

**Response to Public Consultation Process on  
Knowledge Development Box**



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## 1. Industrial Policy and R&D

Industrial policy recognises the special and beneficial role of expenditures on R&D, innovation, new products and quality improvement in fostering long run development. In this context Budget 2015 announced the introduction of a “Knowledge Development Box” (KDB) which has been described as “a competitive income-based regime for intangible assets in Ireland”, the purpose of which “is to enhance the competitiveness of the Irish offering for intangible assets to ensure Ireland becomes the location of choice for investment in intellectual property” (Department of Finance General Briefing on Corporation Tax for Budget 2015).

Ireland in particular emphasises tax incentives to encourage R&D and innovative activity. The proposed KDB is additional to existing tax reliefs. These include, for example:-

1. Relief for Investment in Renewable Energy Generation. This incentive came into force on 18 March, 1999;
2. Section 46 Finance Act, 2008 introduced a new incentive for the provision of certain energy-efficient equipment for use in a company’s trade;
3. A 25% tax credit for qualifying R&D expenditure was introduced in 2004 for companies engaged in in-house qualifying R&D undertaken within the European Economic Area.

In spite of these extensive tax reliefs, Department of Finance documents (Budget Submission no. 153\21 Competitive Enhancement to Intangible Assets Regime (Section 291A)) state that:-

“Generally, countries that have introduced such [patent box] regimes have corporation tax rates that are significantly higher than our 12.5% rate. Nonetheless, industry submissions are calling for the Government to introduce a similar type of incentive here to enhance the competitiveness of Ireland’s tax offering for IP activities”.

However a key flaw in tax based incentives for R&D expenditures is the assumed decision model. Much of R&D expenditure cannot be evaluated using Discounted Cash Flow models, rather they are part of a process of creating options.

## 2. The Problem of Tax Exhausted Companies

The relationship between tax incentives and investment is complex. Survey evidence indicates that factors other than tax may be more important in influencing investment decisions. For example Ernst and Young “attractiveness” surveys for European countries regularly rank corporate taxation as the 8<sup>th</sup> or 9<sup>th</sup> most important factor behind factors such as “Stability and transparency of political, legal and regulatory environment” or “transport and logistics” (Ernst & Young, 2014, p. 13). The assumed investment decision making model (maximising NPV or IRR) may not be appropriate for many firms because investment is to some extent path dependent, or in other cases investment may have many of the features of a real option.

Real options are often an integral part of an investment, for example obtaining planning permission which grants the right but not an obligation to undertake development within a specified time period. Investment in R&D, developing patents, and developing and understanding new production techniques, have many of the features of a real option. Cash flows may be negative and inherently unquantifiable but nevertheless from the perspective of a firm the investment is valuable because of knowledge acquisition and uncertainty reduction. Projects that are loss making cannot benefit from tax allowances. Loss making projects by MNEs may be able to avoid a position of tax exhaustion because of their flexibility in switching both profits and losses within a group structure. Hence MNEs are in a position to comply with EU requirements on “patent box” regimes for substantial activities or the appearance of substantial activities. Compliance may also be helped by extra resources provided by Revenue. The Department of Finance documents propose “increased resources for Revenue’s ‘competent authority’ function so that they can assist multinational taxpayers in transfer pricing disputes with other jurisdictions” (Department of Finance General Briefing on Corporation Tax for Budget 2015).

This advocacy position would appear to be at variance with the purpose of a competent authority as described by the OECD (2007). This states amongst other requirements that “a competent authority should engage in discussions with other competent authorities in a principled, fair, and objective manner, with each case being decided on its own merits and not by reference to any balance of results in other cases” and that “competent authorities should be consistent and reciprocal in the positions they take and not change position on an issue from case to case, depending on which side of the issue produces the most revenue” (OECD, 2007, Best Practice no. 3, p. 11).

There are considerable incentives for MNEs to incur or show cost where corporate tax rates are high, as the value of any allowance is a positive function of the corporate tax rate. This is one reason why R&D facilities of MNEs are located in high corporate tax regimes such as the US.

Many firms in Ireland are ‘tax exhausted’. This may be where tax allowances are greater than pre-tax profits. It is more likely that firms are tax exhausted in Ireland because of current losses, or previous losses, brought forward. These are most likely to be indigenous firms. Table (1) shows that most firms pay little or no corporation tax. For 2012 66% of firms accounted for 1.68% of corporate tax receipts. In contrast 0.9% of firms accounted for 83% of corporation tax receipts. The trend through time has been for Corporation Tax payments to become more concentrated. An important policy implication is that tax incentives are of no value to firms that do not pay tax, that is ‘tax exhausted’ firms.

Table (1)  
The Distribution of Corporation Tax Payments by Irish Companies in 2008-2012

	2008	2008	2009	2009	2010	2010	2011	2011	2012	2012
Net Trading Income € <sup>1</sup>	% of total tax	% of cases	% of total tax	% of cases	% of total tax	% of cases	% of total tax	% of cases	% of total tax	% of cases
≤ 0	7.4	32.9	6.3	38.4	5.8	38.7	3.4	38.9	1.4	37.0
1 - 25,000	0.6	29.4	0.6	28.7	0.6	29.0	0.21	28.1	0.28	28.9
≥ €10 million	69.8	0.8	73.6	0.9	76.7	1.0	81.1	1.0	0.9	83.0

Note:- before 2010 corporation tax refers to tax due plus refunds. After 2010 corporation tax refers to tax due. The data refers to corporate tax 'cases'.

Source: Revenue Commissioners, Income Tax and Corporation Tax Distribution Statistics, available at: <http://www.cso.ie/px/pxeirestat/pssn/rv01/DATABASE>.

A policy solution to granting tax reliefs to tax exhausted companies is to allow firms to reclaim in cash any unused tax allowances. The R&D tax credit is different from other tax credits in that unused tax credits can be reclaimed in cash since 2009 (Department of Finance, 2013, par. 5.13). One result is that the corporate tax system becomes a source of cash to firms. The larger the size of the corporate tax credit the larger the corporate tax outflows.

The tax system is being used in effect to give a form of 'capital grant' to qualifying enterprises, but on the basis that qualifying expenditures fall within the tax code rather than on broader industrial policy objectives. Table (2) shows that for 2011 €106 million was paid to firms rather than being used as tax credits. The R&D tax relief is also unusual in that up to 15% of the expenditures can be claimed for tax relief if contracted out to third parties, such as universities (Department of Finance, 2013, par. 5.33), although "some firms' level of subcontracting as a percentage of their R&D expenditure is much greater than 15%" (Department of Finance, 2013, par. 5.35).

Table (2) shows the growth in these tax expenditures from 2001, so that for 2012, they amounted to 5% of total corporate tax revenues. For 2011 the R&D tax credit alone (excluding other similar reliefs) amounted to just under 30% of direct expenditure on R&D.

Table (2)  
The cost of R&D Tax Credit (€million)

	2001	2008	2009	2010	2011	2012
No. Of firms	<74	582	900	1172	1409	1538
Cost €million	71	146	216	224	261	282
Payable Credit <sup>1</sup>			31	64	106	

Source : Minister for Finance, written answers, 8<sup>th</sup> July, 2014.

<sup>1</sup> Department of Finance (2013) par. 5.19.

Despite these costs the budget of October 2015 increased the value of these tax allowances. It is likely that a small number of firms (15) are the main beneficiaries of this tax change (O'Brien, 2015). Table (3) shows the value of such payments for one firm (Intel Shannon Ltd.). Table (3) shows post-tax profits are over twice pre-tax profits for 2012 because of the tax credit. Table (3) also shows that this firm received capital grants which were amortized to revenue (added to revenue).

Table (3)  
Revenue Grants and Intel Shannon  
\$ million

Year	Revenue Grants receivable, \$million	Capital grants amortized	Pre-tax profits	Post-tax profits
2012	3.068	0.167	4.1	10.08
2011	6.629	0.086	5.4	5.45
2010		0.063	4.9	4.7
2009		0.103	4.3	2.8

Source: Annual Report and accounts for year end 29th December 2012. Footnote 5 refers to 'Revenue grants receivable'.

### 3. The KDB and Innovation Policy

Is the Knowledge Development Box an additional element in Irish industrial policy, aimed at encouraging certain innovative activity and in particular, R&D? Alternatively, is it a means of making up for the forthcoming removal of the "Double Irish", which will increase some MNEs' tax liability? Tax incentives targeted at particular activities, including R&D, could of course be both a way of attempting to encourage desirable development and reducing companies' tax liability. However, the analysis above indicates that the KDB is more the latter than the former, and there are better ways to encourage innovative activity in Ireland than through the KDB proposal.

The vast majority of R&D is undertaken by MNEs in Ireland. Although accounting for only 55 percent of turnover, foreign owned enterprises account for over 70 percent of R&D (CSO press release, 2012)<sup>1</sup>. If anything, the KDB will result in an even greater share in total R&D being accounted for by MNEs.

Other problems with the KDB as an innovation policy include the following:

- Most innovations do not arise from patents. Many do not even result from R&D, but are the results of ideas generated “on the shop floor”;
- The KDB will attempt to link the R&D expenditure in Ireland with the income from the intellectual property (IP) resulting from that expenditure. However, much expenditure on R&D never results in patents or any other IP. The R&D may be generic and speculative in which case it may have long term objectives, or it may be specific and targeted but unsuccessful. This will reduce any clarity about the relationship between a company’s R&D expenditure and its income from exploitation of its IP;
- Where exactly an idea is generated and evolves to become the IP of a company with operations in many countries may be difficult or impossible to determine. This will further reduce the link between any R&D expenditure and the company’s IP;
- This fuzziness is likely to be exploited by MNEs in their tax declarations. The KDB consultation paper suggests internal company systems for recording R&D expenditure and resulting IP. However, the inherent lack of clarity will easily lead to the possibility of attachment of expenditure to result that will enable the MNE to derive the KDB tax benefit;
- One consequence of this is likely to be “rent seeking”, with the build-up of expertise in the big accounting firms to ensure that the administrative systems of the MNEs meet the requirements for benefiting from the KDB, rather than any addition R&D skills.

Irish industrial policy has been excessively dependent on a fiscal regime to encourage foreign direct investments by MNEs into Ireland. The KDB consultation paper itself states: “Attracting investment that generates economic activity with real substance has been a central column of the Irish taxation system for more than 50 years and it is within this context that the introduction of the KDB is being considered.” It is our view that incentivising “investment that generates economic activity with real substance” should be the central column of industrial policy, not fiscal policy.

What is required for sustainable development in Ireland is an effective system of innovation. This cannot be created by the types of policies exemplified by the KDB. In our analysis of industrial policy (Jacobson, 2013) we show that there is a wide variety of different policies, including the following, that must be integrated into a coherent industrial strategy:-

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<sup>1</sup> “Foreign owned enterprises accounted for 55% of turnover and over 22% of employment in 2010 in the business sector in Ireland, see CSO “Business in Ireland 2010” report (<http://cso.ie/shorturl.aspx/133>). These foreign owned enterprises accounted for €1.3bn of the total R&D spend or 71% of such expenditure in Ireland.”

<http://www.cso.ie/en/newsandevents/pressreleases/2013pressreleases/pressreleasebusinessexpenditureonresearchanddevelopment20112012/>

- (1) Setting up dedicated research institutes, for example Fraunhofer Institutes in Germany (see:- <https://www.fraunhofer.de/en/about-fraunhofer.html>);
- (2) Encouraging and funding existing research institutes for example in Universities to focus on applied research and establish collaboration with industry;
- (3) Using State agencies to encourage knowledge acquisition through such means as attendance at trade missions, provision of information;
- (4) Subsidising and targeting lending;
- (5) Providing current and capital grants for ‘qualifying’ expenditures;
- (6) Providing tax incentives targeted at particular activities.

Ireland, it is clear from the foregoing, has concentrated for far too long on the last of these policies, namely fiscal policy.

## References

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