firms ¹	Group Pre-tax profits (1)	Tax shown in income statement (2)	Cash Tax Paid (3)	Depreciation & amortization	Foreign Tax Savings	ETR1 % (4)	ETR2 % (5)	ETR3 % (6)
2015	21	225838	49701	40737	65596	28475	22.0	18.0	14.0
2014	24	213149	56759	41984	57388	21696	26.6	19.7	15.5
2013	27	203935	44143	38353	58503	25318	21.6	18.8	14.6
2012	27	205125	46666	36353	49581	24793	22.8	17.7	14.3
2011	29	185639	43558	30024	49426	20850	23.5	16.2	12.8
2010	28	165910	35430	42236	42884	17693	21.4	25.5	20.2
2009	27	132954	31864	22395	44691	14583	24.0	16.8	12.6
2008	24	120124	29768	27658	34344	14358	24.8	23.0	17.9
2007	27	117273	28997	28005	32318	12117	24.7	23.9	18.7
2006	25	98557	24920	22018	28842	9004	25.3	22.1	17.3

Note: The number of firms vary by year due to the exclusion of firms reporting losses, the inclusion of newly quoted firms and exclusion of firms subject to takeovers/going private;

Summary of definitions of ETR used in table (2).

ETR1 = Tax rate as defined in company accounts as Tax charge/pre-tax profit from the Income Statement (column 7).

ETR2 = Tax rate defined as cash tax payments (from cash flow statement) /pre tax profits (column 8).

ETR3 = Cash tax payment/(accounting depreciation + pre-tax profit). Depreciation is included in the tax base because depreciation as reported in company accounts is not a tax deductible expense (column 9).

Table (3) shows the amount of foreign earnings each year, the foreign tax charge and the accumulated total of foreign earnings for the period 2006-2015. Even though foreign earnings vary between 54% and 78% of total earnings (column 3), they account for between 26.5% and 33.9% of the tax charge in the income statement (column 6). Thus even though most profits are earned outside the U.S., most corporate tax is paid in the U.S. The foreign tax charge as a % of foreign (non-U.S.) earnings fell from around 15% at the beginning of the period to 8.6% in 2015 (column 5). Calculating ETR for foreign earnings based on cash tax payments (if available), rather than the 'tax charge' in the income statement, would result in lower estimates.

Table (3) also shows that unremitted earnings, described as the 'cumulative amount of earnings upon which U.S. income taxes have not been provided', increased approximately 5.2 times, from \$128 billion to \$670 billion (column 8) from 2006 to 2015. A wider definition of unremitted earnings to include earnings which are intended for repatriation, but not yet repatriated, shows total un-repatriated earnings rose from \$158 billion in 2006 to \$769 billion in 2015¹⁵.

¹⁵ For example, Pfizer reported 'indefinitely' invested overseas earnings of \$74 billion for 2014. Unremitted earnings, "that will not be indefinitely reinvested overseas" amount to an estimated \$60.5 billion, giving a total of \$134.5 billion of unremitted earnings. Apple had \$131.25 billion unrepatriated profits in 2015, of which \$91.5 billion were described as 'indefinitely' invested overseas.

The Obama Government proposed a tax of 14% on unremitted profits of U.S. companies, a continuing tax of 19% and a reduction in the standard rate of corporation tax to 28% (U.S. Government 2015, pp. 56-57). One proposal, amongst others, from the Trump administration are for a standard corporation tax rate of 15%, a tax of 10% on unrepatriated earnings held in cash and 4% on other earnings (Nunn, et al, 2016). Such changes if introduced, would have a dramatic effect on U.S. MNE corporate tax strategies, for example a reduced number of firms ‘inverting’ to a lower tax location¹⁶. The effects of these and other measures, on real investment are more difficult to predict, in particular if other countries react by reducing nominal and effective corporate tax rates.

Table (3)
Overseas Earnings and Tax Reported on Overseas earnings for the study group
\$ millions 2006-2015

Year	No. of firms ¹	Foreign Earnings	Foreign earnings as % of Total Earnings	Foreign Tax Charge ²	Foreign Tax Charge as % of Foreign Earnings ETR 4	Foreign Tax Charge as % of Total Tax Charge shown in income statement %	Foreign Tax charges for individual firms %		Unremitted Overseas Earnings ²
							Mean	median	
(1)	(2)	(3)	(4)	(5)	(6)	(7)		(8)	
2015	20	175424	78.2	15025	8.6	30.8	19.6	9.0	670327
2014	20	129743	65.7	14090	10.9	27.8	15.6	12.8	614217
2013	23	131661	65.7	13676	10.4	32.1	16.0	11.6	577558
2012	23	133748	65.6	12756	9.5	28.0	15.0	8.6	480529
2011	26	122882	66.8	13796	11.3	32.2	12.4	10.3	436369
2010	26	102098	61.9	11907	11.7	26.5	10.6	8.5	330844
2009	26	87481	66.0	10746	12.3	33.9	14.7	11.4	257534
2008	23	80468	67.0	8697	10.9	29.5	13.8	10.2	223535
2007	26	64715	55.4	9278	14.3	32.2	17.5	12.1	199054
2006	24	53276	54.3	8169	15.3	33.0	14.6	12.9	128096

Source: SEC Filings – Form 10K various years.

Notes:

1. The number of firms vary by year because firms reporting losses (foreign or group) were excluded, the inclusion of newly quoted firms and exclusion of firms subject to takeovers/going private. Medtronic was also omitted for 2014 as the firm redomiciled from the U.S. to Ireland
2. Defined as earnings that are ‘indefinitely’ invested overseas.

One implication of a lower tax rate on overseas earnings than on U.S. earnings, is that the higher the proportion of foreign earnings the lower the overall tax rate. That is, foreign earnings are negatively related to effective tax rates. This relationship was examined by relating various measures of ETR (1, 2 and 3, Table 2 and ETR 4 Table 3) for individual firms on a year by year basis, to the proportion of: foreign earnings in total earnings; foreign sales in total sales; foreign earnings in foreign sales; and foreign tax savings as a proportion of total earnings.

¹⁶ Several large U.S. firms, (Allergan, Covidian, Medtronic) have ‘inverted’ to Ireland as part of a tax minimization strategy.

Table (4) below shows regression results for four measures of ETR. The relationship between three measures of ETR (ETR1, ETR2, ETR4) and the explanatory variables is statistically significant, but with low R²adj. In addition some of the explanatory variables have the predicted negative coefficient. The ratio of foreign earnings over total earnings was negatively related for two measures of ETR (ETR1 and ETR4). The ratio of foreign earnings/foreign sales, (foreign earnings margin), was found to be weakly negatively related to ETR for two measures (ETR2 and ETR4). The weakest relationships was found for ETR 3 (cash tax paid/pretax profits plus accounting depreciation). These results provide some support for the hypothesis of a negative relationship between foreign earnings and ETR, but may also indicate that the ETR is the outcome of complex tax strategies and numerous variables, for example repatriation strategies¹⁷. As noted earlier cash tax payments in any given financial year may also be affected by payments/refunds of tax relating to previous years.

Table (4)
Regression Results for firms included 2006-2014

	ETR1	ETR2	ETR3	ETR4
constant	31.883	10.603	9.616	8.950
Foreign earnings/Foreign sales % -	0.023	-0.014	0.029	-0.020
Foreign sales/Total sales % -	-0.039	0.075	0.075	0.191
Foreign earnings/Total earnings % -	-0.057*	0.085*	0.000	-0.035
Foreign Tax Savings/Total earnings % -	-0.309*	0.043	0.015	-0.214
F statistic	13.022*	6.886*	1.284	7.644*
R ² (adj)	0.190	0.100	0.005	0.111
No. of cases	214	214	214	214

Note

The data was analysed using SPSS version 21. (*) represents significance at the 95% level. Only those cases where both foreign earnings and total earnings were greater than 0 were included. Cases were also excluded where tax payments/receipts were more/less than 100% of the tax base. There were no substantial correlations amongst predictor variable for the four models. VIF (variance inflation factor) values average less than 2 indicating an absence of multicollinearity (Field, 2013, p. 343). A Durbin-Watson test statistic for heteroscedasticity for three of the models varied between 1.56 and 1.85 indicating a relative lack of autocorrelation (Field, p. 311). For the fourth model (ETR4) the test statistic was 0.983 indicating some positive autocorrelation.

Table (5) shows that for all years, except 2008, net foreign earnings are far larger than the estimated change in unremitted earnings. Unremitted earnings may vary between periods due to divestments and also because of repatriations¹⁸. Table (5) also shows median values for both net foreign earnings and the change in unremitted earnings. Median values of net foreign earnings are again higher than median values of the change in unremitted profits for

¹⁷ The US Senate PSI (2012, 4) describes 'repatriation strategies' of Hewlett-Packard involving continuous short term loans of \$6-9 billion from foreign affiliates to the US parent, which were not subject to any form of tax. Linebaugh, (2013) has further examples.

¹⁸ For an example, see Abbott Laboratories, Form 10 K 2013 note 2.

all years except 2007-2008. This data provides some evidence that U.S. firms pay dividends to the parent company even though nominal tax rates are higher than in countries where profits are earned¹⁹. Excluding outliers (payout ratio less than zero and greater than 200%), the median payout ratio varied between 68% and 87% over the period examined.

Table (5)

Foreign Earnings and Unremitted Earnings for the study group 2007-2014

Year	No. of firms (1)	Foreign Earnings Net of foreign tax (2)	Annual change in unremitted earnings (3)	Median values for net foreign earnings (4)	Median values for the change in unremitted earnings (5)
2014	26	116309	64197	3207	900
2013	24	118446	77138	1928	1800
2012	23	120992	91987	2216	1900
2011	26	109086	96968	1898	1327
2010	27	90927	73140	1215	1000
2009	26	76735	30904	1527	1275
2008	23	72143	45983	1275	1299
2007	25	55170	62164	1415	1100

Note: Those firms making foreign losses were excluded and those firms for which unremitted earnings were unavailable for consecutive years.

Perhaps indicating the sector and size of firm in the study group, there is little evidence of a fall in revenues, profits, or liquid assets over the period of the Great Recession. Median values of foreign sales over total sales varied between 19.2 and 23.1% over the period 2006-2014, median values of foreign earnings over total earnings varied between 59 and 65% over the period 2008-2014, and median values of liquid assets/total assets varied between 27.5 and 32.4%, except for the recession year 2010 when this ratio increased to 37.3%. The only clear trend has been a fall in effective tax rates. Effective tax rates fell over the period 2006 to 2011-2012, both for firm group earnings and foreign earnings.

Two Case Studies: Apple and Alphabet (Google)

Ireland is central to the tax strategies of Apple and Google and is important for tax strategies of all firms included in the study. Both Apple and Google have elements of commonly used tax strategies and are worth examining in greater detail.

In addition Ireland is the world's leader in the export of ICT services (Table 6) with a share of global ICT exports of 12.6% in 2014, compared with 7.5% for the U.S. Google (Alphabet)

¹⁹ Kleinbard (2011, pp. 721-722), estimates that for 2004, only \$18.4 billion in tax was paid on \$166 billion of repatriated earnings (\$47 billion in dividends, \$48 billion in subpart F income and \$59 billion in royalties). Kleinbard states the effective tax rate on regular repatriations is "very low", but if there were a very large repatriation in any one year a "substantial residual US tax liability" would be incurred (Kleinbard, 2011, p. 726). The IBM annual report (2014 p. 126) states "the company periodically repatriates a portion of [unrepatriated] earnings to the extent that it does not incur an additional US tax liability." The tax strategies of Pfizer, resulting in US losses but foreign profits, indicates that repatriated profits are the main source of US corporate tax revenues (Bergin and Drawbaugh, 2015).

is a global leader in ICT exports, and Apple is a global leader in the manufacture of digital devices and the provision of related services.

Table (6)
Information and Communication Technology (ICT) Services Exports from main exporting countries for 2000 and 2014 (\$ million)

Year	2000	% of world	2014	% of world
Ireland	5496	6.9	57646	12.6
India	4647	5.8	55666	12.2
U.S.	11069	13.8	34221	7.5
Germany	5246	6.6	29398	6.4
UK	7155	8.9	20968	4.6
world total	80000		457710	

Source: Computer and Information and Communication sectors, Unctad Handbook of Statistics 2015, p. 264.

Apple Tax Strategy

One important reason for the success of Apple is the development of “organizational competencies” in the context of an “innovative enterprise” (Lazonick, et al. 2013). This includes what has been described as the best known example of ‘factoryless production’ (Bernard and Fort, 2015). The U.S. Senate Permanent Subcommittee on Investigations (PSI, 2013, p. 26) describes the production and distribution structure of the main subsidiary of Apple Ireland, Apple Sales International (ASI) as follows: ASI contracts with a firm in China to produce finished products. These are then shipped from China to the final market. While en route ASI pays for the goods. The Report states (PSI, 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”.

Apple Ireland is regularly described as the HQ for European operations. Apple has seven subsidiaries in Ireland. The U.S. Senate (PSI, 2013) found that one subsidiary located in Ireland (Apple Sales International) had no employees, income of \$22 billion in 2011 (64% 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 groups Ireland along with Bermuda and the Cayman Islands as a tax haven (p. 3) and states (p. 21) that “Ireland has essentially functioned as a tax haven for Apple, providing it with minimal income tax rates approaching zero”. For 2014 the effective tax rate for ASI fell further to 0.005% (European Commission, 2016).

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). In response to a question as to where a subsidiary of Apple (AOI) was managed and controlled, Apple replied “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" (PSI 2013, p. 23, footnote 93). This is an example of what has been described as 'double non-taxation' (OECD, 2015, par.7).

Table (7) shows profits and the tax charge for ASI for the years 2004-2011, and 2014.

Table (7)
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 Rate	0.78%	0.54%	0.55%	0.48%	0.48%	0.08%	0.06%	0.045%	0.005%

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

Table (8) 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 7)²⁰. 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.

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

Table (8)
Tax Payments and Effective Tax Rates for Apple (\$ million) 2006-2016

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

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

Notes to Table (8)

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, not resident in any country for corporate tax purposes is not known.²¹ The ability to remain incorporated in Ireland but not resident for tax purposes in any country was ended in the Finance Act 2014.

Google Tax Strategy

Google operations in Ireland are described as the HQ of EMEA (Europe Middle East and Africa)²² and are the best known example of a ‘double Irish’ or ‘bi-location’ tax strategy, that is legal residence in one country but location for tax purposes in a second country. The country of location for tax purposes often has a zero corporate tax rate, such as Bermuda.

Google employed 1500 in the U.K. (Public Accounts Committee, 2012, Q461) and generated \$18 billion in sales (13% of global sales) in the period 2006-2011 (Q201, 2013). Yet just \$16 million was paid in U.K. corporation taxes in this period. The Public Accounts Committee state (2013, p. 5):-

“Google defends its tax position by claiming that its sales of advertising space to UK clients take place in Ireland—an argument which we find deeply unconvincing on the basis of evidence that, despite sales being billed from Ireland, most sales revenue is generated by staff in the UK”.

²¹ Reasons given for non-disclosure are “confidentiality” and the “small number of companies involved” (Minister for Finance Parliamentary answer 25th June 2013).

²² Source: <https://www.google.ie/about/careers/locations/dublin/>. See also Murad Ahmed “Google shakes up European units in face of tougher rules”, Financial Times, February 25, 2015

Google faces similar issues in countries such as France, Italy and Spain (Buck, 2016).

Google uses PSTP to switch revenue from other countries to Ireland. Google has six subsidiaries in Ireland. One subsidiary (Google Ireland Ltd.) accounted for 32.8% of Google total revenue for 2015 (\$24.6 billion), but resulted in a pre-tax profit of 1.9% of global profits for 2015 (\$371 million), largely due to unexplained “administrative expenses” of €18.4 billion. These are likely to be royalty payments paid to its parent, Google Ireland Holdings, which is an unlimited company registered in Ireland but “administered from Bermuda” (Public Accounts Committee, 2012, Q475). The address of Google Ireland Holdings is c/o Google Bermuda Ltd. Clarendon House, 2 Church St. Bermuda, the same address as law firm, Conyers, Dill and Pearman (CDP).²³

Google Ireland Holdings has been widely described as transferring royalty payments to a Dutch affiliate before transferring them to Bermuda (the ‘Dutch Sandwich’). In 2010 a ‘practice statement’ issued by the Irish tax authorities allowed royalties to be paid by an Irish tax resident company to a foreign company, without deducting withholding taxes. Hence it appears unnecessary to route royalty payments from Ireland to Bermuda via the Netherlands (Mason, Hayes and Curran, 2011).

Table (9) shows that :-

(1) Various measures of ETR (columns 7, 8 and 9) are far below the U.S. statutory rate of 35%. A major reason for this is the low tax rate on earnings of Irish subsidiaries.

(2) Google pays corporation tax on group profits (column 3) but pays very little tax on foreign earnings (column 2 and 5). Hence as in the Apple case the vast bulk of corporation tax payments are in the U.S.

Table 9)
Profits Tax and Effective Tax Rates (ETR) for Google (\$ million) 2006-2015

Year	Group Pre-tax profits (1)	Tax charge in income statement (2)	Cash Tax Paid (3)	Foreign earnings (4)	Tax charge on Foreign Earnings (5)	Foreign Tax Savings (6)	ETR1 % (7)	ETR2 % (8)	ETR3 % (9)	ETR4 % (10)
2016	24150	4672	1643	12130	966	2397	21.1	6.8	5.4	7.6
2015	19651	3303	1932	11380	639	2624	16.8	9.8	7.8	5.6
2014	17259	3331	2819	9323	731	2400	19.3	16.3	12.7	7.8
2013	14496	2282	1932	8668	743	2282	15.7	13.3	10.5	8.6
2012	13386	2598	2034	8075	432	2598	2.2	15.2	12.4	4.4
2011	12326	2589	1471	7633	248	2589	21.2	11.9	10.4	3.2
2010	10796	2291	2175	5848	154	2291	21	20.1	17.8	2.9
2009	8381	1861	1896	4802	140	1861	22.2	22.6	19.1	3.1
2008	5853	1626	1224	3794	71	1626	27.8	20.9	16.6	2.4
2007	5674	1470	883	2467	51.2	1470	25.9	15.6	13.3	2.1
2006	4011	933	538	1318	28.5	933	23.3	13.4	11.7	2.2

²³ Source: B1 2012, of Google Ireland Holdings filed at Companies Registration Office, Dublin

Source: Form 10K various years.

The tax strategies of Apple ('double non-taxation') and Google ('double Irish') are often illustrated using complex diagrams (UNCTAD, 2015, p. 194), but their main attraction has been one of relative simplicity coupled with non-disclosure, due to the use of unlimited Irish companies. Hence the tax strategy used by Google is widely replicated amongst U.S. firms in Ireland as shown in the next section.

Evidence for the 'Double Irish'

The numbers and identities of companies using a 'double Irish' tax strategy are not publicly available²⁴. An examination of files in Company House Dublin, identified 23 U.S. owned subsidiaries, with a 'double Irish' tax structure²⁵. Six of the 23 firms use the same business address in Bermuda, as that of law firm CDP. Twenty were subsidiaries of firms in the study group.

A number of other firms were also identified with similar organisational features (the immediate parent was 'unlimited' and/or the location of the company secretary in a tax haven) but could not be conclusively identified as using a 'double Irish' tax strategy²⁶. A Pepsi-Cola Subsidiary 'Concentrate Manufacturing Company', has a parent located at the same address as law firm CDP, Bermuda, since 1986, where the current company secretary is listed as an employee. The company secretary for Boston Scientific Ltd., Cisco Systems Internetworking and EMC International Company were also listed as employees of CDP, Bermuda.

Total pre-tax income of 20 bi-located subsidiaries identified, amounted to €15.8 billion in 2011²⁷. Including Apple Sales International, income amounted to €32.8 billion for 2011 or 19% of GDP. The total amount of tax sheltered profits using these tax strategies is likely to be much larger. The tax rate for many of these firms is not the nominal tax rate of 12.5%, but zero or near zero. The exclusion of profits of these companies has a considerable effect on measured GDP.

In October 2014 the Minister for Finance announced the ending of the 'double Irish' tax 'loophole' from the year 2020.²⁸

²⁴ Minister for Finance Parliamentary answer, May 28th 2013.

²⁵ Twenty-one of these firms are listed in Stewart, 2014, Table 9.

²⁶ Boston Scientific Ltd, Cisco Systems Internetworking, EMC International Company, Fireeye, and OMJ Manufacturing

²⁷ Two firms (Sandisk Manufacturing and Facebook (Ireland) Holdings) were both 'unlimited' with no financial information available.

²⁸ Residency rules were changed to require all companies registered in Ireland to also be tax resident" Department of Finance, Budget Statement (2015). The Finance Act 2014 (section 38) states "Subject to subsection (2), a company which is incorporated in the State shall be regarded for the purposes of the Tax Acts and the Capital Gains Tax Acts as resident in the State". Subsection (2) provides an exemption which is likely to be important in future tax minimisation strategies. KPMG (2014, p. 9) state :- "If a company is regarded as

Other Tax Minimisation Strategies

Firms may pursue a variety of other tax minimization strategies. Intel Ireland Ltd. for example, is incorporated in the Cayman Islands (since 1994), but has its “principal place of business” in Leixlip, Ireland (CRO, Dublin, Form F7, 2014, SEC Form 10K, 2013, exhibit 21.1).

Another subsidiary of PepsiCo, PepsiCo Global Investment Holdings was registered in Ireland but located for corporate tax purposes in the Netherlands Antilles. This subsidiary was liquidated in 2011 with assets of just over \$1 billion and retained profits of \$400 million, all consisting of interest income. For the period 2004-2011 the tax rate on corporate profits (tax charge in the income statement/Pre-tax profit), was just under 0.09%. Thus interest payments were tax deductible to the tax payer (in some cases located in Ireland), but interest receipts were largely tax free.

A 2009 Luxembourg Tax Ruling for a PepsiCo subsidiary, Pepsi Bottling Group states:- “the effective management and control of PBG Beverages, an Irish subsidiary of PBG Midwest Holdings S.A.R.L., was transferred from Ireland its original place of incorporation to Bermuda”. This took place as part of a complex chain of restructuring involving Irish, Bermuda and Luxembourg based subsidiaries (Luxleaks Pepsi Tax Ruling 2009 appendix 1, p. 10).

Recent evidence has drawn attention to the use of Luxembourg subsidiaries in tax reduction strategies.²⁹ Three firms using a ‘double Irish’ tax strategy, were also identified in Luxembourg Tax Rulings. A ruling for one of these firms, Abbott Laboratories, details 79 separate restructurings of subsidiaries in five different countries as part of a single tax plan (Abbott Laboratories Tax Ruling 2009, pp. 10-11)³⁰.

It is also likely that the Netherlands functions as an equally if not more important centre for MNE tax minimization strategies. Of 19 groups identified as operating a ‘double Irish’ tax structure, 18 also had identifiable affiliates located in the Netherlands and 11 in Luxembourg. The number of identified affiliates in the Netherlands was also larger (72 versus 36)³¹. Some firms located in Ireland are also organized as subsidiaries of parent firms incorporated in the Netherlands (for example Dell, Hewlett Packard, IBM, NCR

resident in another country under the terms of a tax treaty between Ireland and that other country, it will not be considered to be resident in Ireland”.

²⁹ See ICIJ, Luxembourg Leaks: Global Companies' Secrets Exposed, available at <http://www.icij.org/project/luxembourg-leaks>; Simon Bowers, Guardian 3th November 2014, “Luxembourg tax files: how tiny state rubber-stamped tax avoidance on an industrial scale”.

³⁰ Bahamas, Cyprus, Gibraltar, Luxembourg and the Netherlands. Tax rulings involving Covidien (a company which has ‘inverted’ to Ireland but managed from the US) also detail extensive and complex restructurings (see <http://www.icij.org/project/luxembourg-leaks>).

³¹ Firms are less likely to disclose subsidiaries, especially those operating in countries with low/no corporate tax, McIntyre et al, 2015, pp. 16-17.

Implementing complex tax strategies involving chains of subsidiaries in multiple jurisdictions results in considerable firm expenditures. These user costs are reflected in the growth of the tax avoidance industry as discussed in the next section.

The Growth of the Tax Avoidance Industry

Tax legislation is complex. Introducing tax concessions aimed at one sector while attempting to preserve the existing tax base adds to this complexity. Firms wishing to avail of fiscal incentives must necessarily use the services of skilled professionals. Firms providing such services have grown large and powerful, in both lobbying for and influencing changes in the tax code. The UK Committee of Public Accounts (2013) states “the large accountancy firms sit on tax advisory panels and also second staff to government to provide technical advice when tax legislation is amended or created” (Public Accounts Committee, 2013, par. 7). They also “appear to use their insider knowledge of legislation to sell clients advice on how to use those rules to pay less tax” (Public Accounts Committee, p. 9). Sikka and Wimott (2013, p. 431) describe the four big accounting firms as operating “factories devoted to manufacturing schemes to enable wealthy clients and multinational corporations to avoid direct and indirect taxes”.

Reaction: The OECD Reform Programme (BEPS)

As a result of public and Government concern, the OECD/G20 developed proposals (OECD, 2013) aimed at reforming the international tax system in particular as it affects MNE's. The OECD state that the challenge of the digital economy is:- “To ensure that profits are taxed in the jurisdiction where economic activities generating the profits are performed and where value is created” (OECD/G20 2015, p. 4). The OECD state that their work “has reinvigorated the fight against harmful tax practices” and has reduced “the distortionary influence of taxation on the location of mobile financial and service activities”, thus encouraging “fair tax competition” (OECD/G20, 2015, p. 7).

It is likely that some reforms will reduce harmful tax practices, for example the automatic exchange of information³². Other proposals in relation to transfer pricing rules will be less effective, for example retaining the “arm's length principle” which is described as “the cornerstone of transfer pricing rules” (OECD 2015b, p. 150). This is because identifying “arms length transactions” may both be impossible and inappropriate, in particular in the case of MNE's operating in sectors that are highly concentrated or IP intensive.

The OECD proposals are voluntary, subject to interpretation and may change as a result of future data analysis (OECD, 2015a, p.9) and a full review in 2020 (2015b, p. 64).

³² The European Commission is also preparing a directive on automatic exchange of information on advance cross and pricing arrangements with all other member states (European Commission, 2015, p. 2).

A major focus of the BEPS project is on treaty change to prevent harmful tax practices (OECD, 2013, p. 24). However with the exception of one firm 'located' in Luxembourg, all countries where Irish incorporated companies are tax resident, have no tax treaty with Ireland, for example, Bermuda, Cayman Islands, Isle of Man, Jersey. Irish legislative changes mean firms could continue to use a 'double Irish' tax strategy by locating for tax purposes in a country which has a double tax treaty with Ireland (see footnote 12). Shire Pharmaceuticals provides an example of the separation of country of incorporation, which is Jersey (no employees), and corporate tax residence, Ireland, with less than 2% of corporate employees. The U.S. is the main location of revenues, income and employees (Public accounts Committee 2014, Q 134-Q139).

OECD proposals assume that BEPS actions can be clearly separated from non BEPS actions. Hence the OECD consider that no/low tax resulting from tax policies designed to "encourage business development" or "R and D tax credits" should not be attributed to BEPS (OECD Action 11, par 26, 69 75). In practice this separation may not be possible.

Reaction: Tax Incentives and the European Commission.

Similar to the OECD, a key motivation of EU policy is to prevent 'unfair tax competition' A second key objective is to ensure "income is attributed to where value is created" as in proposals for a common tax base (European Commission, 2016b, p. 2). The recently approved 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 on the basis that tax rulings have resulted in granting "selective tax advantages" which constitute state aid (Almunia, 2014)³³.

Decisions that tax rulings constituted illegal State aid have been made in relation to the Belgium 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. More recently the Commission required Ireland to reclaim a far larger sum of €13 billion in illegal State aid plus €6 billion in interest, (a total of almost three times annual corporate tax receipts) from Apple (European Commission Press Release, August 30, 2016a). Preliminary findings of illegal State aid have also been made in relation to Amazon and MacDonalds in Luxemburg and further investigations of other companies are possible are possible³⁴.

³³ See EU Press release "State aid: Commission investigates transfer pricing arrangements on corporate taxation of Apple (Ireland) Starbucks (Netherlands) and Fiat Finance and Trade (Luxembourg), Brussels, 11th June 2014.

³⁴ See Gaspard Sebag and Aoife White, "Microsoft Taxes Said to Face Scrutiny as EU Quizzes Luxembourg", Bloomberg, July 4, 2014; Jim Brunnsden and Josh Noble, "European Commission to examine Google's UK tax deal", Financial Times, January 28 2016.

Pre-publication of the Commission findings the Governments of all four countries issued similar statements to the effect that they expected to be exonerated. In relation to Apple, the Irish Minister for Finance stated that “Ireland is confident that there is no state aid rule breach in this case”. Even though Ireland would benefit from any tax payments the Minister also stated that “we will defend all aspects vigorously”³⁵. Post publication of the Commission findings all four countries appealed the Commission decisions to the European courts. Starbucks and Fiat have also appealed and Apple has stated that it will also do so.

There are a number of reasons given why the Irish Government is appealing the Apple decision, for example “to challenge the encroachment of EU state aid rules into the sovereign Member state competence of taxation”³⁶. However the principle of sovereignty in taxation runs counter to the principle that it is illegal to give State aid to selected companies - a principle that the European Court of Justice has a track record of supporting.

In relation to the Commission Apple decision, the Commission (Press Statement 30th August 2016) 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 tax in Ireland. The remaining vast majority of profits were allocated to the "head office", where they remained untaxed”.

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

“ASI and AOE had a trading activity in Ireland through their respective branches and were **managed and controlled outside Ireland**”.

The ‘central management and control test’ is applied on “the basis of fact and precedent” (Revenue Commissioners, 2013, p. 1). These “facts” cannot be the location of fixed assets or employees, Board meetings were conducted in the U.S. Check PSI report ,Furthermore Board meeting minutes do not indicate that the Board of directors performed ‘active and critical roles’ ; the postal address in company documentation was given as Ireland.

Commission case (European Commission (2016a), is to challenge

The OECD/BEPS initiative emphasises multilateral action which is also favoured by U.S. MNE’s and Government (U.S Treasury, 2016 p. 19). The U.S. Government considers that the

³⁵ See Department of Finance Press Release 11th June 2014.

³⁶ The U.S. Treasury (2016) has also published a detailed critique of Commission state aid cases.

Commission state aid cases “sets aside years of multilateral efforts” to reform international taxation (U.S. Treasury, 2016, p. 25). Governments accused of unfair tax practices may also support multilateral action as they argue that tax avoidance issues arise because of the reluctance of governments to collectively harmonise tax rates (Traynor and Bowers, 2014). An associated argument is that countries critical of low tax regimes are being hypocritical because of their own very favourable tax regimes.

In contrast some countries (Australia and the U.K.), have introduced unilateral legislative changes to combat “artificial arrangements” to avoid tax. In the case of the UK this resulted in a small and much criticized increase in tax payments by Google (Strauss, 2016). Firms expect further unilateral action via legislation (Deloitte, 2014, p.2). Unilateral action has also taken the form of challenging tax structures through the courts (PWC, 2012)³⁷. Such actions reflect a desire not only to minimize ‘artificial’ reductions in the corporate tax base but also intra-country disputes as to the allocation of the tax base. The U.S. Government has criticised EU State aid cases because U.S. companies are disproportionately targeted and the novel use of powers may result in reduced U.S. taxes (U.S. Treasury, 2016, pp. 4-5).

Conclusion

This paper provides detailed evidence of the use of tax minimisation strategies by U.S. MNE’s with substantial operations in Ireland. The paper shows that group effective tax rates using cash tax payments as the numerator are for most years lower than those published. Using a wider definition of the tax base to include accounting depreciation provisions, results in even lower measures. Foreign earnings for the study group varied between 54.3% and 67.8% of total earnings, but accounted for between 26.5% and 33.9% of the tax charge in the income statement. Thus even though most profits are earned outside the U.S. most corporate tax is paid in the US. This finding has considerable implications for tax policy and equity in intra-country tax allocation.

There are risks to firms using complex tax strategies because they may be deemed to be illegal (as in the Apple case) and to an industrial policy dependent on attracting FDI. Tax regimes within a country may change because of external requirements or because of changes in tax regimes in other countries negating tax concessions, with a consequent risk of FDI relocation.

The European Commission is likely to be the main driver of tax regime change in Ireland and other countries, because it has considerable fining powers, and rulings, although subject to appeal, are legally enforceable. This is in contrast to OECD proposals. These changes may in turn cause affected companies, their advisors, and some governments, to seek replacement

³⁷ See for example, Ahmed, M. and Sanderson, R. Apple agrees to pay €318m fine to close Italian tax case, Financial Times, December

incentives. One example is a ‘Knowledge Development Box’ in Ireland (Department of Finance, 2015). Proposals for greater inter-country exchange of information (OECD, 2015a, p. 14, European Commission, 2015) and for country by country reporting (OECD, 2015c) may be the most significant reform in the long run, but to be really effective country by country reporting should be publicly available.

UNCTAD (2015, p. 17) conclude that “tax does not so much drive locational decisions as it drives the modality of the investment and the routing of investment flows”. However some investments in low cost locations “are highly sensitive to tax”. These are investments that are a key part of a global value chain, where profit switching transfer pricing is important, and where low/no taxes on international transfers are a key factor in location decisions.

These latter aspects may partly explain why Ireland has been relatively successful in attracting FDI. For example, employers PRSI rates in Ireland for 2013, are the second lowest in the EU and contributions at 3% of GDP are the 8th lowest in the OECD. FDI in Ireland has relatively low local linkages. Domestic expenditures in Ireland for IDA supported firms are relatively low at 17.3% of sales for 2013, compared with 38.9% for 1996³⁸.

Tax incentives while they may be successful in attracting relatively footloose international firms, may erode the tax base of neighbouring countries through the use of tax incentives in unanticipated ways. The net result of low corporate tax policies is “a dangerous race to the bottom” which will make the taxation of mobile taxation by any nation impossible (New York Times, 2014). The burden of taxation thus shifts to activities and individuals that are unable to avoid tax.

At the same time increased profits in low tax countries due to PSTP, results in increased tax revenues. Taxes on corporate income as a % of total tax amounted to 12.4% for Luxembourg, 8.4% for Ireland compared with 4.9% for Germany for 2013³⁹.

A tax based industrial policy is not likely to result in an innovative, research led economy. A tax based industrial policy is more likely to lead to an emphasis on tax reduction. Those skilled in knowledge of the tax system become influential in management decisions⁴⁰. The tax avoidance industry and those firms specialised in understanding the tax system and selling tax services become large and powerful and may exert considerable influence in formulating tax policy and legislation.

³⁸ Source: Industrial Development Authority, Ireland Annual Reports for 2014 pp 5-6 and 2000 p. 6 and p. 14.

³⁹ Source: OECD Revenue Statistics, 2015, Table 12.

⁴⁰ There are over 24,000 members of the main professional body of accountants in Ireland in 2015. Of this total 63% work in business and 66% work in Ireland. Source: Chartered Accountants Ireland, annual report, 2015, p. 12. See also Clancy et al, 2010, par.3.14.

The challenge for researchers and policy makers is to develop and implement industrial policy measures not dependent on tax incentives and tax minimisation strategies. Increased regulation and prohibition of ‘aggressive’ tax strategies also implies change in management strategy and firm organisation. The implications for location of FDI is an important avenue for future research.

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Appendix

U.S. Companies with subsidiaries in Ireland included in Study

Name of Group	Name of Group	Name of Group
Abbott Laboratories	eBay	Macafee
Abbvie	EMC	Microsoft
Adobe Systems	Gilead Sciences	Medtronic
Amazon	Google	NCR
Analog	Hewlett-Packard	Oracle
AOL	IBM	Pfizer
Apple	Intel	San Disk
BMC Software	Facebook	Symantec
Boston Scientific	Forest Laboratories	Synopsys
Cisco	Linkedin	Yahoo
Dell		