

# *Innovation Tax Policy around the World*

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January 20, 2012

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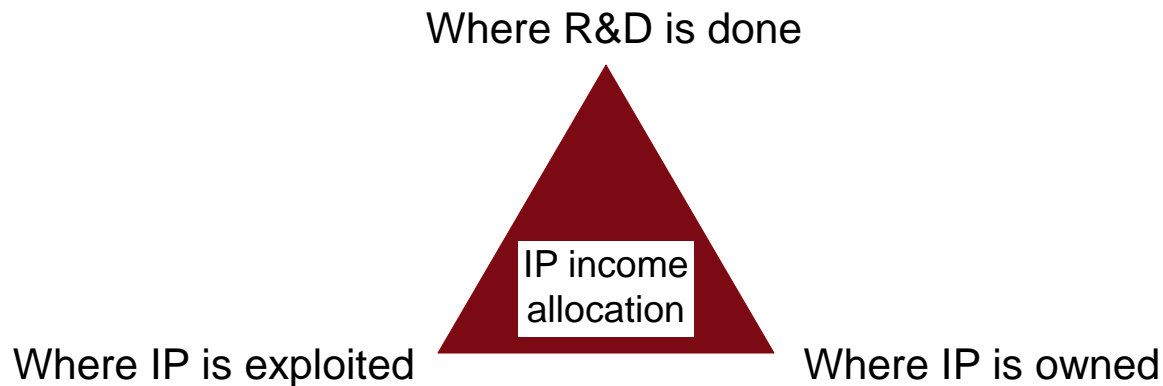
# *Agenda*

- The Innovation Value Chain
- Why Governments Provide Tax Incentives for R&D
- International Comparison of R&D Tax Incentives
- International Comparison of Reduced Tax Rates for Innovation Income (“Innovation Box”)

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# *The Innovation Value Chain*

- 1. Research** - The creation of technological IP often involves intensive research activity, with substantial up-front cost with an uncertain future reward.
- 2. Development** - Turning an initial patent or concept into a marketable product requires a range of complementary activities, including further R&D activity either on the IP itself or processes required to manufacture or deliver product or service.
- 3. Commercialization** - Successful exploitation in the global market requires significant further high value activity.



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# *Why Governments Provide Tax Incentives for R&D*

## **Competitiveness Issues**

- Economic studies indicate that a high proportion of economic growth is attributable to technological change.
- R&D activities are increasingly mobile.
- R&D location decisions may be based not only on R&D incentives but also on tax rate imposed on IP income.
- To provide an attractive location for R&D, countries must consider R&D tax incentives as well as income tax rates in other jurisdictions.

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# *Why Governments Provide Tax Incentives for R&D*

## **Competitiveness Issues**

“The location of R&D activity can matter. For example, technological prowess may help a country reap the financial and employment benefits of leadership in a strategic industry. A cutting-edge scientific or technological center can create a variety of spillovers that promote innovation, quality, skills acquisition, and productivity in industries located nearby; such spillovers are the reason that high-tech firms often locate in clusters or near leading universities. To the extent that countries gain from leadership in technologically vibrant industries or from local spillovers arising from inventive activity, the case for government support of R&D within a given country is stronger.”

- Ben Bernanke, “The Governments Role in Promoting R&D,” May 16, 2011

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# *International Comparison of R&D Tax Incentives*

## **Menu of Possible Tax Incentives for R&D Activities**

### Front-end incentives

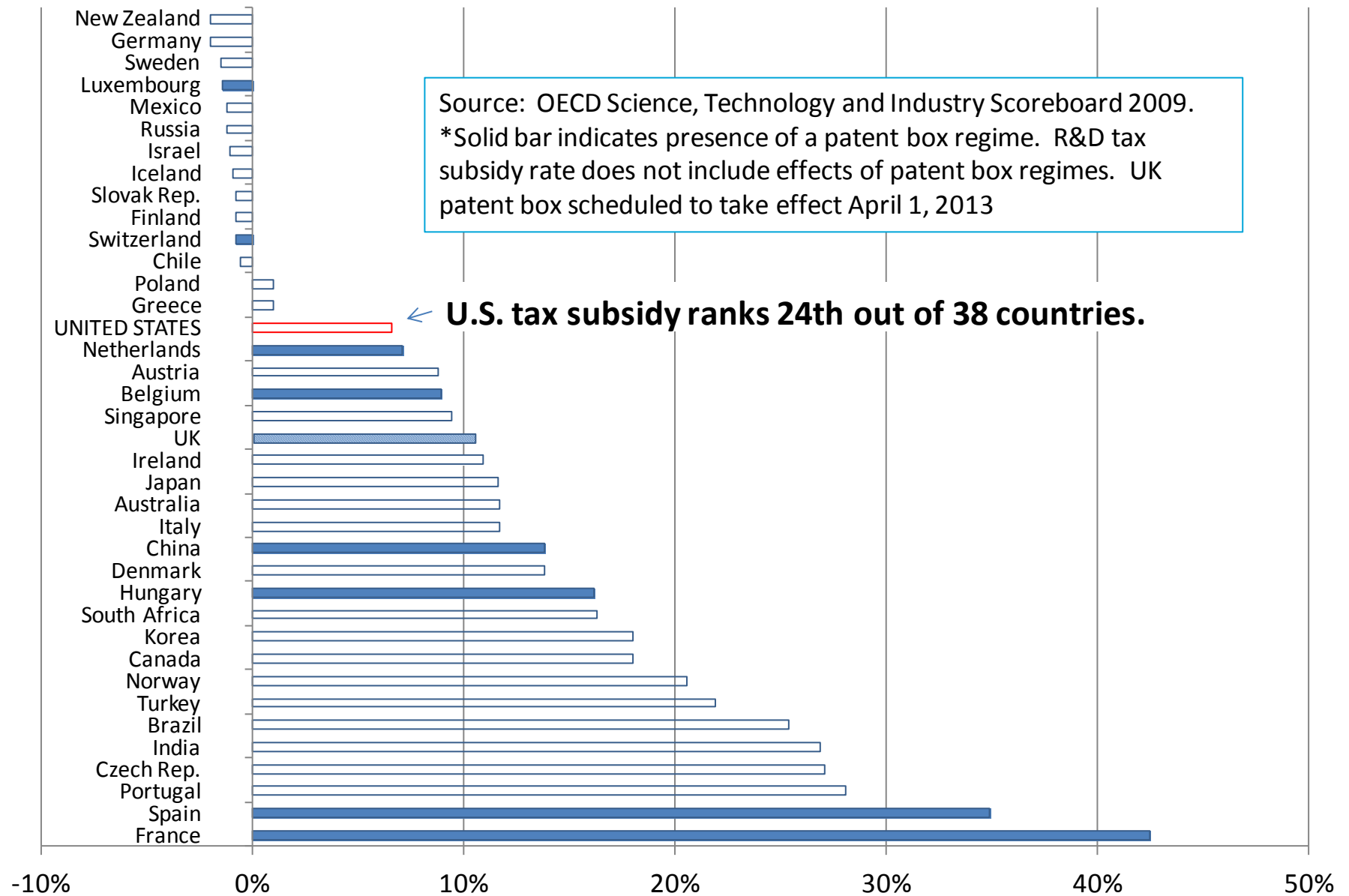
- Credit for R&D expenses
- Deduction of more than 100% for R&D expenses (“super” deduction)

### Back-end incentives

- Lower tax rate for income derived from intellectual property (“innovation box”)

## Tax Subsidy Rate for R&D in OECD and 7 Other Countries, 2008\*

Source: OECD Science, Technology and Industry Scoreboard 2009.  
 \*Solid bar indicates presence of a patent box regime. R&D tax subsidy rate does not include effects of patent box regimes. UK patent box scheduled to take effect April 1, 2013



← U.S. tax subsidy ranks 24th out of 38 countries.

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# *International Comparison of R&D Tax Incentives*

## **Front-End Incentives: Design Issues**

1. Qualifying R&D activities v. “discovery”
2. Location of qualifying R&D activities and location of IP
3. Tax credit v. “super” deduction



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# *International Comparison of R&D Tax Incentives*

## **Qualifying R&D Activities v. “Discovery”**

- “Research” v. “Development”
- Revolutionary v. Evolutionary
- OECD (Frascati) definition
- U.S. definition

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# ***International Comparison of R&D Tax Incentives***

## **Location of Qualifying R&D Activities and Location of IP**

### **Qualifying R&D Activities Must Occur Within Country**

Australia

Brazil

Canada

China

India

South Africa

United States

### **Resulting IP Must Be Retained in Country**

China

Japan

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# *International Comparison of R&D Tax Incentives*

## **Tax Credit v. “Super” Deduction**

<b>Select “Tax Credit” Countries</b>	<b>Volume based?</b>	<b>Refundable?</b>
Australia	Yes	Yes
Canada	Yes	Yes
France	Yes	Yes
Ireland	Yes	Yes
Italy	Yes	
Japan	Yes	No
Spain	Yes	No
United States	No	No

# *International Comparison of R&D Tax Incentives*

## **Tax Credit v. “Super” Deduction**

### Select “Super Deduction ” Countries

Brazil	160%
China	150%
Czech Republic	200%
Hungary	200%
India	200%
The Netherlands	140%
Russia	150%
South Africa	150%
Turkey	200%
United Kingdom	130% (Refundable – April 2013)

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# *International Comparison of R&D Tax Incentives*

## **Tax Credit v. “Super” Deduction**

### **Select Countries with No R&D Tax Incentives**

Finland

Germany

Israel

Mexico

New Zealand

Sweden

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# *International Comparison of “Innovation Boxes”*

## **Issues in the Design of an “Innovation Box” Regime**

- A. Qualifying IP
  - 1. Patents
  - 2. Other IP, e.g., copyright, trademark, formula, process, design, pattern, knowhow, trade secret?
  - 3. Self-developed, licensed-in, and acquired IP?
  - 4. New and existing IP? Improvements to existing IP?
  - 5. IP development required to be performed in country?
- B. IP Income in “Box”
  - 1. Gross or net qualifying IP income?
  - 2. IP embedded in price of goods and services?
    - Formulary or transfer pricing approach?
  - 3. Limited to income from domestic exploitation of qualified IP?
- C. Treatment of Income in “Box”
  - 1. Deduction or partial exclusion?
  - 2. Cap on tax benefit?
  - 3. Credit for withholding taxes on IP income?
- D. Coordination with Existing R&D Incentives

# EU Patent Box Regimes, and UK Proposal

Source: PwC. Information current as of December 31, 2011.

	Effective tax rate	Qualified IP	Qualified income
Belg.	Maximum 6.8%	Patents and extended patent certificates	Patent income less cost of acquired IP
France	Maximum 15%	Patents, extended patent certificate, patentable inventions, industrial fabrication processes	Royalties net of cost of managing qualified IP.
Hungary	Maximum 9.5%	Patents, know-how, trade marks, business names, business secrets, and copyrights	Royalties
Lux.	Maximum 5.76%	Patents, trademarks, designs, domain names, models, and software copyrights	Royalties.
Neth.	5.00%	Patented IP or R&D IP	Net income from qualified IP.
Spain	Maximum 15%	Patents, secret formulas, processes, plans, models, designs, and know-how	Gross patent income
UK	10%	Patents, supplementary protection certificates, regulatory data protection and plant variety rights	Net income from qualifying IP

	<b>Acquired IP?</b>	<b>Cap on benefit?</b>	<b>Includes embedded royalties?</b>	<b>Includes gain on sale of qualified IP?</b>
<b>Belg.</b>	Yes if IP is further developed.	Deduction limited to 100% of pre-tax income.	Yes	No
<b>France</b>	Yes, subject to specific conditions	No	No	Yes
<b>Hungary</b>	Yes	Deduction limited to 50% of pre-tax income	No	Yes
<b>Lux.</b>	Yes, from non-directly associated companies	No	Yes	Yes
<b>Neth.</b>	Yes, but only if IP is further self-developed	No	Yes	Yes
<b>Spain</b>	No	Yes, 6 times the costs incurred to develop the IP	No	No
<b>UK</b>	Yes if further developed and actively managed	No	Yes	Yes



	<b>Can R&amp;D be performed abroad?</b>	<b>Credit for tax withheld on qualified royalty?</b>	<b>Year enacted</b>	<b>Applicable to existing IP?</b>
<b>Belg.</b>	Yes, if qualifying R&D center	Yes	2007	IP granted or first used after 1/01/2007
<b>France</b>	Yes	Yes	2001, 2005, 2010	Yes
<b>Hungary</b>	Yes	Yes	2003	Yes
<b>Lux.</b>	Yes	Yes	2008	IP developed or acquired after 12/31/2007
<b>Neth.</b>	Yes for patented IP; strict conditions for R&D IP	Yes, subject to limitations	2007 / 2010	IP after 12/31/2006
<b>Spain</b>	Yes, but must be self-developed by the licensor	Yes	2008	Yes, can be applicable to IP posted before 1/01/2008
<b>UK</b>	Yes	Yes	2013	Yes can be applicable to patents granted prior to 2013

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## ***For more information:***

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