Submission to the Department of Finance

Public Consultation Paper:

The Knowledge Development Box

Iulia Siedschlag

Economic and Social Research Institute

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Dr Iulia Siedschlag is Associate Research Professor and Head of the Centre for Internationalisation and Competitiveness at the ESRI. Her key areas of expertise include international and European integration, economic growth of open economies, international trade and investment, technological change, R&D and innovation. She has been appointed to numerous international expert groups and provided policy advice to international organisations including the European Commission, the European Central Bank, the World Bank, the Inter-American Development Bank, the Asian Development Bank Institute, and the World Economic Forum. The views expressed here are those of the author and may not be regarded as stating an official position of the ESRI.

Response to Public Consultation Paper: The Knowledge Development Box

Iulia Siedschlag, Economic and Social Research Institute

1. This submission contributes evidence-based views for consideration in the design and implementation of a preferential tax rate on corporate income from intellectual property, the Knowledge Development Box (KDB).

2. The announced objective of this new tax instrument will be "to retain and attract business with real economic substance in Ireland." This objective recognises two major challenges the Irish economy is facing:

(i) economic growth in advanced economies is increasingly linked to investment in knowledge-based activities;

(ii) countries are competing for mobile investment in intangible assets.

3. International evidence[1] indicates that economic growth in advanced economies in the next decades will be increasingly dependent on knowledge and technology. To address these challenges many governments in the European Union and around the world have implemented policy instruments designed to attract investment in knowledge-based capital. In particular, in recent years, preferential tax rates on corporate income from patents (known as *Patent Boxes*) have been introduced in a number of European countries.[2] Recent empirical evidence indicates that European firms' intangible assets are more likely to be held in subsidiaries located in lower tax jurisdictions than tangible assets (Dischinger and Riedel 2011).

4. Multinational enterprises are in a position to separate the location of innovation activities from the location of ownership of intellectual property such as patents. As part of tax planning strategies, multinational enterprises could locate ownership of patent-related income in low tax jurisdictions while patent applications and innovation activities could take place in different locations. Recent empirical evidence indicates that the location of ownership of patents is responsive to the corporate income tax (Griffith et al. 2014). Furthermore, the international evidence shows that lower rates of tax on income from patents can attract innovative projects with a high earning potential (Ernst et al. 2013).

5. As part of international concerns that income shifting for tax purposes is reducing global tax revenues with negative consequences on growth everywhere, the OECD and the European Union are considering a range of measures to better align taxing rights between countries with real economic activity. In this context, the preferential tax regimes known as *Patent Boxe*s have come recently under international scrutiny. While international consultations on this matter are still ongoing, the most likely outcome at this stage appears to be an agreement on a modified nexus approach for preferential tax regimes on income from intellectual property (IP). The main principle of this approach is that the income from IP eligible for a preferential tax treatment should be proportionate with the underlying research activities.

[1] Global policy challenges for the next 50 years are discussed by Braconier et al. (2014).

[2] Belgium, Cyprus, France, Hungary, Lichtenstein, Luxembourg, Malta, the Netherlands, Portugal, Spain, United Kingdom, as well as the Canton Nidwalden in Switzerland. Evers et al. (2014) review the features of these preferential tax regimes in the above mentioned countries.

6. The rationale for such a preferential tax treatment of corporate income from IP is linked to knowledge spillovers associated with the underlying R&D activities. Therefore, to be effective, the KDB in Ireland should target the underlying research activities which generate large knowledge spillovers. In this context, a major relevant question in relation to the design and implementation of the KDB in Ireland is to what extent this preferential tax treatment will incentivise the co-location of income from patents with R&D and innovation activities. In relation to this, international evidence[3] indicates that the location of R&D activities by multinational enterprises is linked to a number of supply-driven factors including: availability of highly-skilled R&D personnel; proximity to centres of scientific excellence; proximity to other foreign R&D activities; technological strengths; strong links between universities and industry.

7. To ensure that the design and implementation of the KDB will meet the announced objective, it would be important to evaluate *ex-ante* the expected benefits and costs of such a policy instrument. Such an evaluation would consider both benefits (additional R&D and innovation activity, tax revenue from additional income from IP) and costs (foregone tax revenue, administration costs).

8. An important consideration in evaluating the potential benefits and costs of the KDB is that patents represent only one form of IP. Furthermore, the propensity of firms to use patents is in general concentrated in certain industries and types of firms. Large countries and a small number of large firms account for a large share of patent applications. A recent OECD study[4] finds that in 2009, in Ireland, 1.6 % of all firms applied for patents. The patenting propensity of firms in the same year was higher in other small open economies such as Switzerland (8.5%); Finland (7.2%) Sweden (5.7%); Belgium (3.9%); the Netherlands (2.9%).

9. It is also important to consider that not all inventions are patentable. Other forms of IP may be used to protect inventions such as trademarks, copyrights, and designs. A preferential tax rate for corporate income from patents will introduce a distortion in the tax system by introducing different taxations for different types of corporate income. In this context, such a preferential tax treatment might discourage other forms of intellectual property with potential large knowledge spillovers. Furthermore, the value of patents varies, with the most profitable patents concentrated in a small number of large firms.

10. With respect to the qualifying expenditures incurred to develop a patent, these may take place in different locations outside Ireland. This means that the KDB will subsidise some innovation activities conducted outside Ireland. It would be important to consider how these innovation activities conducted offshore would generate benefits to Ireland.

11. On the cost side, to the extent that eligible innovation projects by large multinational enterprises would happen in the absence of this tax instrument, deadweight costs associated with the KDB could be large.

12. It would be important to consider how the KDB will interact with controlled foreign company (CFC) rules in place in many (higher tax) countries which aim to prevent income shifting for tax purposes.

[3] Recent reviews of this evidence are available in Siedschlag et al. (2013), and Hervás et al. (2014).
[4] Squicciarini and Dernis (2013).

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