

Thinking Outside the Patent Box

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Thursday, 22 September, 2016

Introduction

- Most Governments Support R&D
 - » Seen as a crucial investment for the long-run growth of economies
 - » Maintaining jobs
 - » Contributing to national competitiveness
 - » Risky investment
- R&D Incentives (direct and indirect)
 - » Front End Incentives
or
 - » Revenue Based Incentives

R&D Incentives

Front End Incentives

- tax credits for qualifying R&D (euro-for-euro reduction of tax liability; can be refundable or non-refundable);
- cash grants / subsidies (targeted means to incentivise companies);
- super deductions (allow a deduction greater than actual R&D spend);
- accelerated capital deductions for expenditure;
- direct equity investments by governments in either company or project;
- favourable excise duty, VAT or other treatment on inputs used in R&D, lower payroll taxes in respect of qualifying employees;

OR

Back End Incentives (when income is actually generated from exploiting IP)

- patent box regimes (tax relief on profits attributable to results of R&D);
- preferential tax rates for other IP related income;

Introduction

- Many variations adopted by countries
- Which are the most effective in attracting high value jobs and IP related income?
- Are tax incentives effective at all?
- Challenges for countries in designing incentives

Economics of IP Tax Incentives

Geerten M.M. Michielse, Senior Economist (Tax Policy)

**IBA Annual Conference Washington
2016**

Innovation and Growth

- The views expressed in this presentation are the authors' and do not reflect those of the IMF, its Executive Boards, or its management
- Innovation is critical for productivity
- Government policy is critical for innovation
- Three pillars of innovation (IMF's Fiscal Monitor, April 2016):
 - **Research and development** (includes both basic and applied research)
 - Technology transfer (includes international diffusion of technology and knowledge)
 - Entrepreneurial innovation (involves experimentation with new products and processes by new businesses)

Research & Development

- R&D expenditures widely seen as key driver of country's productivity growth
- Governments can promote these expenditures by
 - direct investment in R&D (public universities, government research institutes, and defense-related research)
 - **design policies that encourage firms to undertake more private R&D**

Private Research & Development

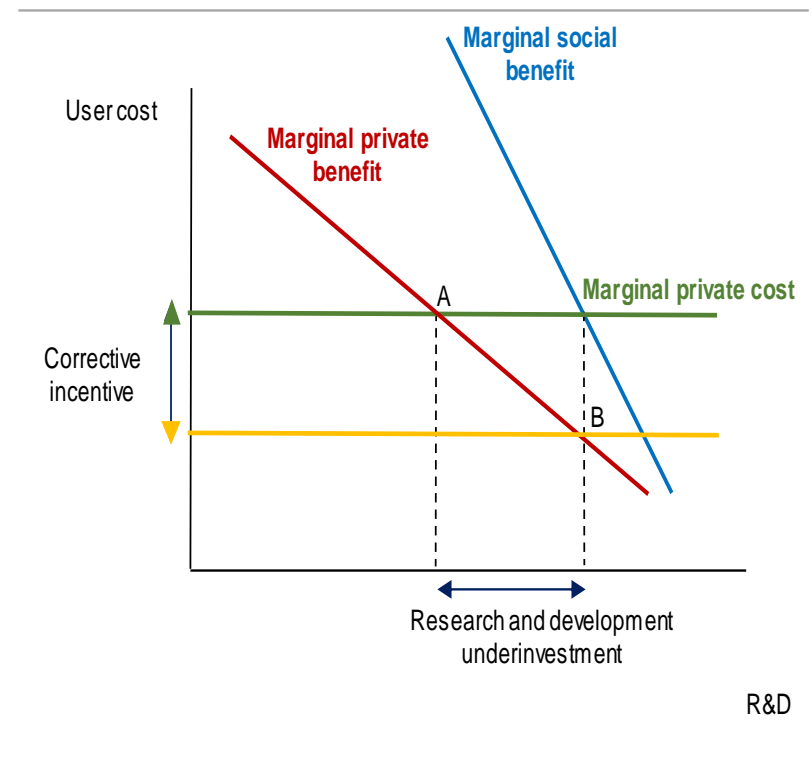
Investments might be lower than socially efficient level (or “underinvestment”), caused by two important market failures:

- **Credit constraints**

- IMF Report finds that fiscal stabilization policies have strong implications for R&D and productivity growth

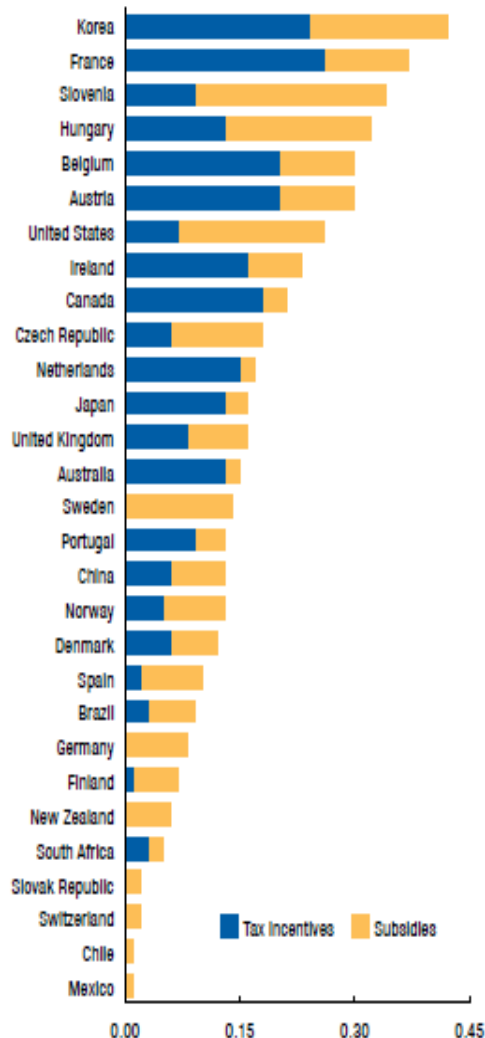
- **Externalities or spillover**

- **Pigou's price correction**; i.e. tax incentives to efficiently address externalities



Fiscal Support for Private Research

R&D subsidies/tax incentives



■ R&D subsidies

- Specific support to targeted R&D projects
- Discretionary by nature
- Largely designed by government
- More efficient, if well targeted and based on appropriate info about size/nature of spillovers
- Especially useful to foster research component in R&D

■ Tax incentives

- Available to all firm that invest in R&D (although can be designed to specific groups of firms)
- Market-based approach
- Equal treatment
- May not adequately address the complex knowledge spillovers associated with R&D

Design Issues of R&D Tax Incentives

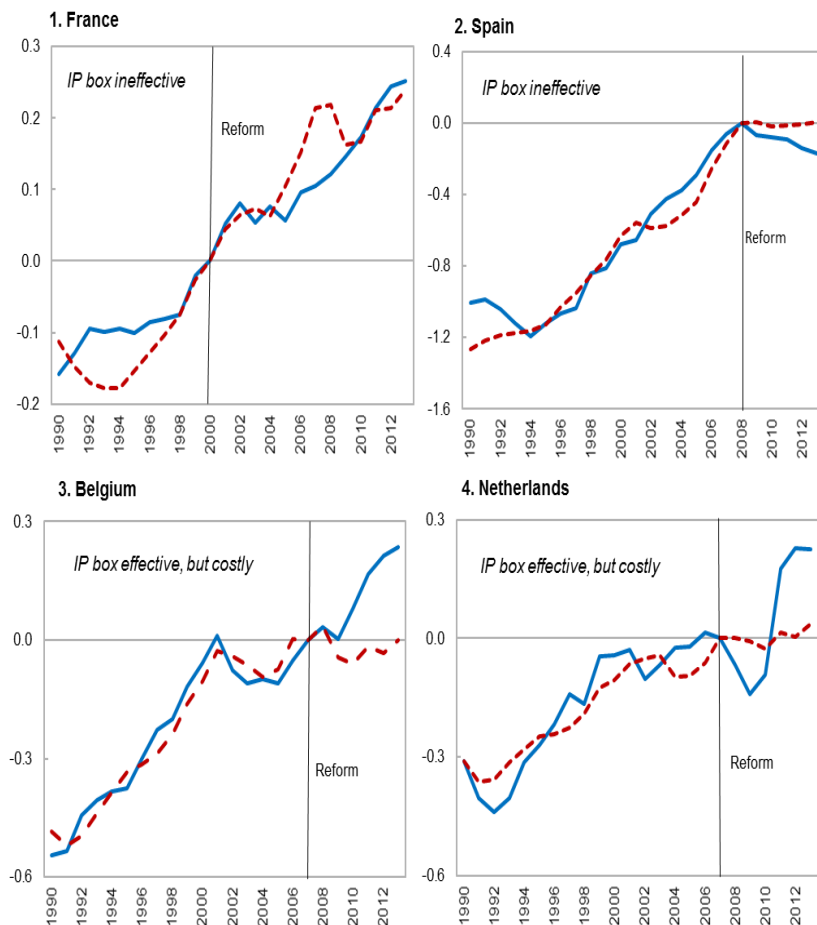
lessons learned

- Targeting small and new firms
 - 2-3 times more effective in promoting R&D investments than for an average size firm
- Refundable tax credits
 - New firms often have negative profits in their start-up phase
- Targeting incremental R&D
 - Cheaper, because avoiding windfall gain for existing R&D
- **Intellectual property (IP) box regimes**
 - Often less cost-effective in promoting innovation
- Gradually expanding R&D tax incentives
 - Large increases might simply raise wages of researchers, who tend to be in fixed supply in the short term
- Effective administration
 - Critical to avoid abuse (e.g. relabeling ordinary expenditures, minimize compliance cost)

IP Boxes and Innovation

Synthetic Control Estimation Results: Intellectual Property Box and Private R&D (Log of real R&D spending)

Actual Synthetic Control



- **Ineffective** – no effect at all in two countries
 - Only effective where it seems relief large / link to R&D strong
- **Inefficient** – as relief depends on income, not R&D expenditures
- **Negative international spillovers** – focus is on attracting of mobile IP income (i.e., aggressive tax competition)

IMF's Key Findings

- Fiscal stabilization supports R&D and TFP growth
- Scope for more/better incentives
- IP boxes not well designed for innovation

Belgium & Patent Box

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Belgium

- first patent box (“PID” or “Patent Income Deduction”) introduced in 2007
- Main features:
 - » **80% exemption** (ETR 6,78%) on the qualifying gross income (royalty paid or deemed arm’s length royalty) derived from patents or exclusive rights to use patents;
 - » Not applicable to income from plant variety rights, trademarks, copyrights and know-how
 - » Not applicable to income from ancillary services or to capital gains
- Conditions:
 - » Patent must have been developed by the licensor; in case of exclusive right to use: licensee has to develop further improvements
 - » separate R&D center (functioning as a separate branch of activity) required except for SME’s
 - » expenses for acquired R&D (e.g. license fee) to be deducted from qualifying income
 - » no carry forward of unused deduction

Belgium

- BEPS OECD paper on harmful tax practices
- patent box abolished for patents applied for or granted after 1 July 2016
 - » grandfathering: companies may claim deduction until 30/6/2021 if patent is applied for or granted before 1 July 2016
- new regime on “**Innovation Income Deduction**” (“IID”) announced
 - » **90% exemption** (ETR 3,39%) on the qualifying net income (royalty paid or deemed arm’s length royalty) derived from patents or exclusive rights to use patents;
 - R&D costs to be deducted from gross qualifying income
 - » extension to **plant variety rights** and **copyrighted software**
 - » qualifying income also includes **capital gains and indemnities**
 - » **carry forward** of unclaimed deduction
 - » deduction applies to **separate intangibles** or **group of intangibles** (“streaming” approach where all revenue / costs should be allocated to the intangible, no simplified “standard” approach)

Belgium

- application OECD recommended “**nexus approach**”

$$\text{Qualifying Income} = \text{Net Income} \times \frac{(A + B) * 1.3}{A + B + C + D}$$

A = company's own R&D expenses

B = R&D expenses unrelated parties

C = costs for acquisition of IP rights

D = R&D expenses related parties

- cost are **all historical costs** (no write-off as in UK patent box) – may be amended when new regime is published
- correction factor capped to 1
- in specific cases where the outcome of the fraction is “**not fair**”, ruling service may grant **exception** (in line with OECD recommendations)
- requirement of separate R&D centre abolished
- special **documentation requirements**

Belgium

- Substantial corporate tax reform announced
 - » gradual **reduction of corporate income tax rate to 20%** in 2019
 - 28% (2017), 24% (2018), 20% (2019) <> SME's 24% → 20%
 - » **100% participation exemption** on dividends (currently 95%)
 - » **100% exemption on capital gains on shares** (restored)
 - 0,412% special tax rate shares > 1 year abolished as from 2017
 - 25% rate shares < 1 year abolished as from 2018
 - » **Abolishment “fairness tax”**, i.e. additional corporate tax on outbound dividends
 - » **Exemption tax free reserves** in case of reinvestment
 - » simplification of the tax base
 - **Notional interest deduction (NID), CFL and investment deductions going forward?**
 - limitation of **interest deduction to 30% of EBITDA** (cfr. ATAD)
 - **double declining amortisations ?**

UK & Patent Box

Anne Fairpo

Temple Tax Chambers

Who qualifies

- Who can claim?
 - » companies
 - » Corporate partners
- Must elect to use: elect in writing within two years of the end of the accounting period
- Note: election for period ending on/before 30 June 2016 means existing IP is within *old* rules

Qualifying IP

- UK patents (those granted under the UK Patents Act 1977)
- Patents granted under the European Patent Convention
- Other rights specified
 - » plant variety rights; data exclusivity; supplementary protection certificates
 - » specific EEA countries (Treasury Order SI 2013/420 – March 2013)
- If elected into old regime: continues to apply to qualifying IP applied for by 30 June 2016, until 30 June 2021

Calculation

- Multi-stage calculation
 - » Calculate IP profits (either by apportionment, or streaming, profits of trade – ***must stream by patent/product or category under new regime***)
 - » Deduct a routine return
 - » Deduct a marketing return
 - » New regime only: calculate R&D/acquisition restriction
 - » Calculate deduction
- **Repeat for each patent/product/category under new regime**
- **Products with old and new regime IP: split income and calculate under each regime**

BEPS compliance

- From 1 July 2016 for IP applied for after that date, or earlier IP of new entrants into regime
 - » Reminder: can still elect into old rules within the usual two year period and where have elected for an applied-for patent before 1 July 2016, *current* rules will apply
- For IP applied for, and within the regime, by 1st July 2016, old rules continue until 1st July 2021
 - » Products covered by old and new IP will need to apportion

BEPS compliance

- Patent box benefit limited by local R&D, using formula

$$\frac{D + S + U}{D + S + A + R}$$

$$D + S + A + R$$

- D = direct R&D costs incurred on IP
- S = costs of R&D subcontracted to *third* parties
- A = costs of acquiring IP (including IP acquired from connected party on/after 1 Jan 2016)
- R = costs of R&D subcontracted to *related* parties
- U = lower of (A + R) and 30% of (D + S)

BEPS compliance

- Impact: will need to track R&D expenditure on IP
 - » Transitional rules for 1st July 2016, for IP in development
 - » Old IP in new regime: use prior three years R&D expenditure to calculate D/S/R – or use global if not feasible to track per IP item

Impact of changes

- Substantial increase in record-keeping requirements
 - » Tracking R&D by IP asset or IP item is not necessarily straightforward
 - » Maintaining records for 20 years is out of step with other record keeping requirements for tax
- UK corporation tax is reducing to 19% in April 2017 and 17% in 2020 (and possibly 15%, but who knows ...)
 - » 10% effective rate for patent box profits may no longer be worth the compliance costs for many businesses

Impact of Brexit

- UK will no longer be bound by EU state aid rules
 - » Patent boxes arguably contrary to state aid in any case, judging from comments in recent Commission decisions on other tax matters
 - » Patent box rules limited by BEPS, rather than EU
- May offer scope for alternative/additional tax incentives for innovation

An Industry Perspective

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Larry Smith, Endo Pharmaceuticals, USA

22 September 2016

An Industry Perspective

- Views are my own and are based on more than 20 years spanning high technology, manufacturing, life sciences and pharmaceutical industries
- Do patent boxes and other tax incentives work?
 - » Absolutely! Proof is Ireland, Switzerland and Singapore's economies relative to their neighbours' economies as well as recently the UK
 - » They benefit countries and industries by creating incubators that attract higher skilled and paid talent creating a symbiotic environment needed for innovation to thrive (e.g., Singapore – precision mfg in 90's and recently Life Sciences)
 - » They work best when there is rule of law and certainty upon which to make long-term and often risky investment decisions
 - » Front-end often preferred as business units typically measured on pre-tax basis and start-ups incur upfront losses

Industry View cont.

- Threats? Rhetoric and misinformation targeting multinationals puts at risk ability of largest job creators to anchor/seed investments
 - » Ignores the investments and value created by firms and instead focuses on location of consumption (where often very little value created or risky investments made particularly as e-commerce grows)
 - » An innovation box should extend well-beyond “patents” and encourage value creating activities vs. routine functions such as basic R&D screening, manufacturing etc. that are often out-sourced and automated (e.g., India high throughput compound screening)
 - » Value often is in providing software as a service (e.g., Telematics that sells customers back their own data or knowledge of the industry/regulatory process (e.g., design of clinical studies vs. performance that are typically outsourced)
 - » This value creating expertise and knowledge is typically not memorialized on paper or protected but can create as much value as “patents” that can be challenged, invented around or ignored as is the case in India and China

U.S. Tax Reform

- US tax reform impact?
 - » US tax law predates modern global commerce and information based economies (e.g., Sub-F rules predate software)
 - Assumes that firms are fully integrated, focused on the U.S. market / export markets vs. localized markets and value is created predominantly from physical activity such as manufacturing
 - » Clear need for reform of the system with OECD/EU focusing on US MNCs structures that are needed to navigate outdated Sub F rules and avoid double taxation of OUS income
 - Revenue grab as US MNC profits accumulate in “principal” companies that are not attributable to in-market value creation or entrepreneurial risk taking
 - Correct in-market profit determined based on arm’s length principles under transfer pricing rules
 - » Outcome depends on elections particularly U.S. Senate and political horse trading
 - » Need to pay for lower corporate rate will drive winners and losers
 - » Innovation box should be part of international reform to attract back investment rather than as stick (e.g., minimum tax) that will continue to disadvantage US MNCs

IP tax aspects / Singapore - PRC

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22 September 2016

Singapore

- Singapore has no patent box
- 17% income tax rate (offshore sourced income non-taxable unless remitted to Singapore)
- Good tax treaty network (80+ DTA's)
- Tax amortization allowances for IP acquired by a Singapore company provided that it is used for the business of the Singapore company (e.g. production, manufacture, commercialisation) as opposed to the Singapore company being a passive IP owning company earning royalties. Threats? Rhetoric and misinformation targeting multinationals puts at risk ability of largest job creators to anchor/seed investments
- Amortize over a 5 year period, i.e. 20% straight line amortization

Singapore

- 10% withholding tax on outbound royalties unless reduced by a DTA
- Provided sufficient substance in Singapore: tax incentive to reduce withholding tax on royalties to nil for a specified number of years (generally 5, extendable) and/or reduced income tax rate on royalty income for 5 yrs (renewable)
- Various IP and R&D related grants – for example, the Innovation Development Scheme (IDS), Patent Application Fund Plus (PAF Plus) and Initiatives in New Technology (INTECH)

Singapore

- Productivity and Innovation credit (PIC)
- One time allowance of 400% for the first S\$ 400K of qualifying expenditure per YA for investments in:
 - » R&D in and outside Singapore
 - » Registration of IP
 - » Acquisition of IP
 - » Eligible design in Singapore
 - » Automation equipment and software
 - » Training

PRC

- China provides various tax incentives for R&D:
 - » 150% deduction for eligible R&D expenditure
 - » 15% CIT rate for High New Technology Enterprise
 - » 15% CIT rate for Advanced Technology Service Enterprises

Ireland – IP Moving Onshore

Peter Maher, A&L Goodbody, Ireland

Ireland – IP Moving Onshore

- Choice between two options involving Ireland
- Keep the IP outside Ireland and licence in to Irish OpCo (Option 1)
 - » 12.5% CIT on OpCo income
 - » Deduction for outbound royalties
 - » No WHT
 - » Corporate residence rules facilitate “double Irish” structure
 - » R&D tax credits
- Bring the IP onshore (Option 2)
 - » 12.5% CIT on OpCo income
 - » 100% tax depreciation allowances on capital cost of IP
 - » Interest deduction for borrowings to fund the IP purchase
 - » R & D tax credits

Knowledge Development Box

- Knowledge Development Box
 - » “6.25% tax rate
 - » “The first OECD compliant KDB in the world” – modified nexus approach
 - » Patented inventions and copyrighted software
 - » R & D activity in the EEA by the claimant Irish company leading to the development, improvement or creation of a qualifying asset
 - » The qualifying profit is the portion of the income attributable to the qualifying asset
 - » How successful, time will tell