Consultation on the UK Patent Box proposal; a response

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This is a response to the UK Government's consultation on the introduction and implementation of a Patent Box - HMT and HMRC, 'Consultation on the Patent Box', June 2011 (http://www.hm-treasury.gov.uk/d/consult_patent_box.pdf).

We discuss some of the design principles for a UK Patent Box as set out in the consultation document with reference to the stated aims of the policy and the principles that a good tax system should not be unduly complex or unnecessarily distort decisions. In what follows, all references to paragraphs relate to the 2011 consultation document.

Evaluating the specific design proposals requires a clear statement of the intended aims of the Patent Box policy; whether or not a proposed design decision is sensible depends on what it is trying to achieve. The consultation document states that the aim of the Patent Box is to *"provide an additional incentive for companies in the UK to retain and commercialise existing patents and to develop new innovative patented products"* (paragraph 1.7). In the previous consultation document there was an emphasis designing a policy that "encourages investment in the UK" and "prevent(s) movement of IP offshore".[3] The aims of policy are discussed in Box 1.[4]

In this document we highlight that some of the design proposals reduce firms' incentives to invest in innovation to create new patentable technologies and extend the tax break to activities that would have occurred in the absence of the policy. We argue that the proposals, in particular those relating to the formulaic approach, are unduly complicated and lack a clear link to the aims of the policy

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[3] See paragraphs 3.1 and 3.5 respectively in *HMT and HMRC, The taxation of innovation and intellectual property, November 2011* (*http://www.hm-treasury.gov.uk/d/corporate_tax_reform_part2b_innovation_and_intellectual_property.pdf*).
[4] Further discussion of the aims and analysis of the Patent Box proposal can be found in full in R. Griffith and H. Miller, '*Support for research and innovation*', in the 2010 Green Budget (http://www.ifs.org.uk/budgets/gb2010/10chap10.pdf) and R. Griffith and H. Miller, '*Corporate taxes and intellectual property*', in the 2011 Green Budget (http://www.ifs.org.uk/budgets/gb2011/11chap10.pdf).

Box 1: The aims of a UK Patent Box

Increase incentives to invest in innovation and commercialise patents

A Patent Box is poorly justified on the grounds that it will increase innovation - the policy targets the income that results from patented technology, not the underlying research activity itself. In addition, it is not clear that a Patent Box creates strong incentives for firms to carry out additional innovation activities in the UK – the underlying research can have been conducted outside of the UK. The Patent Box will likely spur additional development and commercialisation activities which are related to creating an income stream from a patented technology. However, these are activities for which firms capture all of the returns and therefore face the correct incentives to maximize the related income stream; a tax incentive to this end is not required.

In addition, a Patent Box: unnecessarily distorts the decision to invest in patentable technologies; entails a large deadweight cost; introduces additional complexity.

Make the UK a more attractive location for patents and related activities

A Patent Box will incentivise firms to hold patents in the UK. This issue is particularly acute in light of the Patent Boxes already operating in 4 EU countries. There are a number of considerations here:

- The Patent Box will make the UK a more attractive location to earn patent income. The affect on firms choosing to conduct real activities in the UK is unclear since firms can and do separate the income from intellectual property from innovation or development.
- Despite becoming a more attractive location, Government estimates predict that the Patent Box will have a revenue cost of £1.1bn a year (table 2.4, June 2010 Budget).
- The Patent Box can be viewed as a way to set a preferential rate on an important form of mobile income. This may allow a government to avoid deterring mobile activities while sustaining a higher (main) rate on less mobile activities. However, preferential rates have been discouraged by international agreements (including the EU Code of Conduct on business taxation), largely as a result of concerns that they may intensify tax competition and in so doing lower revenues for all governments. EU governments may be better off avoiding Patent Boxes, especially if patents are less mobile between the block of EU countries and the rest of the world than they are from an individual EU country.

Commencement

Summary: it is not clear that the added complexity and potential deadweight cost of the proposed phase-in approach is warranted by the potential benefits.

The November consultation doc proposed that eligible patents would be those first commercialized after 29 November 2010.[5] The latest proposals set out an alternative under which the Patent Box would apply to the profits earned after 1 April 2013 arising from all eligible patents. To account for the increased cost of extending the policy in this way, the Patent Box would be phased in over 5 years (Table 6.A). The proposed phase-in approach:

- will increase the deadweight cost (i.e. tax break given to activity that would have occurred in the absence of the policy). However, this is offset to some degree by reducing the effective tax break in the first 4 years of the policy.
- will increase complexity by instigating a 5 year period in which benefits are phased in.
- will not increase the incentive to create more patentable technologies and may decrease the incentive (because the tax break is smaller in the first 5 years).
- may increase the incentive to create more income from currently patented products. As highlighted above, there is little justification for setting tax policy to incentivise commercialisation activities.
- may increase the incentives for firms to retain current patents in the UK.

One objection to setting a cut-off date for patent eligibility is that it will require complex transitional rules until all non-eligible patents have expired (paragraph 6.1). While this would apply under a system in which patents became eligible after a cut-off that was difficult to ascertain (such as proposed in the November consultation document), it would not be the case if the cut-off was based on the date of grant, which is easily identifiable.

Defining and identifying income

Summary: the definition of qualifying income weakens the link to innovative activities, increases the deadweight cost of the Patent Box and distorts firms' decisions over the forms of intellectual property to invest in. The proposed formula adds significant complexity to an already complex tax policy. It is not clear how the design decisions relate to the aims of the policy.

[5] See paragraph 3.12 in *HMT and HMRC, The taxation of innovation and intellectual property*, November 2011.

The proposals have made the scope of the Patent Box wider so that it will apply to income beyond that directly related to patents (by allowing all income accruing to a product that incorporates at least one qualifying patent to qualify for the Patent Box). At the same time the proposals restrict the amount of profit that is eligible for the 10% rate (via the formula for calculating Patent Box profits). The design of the formula has been driven partly by the need to manage the revenue implications of including a wider class of income.[6]

Qualifying income

Qualifying income is defined as all income accruing to a product (or service) that incorporates at least one qualifying patent, rather than income that can be directly attributable to an individual patent. In most cases this will be much wider than the income that is directly related to the technology embodied in a patent.

- This definition of qualifying income reduces the incentives to invest in additional patentable technologies – an additional patent does not necessarily affect how much income can be included as qualifying income.
- In thinking about encouraging firms to retain activity in the UK, it is not clear how the definition of qualifying income relates to a notion of income which is mobile and therefore at risk of moving offshore. That is, while there is evidence that the income from patented technologies is particularly mobile – firms can and do locate such income offshore - this doesn't apply to the same extent to all income.
- The definition of qualifying income increases the deadweight cost associated with the Patent Box by extending the scope of the tax break to a greater proportion of activities that would have occurred in the absence of the policy.
- The number of firms which hold any patents is highly skewed. While this definition of qualifying income increases the scope of the Patent Box, the largest share of the tax savings entailed will likely accrue to a small number of firms that account for the majority of patents and are likely to be most able to generate large associated revenue streams from their technologies.[7]

[6] The consultation document highlights (paragraph 4.1) that "including sale proceeds of a patented product as qualifying income allows more companies to benefit from the Patent Box, but involves increased difficulty in identifying what level of profit should be attributed to the patents involved".
[7] For information on the concentration of patent holdings see table 1 of R. Griffith, H. Miller and M. O'Connell, *Corporate Taxes and Intellectual Property: Simulating the Effect of Patent Boxes*, IFS Briefing Note 112, 2010 (http://www.ifs.org.uk/publications/5361).

Intellectual Property associated with Patents

The Patent Box will not be extended to other forms of intellectual property. As such, the policy unnecessarily distorts the decision to invest in patentable technologies rather than in other activities, including those that result in other valuable forms of intellectual property.

- The justification that this decision is driven by the link between patents and high tech R&D seems more tenuous under the proposals to include all income from qualifying products – that is, to include income which the consultation document deems to have a lower link to high tech R&D.
- Patents do provide HMRC with something that is easily verifiable and identifiable. However, we note that other forms of intellectual property also have processes for ensuring originality and result in documentation for identification. Some other forms of intellectual property are included in the Dutch and Luxembourg Patent Boxes.
- While the Patent Box explicitly excludes other forms of intellectual property, the definition of qualifying income is such that businesses with at least one qualifying patent will likely benefit from the tax reduction on other forms of related intellectual property. This increases the scope of the Patent Box to the benefit of firms which create value from other forms of intellectual property. However, it continues to distort firms' decisions by requiring that other forms of intellectual property must be combined with a patent before they are tax favoured.

The formulaic approach

The implementation of a Patent Box was always going to necessitate relatively complex rules because it requires identification of the income from patents. However, the current proposals will add significant complexity to the tax system. A formula was favoured over the operation of an arm's length approach to calculating patent income in order to reduce the administrative burdens of a Patent Box. It is not clear that the proposed formula is less complicated or burdensome than an arm's length approach.

- Even in the simplest case, the formula is far from straightforward. The complexity will increase with the rules for divisionalisation, losses and transfer pricing and provisions to prevent abuse. The formula will also be more burdensome, both for

HMRC and business, for firms that have losses or complex and varied sources income.

- There are many areas where further details are still required, including how the government will ascertain whether an eligible patent is an integral part of a product, how to apportion residual profit to patents and how to assess that significant associated development is taking place.
- Much of the complication entailed in the proposed formula derives from the decision to allow firms to enter only 'residual profit' derived from a 'patent and closely related IP' into the Patent Box, rather than a more direct measure of all profit created from intellectual property (section 4). This seems to be driven predominately by revenue considerations (to balance the increase in qualifying income) rather than being explicitly linked to the aims of the policy.
- Under the current proposals it is not clear that the formula will be less burdensome than an arm's length approach. It is worth noting that an arm's length approach will continue to be required for some parts of the policy (including divisionalisation); is used in other parts of the UK tax system; is used by other governments in the operation of Patent Boxes.[8]

[8] In Belgium, embedded income is calculated as the royalties that the Belgian company would have received had it licensed the patents used in the manufacturing process to an unrelated party.