The new R&D tax credit and patent box proposed in the Legge di Stabilità 2015

Innovation is a key driver of economic growth and investment in R&D is a key driver of innovation. Many governments encourage business investment in R&D, often with the aim of correcting or alleviating two main market failures. Italy is far from immune from these failures, and indeed the share of business enterprise expenditure on R&D was amongst the lowest amongst OECD economies (Figure 1).

Firstly, returns on investments in R&D are difficult to appropriate by firms as some of the resulting knowledge will leak out or “spill over” to other firms, to the benefit of society. As such, firms will not be able to fully appropriate the returns to their investment, leading to ‘underinvestment’ in innovation. Policy instruments such as intellectual property rights, grants, and R&D tax incentives can help address this problem.

Secondly, firms, and in particular small start-ups will face difficulties in finding external finance given the highly uncertain nature of innovation and the large difference in the information available to inventors compared to investors. This may imply that external capital for innovation will only be available at a high cost, if at all.

Figure 1: Business enterprise expenditure on R&D as percentage of GDP, 2001 and 2011


Article 7 of the Budget Bill for 2015 (Legge di stabilità) (1) introduces two fiscal measures for supporting firms investment in R&D:

1) an R&D tax credit, based on a set of rules replacing those proposed in the “Destinazione Italia” (law Decree n.145/2013) which was never implemented; and
2) a “patent box” regime.

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(1) Initially proposed in October 2014 by the Italian Government, it was approved by the Camera dei Deputati (Lower Chamber) on 30th November 2014 and by the Senate on 20th December 2014, and finally passed on 23rd December 2014.
Italy also offers other measures to support innovation such as regional R&D tax incentives and personal-income based incentives for qualified researchers. These measures are not examined in this review.

(1) The R&D tax credit

The R&D tax credit measure included in the Legge di Stabilità 2015 allows all firms that perform R&D between 2015 and 2019 – independently of their legal form, sector of activity, accounting standards and size – to receive a 25% R&D tax credit on the incremental expenditures relative to the average expenditure of the last three tax years (i.e. the 2012-2014) with a credit ceiling of 5 million euros per year for each beneficiary and a minimum R&D spending requirement of 30,000 euros. The tax credit rate increases to 50% for:

i) R&D conducted in collaboration with universities, public research institutions or equivalent entities;

ii) innovative start-ups as defined in Law no.221/2012; and,

iii) expenditures related to highly qualified (with Masters or Doctoral degrees) staff engaged in eligible R&D activities.

The tax credit may be used to offset income and regional taxes and social security contributions.

Relative to the previous regime introduced in 2011 the tax credit is more generous, as it also covers projects that are not conducted jointly with universities and public research institutions. Relative to other countries it is important to stress that the tax credit is calculated on an incremental basis which has the positive feature of minimizing the deadweight loss associated with the policy, but at the same time is particularly burdensome in terms of compliance costs especially for entrepreneurial and small firms. The current incremental nature of the credit, with a moving average base, provides a much smaller incentive than the statutory credit rate. Even though the proposed measure includes the costs for a registered auditor for up to 5,000 euros in the calculation of the tax credit, the incremental nature of the policy might limit its take-up, especially amongst smaller businesses. However, since most small businesses are unlikely to have invested in R&D during the last few years since the financial crisis, they will benefit most from the incremental nature of the scheme in comparison with those firms that have invested relatively more heavily in R&D in the last 3 years. In fact, these firms are the ones that would benefit most from the measure.

The general trend among OECD countries has been to adjust their R&D tax incentives to make them more generous and simpler to use. Most economies apply a system where an R&D tax credit is provided on the volume of R&D expenditure undertaken. Based on country responses to the OECD STI Outlook policy questionnaire 2014, Australia, Austria, Canada, Chile, France, Iceland, and Norway, for example, have a volume based R&D tax credits, while a few countries target R&D tax credits to incremental R&D expenditure (United States) or through a hybrid system of volume and incremental credits (e.g. Japan, Korea and Spain). France (in 2008) and Australia (in 2010) replaced their relatively complex hybrid volume and incremental-based schemes with simpler and more generous volume-based schemes.

The Italian measure also allows for more generous support for innovative start-ups which might help this group of firms overcome market failures related to credit constraints and their limited access to credit due to the lack of collateral. This is in line with other countries, such as France with their Jeunes Entreprises Innovantes (JEI) scheme, the Netherlands and Portugal with their more generous tax credit rates for young firms and start-ups, and countries like Australia and Canada where provisions are introduced for SMEs which will likely include most of the young firms.

The proposed R&D tax credit can be used to offset the national corporate income tax (IR
costa sul reddito delle società), the regional corporate income tax (IRAP - imposta regionale sulle attività produttive), and social contributions. The inclusion of the possibility of offsetting the latter means that even firms that are in a loss position can benefit from the incentive. This is important to avoid favouring firms that make profits at the expense of
firms that incur losses, as is often the case for young dynamic firms. Given the high share of small old businesses, and concerns about the dynamism and the efficiency of resource allocation in the Italian economy, the presence of this offset measure is important (see OECD, 2010 and Andrews and Criscuolo, 2013 for a discussion on the importance of R&D tax credit design features)

More generally, the changes in rules between the R&D tax credit system introduced in the Destinazione Italia Decree, for which an implementing decree was never issued, and the system described in the Legge di Stabilità highlight a deeper problem in the R&D tax credits system in Italy over the last decade: recurrent changes and uncertainty about the design, the implementation and the funding for this policy instrument.

On the latter, for example, the Destinazione Italia had capped a total tax credit funding at 600 million euros over the three year period 2014-16 with a cap for each beneficiary of 2.5 million. The Legge di Stabilità on the other hand states that the dedicated R&D tax credit fund has at the moment no appropriation but that it will be financed through to the phasing out of existing tax incentives with a cap for each beneficiary of 5 million euros (2).

Table 1. National & regional tax incentive support for business R&D in Italy, 1997-2014

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<th>R&amp;D tax incentive schemes</th>
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<td>Regional R&amp;D tax credit (Law 140/1997)</td>
<td>Volume-based and incremental tax credit (intramural R&amp;D, acquisition of knowledge based capital). The volume-based rate varies by firm size and region ranging from 20-30% for small, 15-25% for medium-sized and 10-20% for large firms. The incremental tax credit is applied to incremental R&amp;D expenses relative to the average R&amp;D investment in the last three years.</td>
<td>1997 (abolished 2014)</td>
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<td>R&amp;D tax credit targeted to SMEs (Law 449/1997)</td>
<td>Fixed amount of EUR 7,500 for the hiring of each new qualified researcher; 60% volume-based tax credit (R&amp;D collaborations with universities and public research consortia).</td>
<td>1997 (abolished 2014)</td>
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<tr>
<td>R&amp;D tax credit (Law 296/2006)</td>
<td>Volume-based tax credit of 10% for intramural R&amp;D. Volume-based tax credit of 40% for R&amp;D collaborations with universities or public research organisations. A ceiling of EURm 50M applies to eligible R&amp;D expenditures. No refund or carry-over of unused credits.</td>
<td>2006 (abolished 2011)</td>
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<td>R&amp;D tax credit (Law 70/2011)</td>
<td>Incremental R&amp;D tax credit of 90% for R&amp;D collaborations with universities or public research organisations. The rate is applicable to incremental R&amp;D expenditures relative to the average R&amp;D investment in 2008-2011.</td>
<td>2011-2012 (experimental)</td>
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<td>R&amp;D tax credit (Law 83/2012)</td>
<td>Volume-based tax credit of 35% for R&amp;D wages (up to EURk 200 per year and enterprise). Firms are eligible if permanently hiring (i) PhD holders from an Italian or recognized foreign university and (ii) Master degree holders (technical or scientific subject) employed in R&amp;D.</td>
<td>2012 [introduced retrospectively]</td>
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<td>R&amp;D tax incentive (221/2012)</td>
<td>Tax relief for investments in R&amp;D intensive start-ups (IST) equal to 20% of the invested amount (up to EURm 1.8 per year). Start-ups must incur a minimum amount of R&amp;D expenses (15% of total revenues or costs) among other criteria to be eligible for IST status.</td>
<td>2013-2016</td>
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<tr>
<td>R&amp;D tax credit (Destinazione Italia, Law 145/2013)</td>
<td>Incremental tax credit for intra- and extramural R&amp;D of 50% applicable to incremental R&amp;D expenditures relative to the average R&amp;D investment in the last three years (credit ceiling of EURm 2.5 per year and beneficiary, minimum R&amp;D spending requirement of EUR 50).</td>
<td>2014-2016 (never implemented)</td>
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<tr>
<td>R&amp;D tax credit (Legge di Stabilità 2015, Article 7)</td>
<td>Incremental R&amp;D tax credit of 25% applicable to R&amp;D expenditures in excess of the average R&amp;D investment in the last three tax years (credit ceiling of EURm 5 per year and beneficiary, minimum R&amp;D spending requirement of EUR 30); an enhanced rate of 50% applies for (i) R&amp;D collaborations with universities and public research institutions, (ii) innovative start-ups and (iii) research wages for highly qualified staff (with a Master or doctoral degree).</td>
<td>2015-2019 (approved 23rd December 2014)</td>
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Source: OECD, based on national sources and publicly available information.

Note: For information on the measurement of R&D tax incentives, see: http://www.oecd.org/sti/rd-tax-stats.htm

More broadly, eight expenditure-based R&D tax incentives (tax credits) were introduced – although not always implemented - in Italy since 1997 (see table below for a summary of the measures and a timeline). These incentives were often short-term and experimental and

(2) See for details: http://www.camera.it/leg17/465?area=20&tema=790&Crediti+di+imposta+a+per+la+ricerca+e+l+sviluppo
vary significantly in their design: a volume-based R&D tax credit was introduced at first, while the Destinazione Italia decree and the Legge di Stabilità 2015 introduce an incremental-based tax credit. These recurrent changes, the difficulty in finding the relevant information on which regime is in place and the general uncertainty on the details of the scheme, the administrative steps involved, and changes in the level of funding available are likely to lower its uptake and effectiveness, with negative implications for the level of R&D investment induced. Indeed, policy uncertainty has been found to have sizable adverse effect on the real economy (Baker et al., 2013; Fernandez, Villaverde et al., 2011; Hasset and Hubbard, 2002).

Evaluations of R&D tax credits as well as other innovation policies are becoming of paramount importance given tight budget constraints. Evaluation of such incentives is complicated by difficulties such as measuring effective tax rates on R&D, data availability, and estimation problems (including endogeneity, time lags, as well as indirect effects on firms that did not receive the fiscal incentives). However, these frequent changes in policy design in Italy make evaluations of the impacts of R&D tax incentives on R&D expenditure even more difficult.

(2) The optional Intellectual Property Box Regime

Intellectual Property (IP) assets, such as patents, copyrights, trademarks or brands, is highly mobile and therefore can be located away from the research activity that generate them. In particular, multinationals often locate their intangible assets in low tax jurisdictions to reduce their corporate tax liabilities and thus erode tax revenues of countries with high tax regimes – a phenomenon labelled “base erosion and profit shifting” (BEPS).

As a response to this higher mobility of IP assets, some countries have decided to introduce special IP tax regimes, generally called “patent boxes”. For example France introduced such a scheme in 2001, Hungary in 2003, Netherlands and Belgium in 2007, followed by Spain and Luxembourg in 2008. Finally the UK introduced a scheme in 2013 (3).

In Italy, the proposed Legge di Stabilità introduces an IP Box regime that allows businesses to benefit from lower effective tax rates on profits derived from intellectual assets including patents, know-how (such as processes, formulas and information acquired in the industrial, commercial or scientific field) eligible for legal protection and trademarks, only if functionally equivalent to patents, i.e. trademarks would qualify for the regime only if they require ongoing R&D expenditures for their development and maintenance. The elective regime grants an exemption from corporate income tax (IRES, generally levied at 27.5%) and local tax (IRAP, generally levied at 3.9%) on income derived from qualifying IP assets for an irrevocable 5 years. The exemption will be equal to 30% for 2015, 40% for 2016 and 50% as of 2017 onwards, when - keeping the present corporate tax rate fixed - the effective tax rate on such intangibles will be 13.75 percent.

The income on which the tax exemption is applied is to be calculated proportionally to the R&D activities actually performed by the taxpayer. It will be further adjusted according to the share of profits generated by the IP asset when the IP is used directly by the IP owner, and an advanced ruling by the Italian Revenue Agency is required in this case. The legislation establishes that the profit from the sale of the IP will be tax-exempt, but only if at least 90 percent of the proceeds received are ploughed back into similar investments before the end of the second fiscal year following the relevant sale.

(3) All of these regimes, including the Italian IP box, will need to be assessed against the substantial activities requirement set out by the OECD Forum on Harmful Tax Practices. The UK government has already announced that its current regime will be closed to new entrants as of June 2016 and phased out by 2021, and the current regime is likely to be replaced by a regime that complies with the OECD requirements.
The stated aim (see the “relazione illustrativa”) is to:

i) incentivise the location of intellectual assets currently held abroad by foreign-owned and Italian enterprises in Italy;

ii) avoid the relocation of these assets abroad; and,

iii) support investment in R&D.

The proposed Legge di Stabilità requires the coupling of the intellectual assets to underlying research conducted in Italy, directly or through contracts with universities or research institutions. This requirement was intended to comply with the BEPS “substantial activity” requirement according to the “modified nexus approach” described in OECD (2014) as a measure that can help prevent harmful tax competition amongst countries (4).

More importantly, given Italy’s current fiscal and economic challenges, the question should be raised of whether such patent box is likely to be effective and to represent “value for money”, or whether the tight government budget for research and innovation should rather focus on other measures, (e.g. funding basic research). The debate on the impact of such R&D income support schemes has raised some concerns as to whether

1) they tackle the fundamental market failures of investment in innovation, and

2) they bring long term increases in tax revenue streams or are prone to spur a tax competition that entails a race to the bottom which ultimately results in a fall in tax revenues for all countries concerned (Griffith, et al. 2010). The discussion below will focus on the first issue.

A patent box by its very nature gives an ex-post reward only to successful innovators that already hold a monopoly right on their inventions and receive an income from it. The policy, therefore, will not foster experimentation per se, which being a risky activity naturally entails high rates of failure, that is an important feature of policies designed to foster entrepreneurship; ensure reallocation; learning and frontier growth (Andrews and Criscuolo 2013 and 2015). Secondly, it might push firms to focus on innovations that lead to outcomes that are susceptible to protection by IP rights, and therefore distort the choice of firms to focus on more applied research (Akcioglu et al., 2014) or on products that are closer to market which in the long run might not be a productivity growth enhancing strategy. The policy could also push firms to seek patent protection for innovations for which they would have not sought patent protection in the absence of the policy; in fact many innovative firms choose not to seek any IP protection as innovation surveys reveal. As a consequence, Italy’s rate of patenting is comparatively low relative to countries like Finland or Germany, and its patenting activity has increased only marginally in the last decade (5).

In addition, credit constrained, innovative firms need the funds to conduct their research as early as possible and policies that provide funds with a lag relative to research effort might not be suitable for this group of firms and might even make the playing field uneven (Criscuolo and Andrews, 2013). The patent box does seem to suffer from this limitation and thus is unlikely to support research activities by credit-constrained firms: given the long lags that characterise the patenting process firms are likely to benefit from the support only years after having carried out the R&D investment. The patenting lag may raise a further issue of additionality, because the scheme might provide discounted tax rates for income deriving from R&D activity already conducted before the introduction of the scheme.

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(4) As with all other IP regimes, the Italian IP box will need to be assessed against the substantial activity requirement to ensure that it in fact meets the requirements set out by the Forum on Harmful Tax Practices.

(5) http://noi-italia2013.istat.it/index.php?id=55&no_cache=1&user_100ind_pi1%5Bid_pagina%5D=783&cHash=7b9be4f25e5188263bce3262e660d56d
Finally, while the IP box proposed by the Legge di Stabilità covers several IP assets, a concern might be related to the fact that a large share of patents are held by a small number of large multinational corporations, and this skewness in the patent distribution is likely to be exacerbated when focusing on the high-revenue patents. This would imply that the benefits of the patent box would accrue mainly to multinational firms and these are the firms that might find ways of using the patent box to shift profits across jurisdictions. For example, calculating the income eligible for the tax breaks when firms directly use the IP is extremely difficult, both because of the difficulty of clearly identifying the stream of profits generated by a single patent when multiple patents - often granted at different points in time - are used to produce a complex product (such as semiconductors or microchips), and because the income flow will have to be imputed in the absence of an explicit price for the use of the IP. This difficulty for the tax authority to clearly know the share of profits concerned might allow firms to abuse the system to shift profits across jurisdictions.

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