

## New Law on Innovation Promotion: In the Right Direction

**Chile leads on the innovation rankings of the region but there is room for improvement in this key issue for entrepreneurship, growth and employment. This week, a law that puts emphasis on the businesses for developing new technologies, products and services was approved. The law points in the right direction, since it puts the private sector in the core of innovation development, but its effectiveness will depend on CORFO's promptness to carry through the benefits for innovating businesses.**

With a definite majority, the Congress approved the bill sent in 2010, which extends and adjusts the current tax stimulus system for the businesses' research and development efforts aimed at new technologies. This initiative is crucial to foster entrepreneurship and goes in the right direction, since it promotes the role of businesses for generating innovation, by strengthening the tax incentives existing to date.

This new legislation copes with a diagnosis known for many years and which is ratified in the international competitiveness indices: Chile has made progress on innovation matters, but it still has a long way to go.

*"The Global Innovation Index"* (GII), carried out by INSEAD eLab since 2007 and which included 125 countries last year, serves as an instrument to measure innovation in the country.

This index is based on two indicators: "Innovation Inputs" and "Innovation Outputs", which are built around pillars. The first has 5 pillars, Institutions, Human Capital and Research, Infrastructure, Market and Business Sophistication, and captures elements from the domestic economy to create innovating activities. Instead, the second one, "Innovation Outputs", contains two pillars, Scientific

Outputs and Creative Outputs, which capture actual evidence of innovation.

In 2011, 20 countries of Latin America and the Caribbean were included in the GII. None of them reach the top 30 on any of the three main indices; GII, Input and Output, and 3 are ranked within the bottom 25: Venezuela, Nicaragua and Bolivia.

Three upper-middle income countries of Latin America and the Caribbean hold top positions within their income group: Chile in the 38<sup>th</sup> position of the GII and second in its income group after Malaysia (31), Costa Rica (45) and Brazil (47). Argentina (58), Uruguay (64) and Colombia (71) are in the third quintile; Panama (77), Mexico (81), Peru (83) and Jamaica (92), in the fourth; and Venezuela down among the bottom 25, with position 102.

Chile is the sole country of the region in the top 40. In 2009 and 2010 it held position 39 and 42 respectively, that is, it improved 4 positions compared with 2009, and one in relation to 2010.

Table 1

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### GII RANKING 2011

Country	Score	Ranking
Switzerland	63.82	1
Sweden	62.12	2
Singapore	59.64	3
Hong Kong (SAR) China	58.8	4
Finland	57.5	5
Denmark	56.96	6
United States	56.57	7
Canada	56.33	8
Netherlands	56.31	9
England	55.96	10
Chile	38.84	38

Source: The Global Innovation Index 2011

In the Sub-Index “Innovation Inputs”, Chile ranked 36 with a commendable position on the institutions pillar, an institutional framework that attracts business and fosters growth by providing good governance and the correct levels of protection and incentives is essential to innovation. Likewise, it was on the top 20 in 6

indicators: regulatory quality and tax rate (Institutions), government online service (Infrastructure), market capitalization and applied tariff rate (Market Sophistication).

With regard to the Sub-Index “Innovation Outputs”, its strengths are FDI net inflows within “scientific outputs”, and resident trademark registration, within “creative outputs”.

Chile’s main weaknesses are Human Capital and Research and Scientific Outputs, with a disappointing position 71 and 85 respectively.

### **What has happened in Chile?**

Chile has a huge task ahead in innovation matters; however it has made important progresses.

Chile stands out for its good political and economical institutions and for its acceptable infrastructure and economical conditions, but it has deficient indicators on education, research and development effort, and scientific production.

The national innovation strategy carried out by the Government is committed to the rectification of these gaps and a primary aspect needing correction is to increase the expenditure on research and development, which in 2008 represented only 0.4% of the GDP, the lowest penultimate among the OCDE member countries, whose average reaches 2.3% of the GDP. Our R&D effort is weak, the participation of the businesses in financing or execution issues is not enough (40% in Chile versus 60% in the OCDE countries), and there is too much university research that is completely disconnected from the industrial needs.

Law N° 20,241 of 2007 was a valuable initiative to get the businesses to develop R&D projects, but since its enactment, only 70 projects have been financed, accounting for a total of US\$12 millions approximately.

Last year, both the number and amount of approved projects considerably increased by 80%, once CORFO<sup>1</sup> improved the approval proceedings.

The incentive for making a greater effort on R&D is remarkable; 35% credit against the first category tax and use of 65% as tax expenditures, but the established conditions and restrictions have

hindered the expected outcomes. Therefore, one of the Government's first initiatives was to prepare the recently approved bill, a task that was performed by the Ministries of Economy and Finance and CORFO, and endorsed by the National Innovation Council.

The Law, which shall be enacted soon, keeps the tax credit in 35% and it shall only be applied to the projects which have been previously qualified as innovators by CORFO. However, instead of restraining the tax benefit to the projects carried out with certified research centers, it extends to the expenditures made directly by the concerned business or hired to third parties. Additionally, it eliminates a limit which prevented the access of businesses with no sales and increases the ceiling of the tax benefit from 5,000UTM<sup>ii</sup> to 15,000UTM a year, that is, from US\$400,000 to US\$1.2 million. The benefit is accumulative and can be used later, although unfortunately, it cannot be applied to Global Complementary and Additional taxes, something that will need to be corrected in the future.

Table 2

DETAIL OF THE SCORE OBTAINED BY CHILE IN GII 2011

	Score	Ranking
<b>1 Institutions</b>	<b>85.2</b>	<b>18</b>
1.1 Political environment	81.3	22
1.2 Regulatory environment	87.8	12
1.3 Business environment	86.3	32
<b>2 Human Capital and Research</b>	<b>34.9</b>	<b>71</b>
2.1 Education	50.1	89
2.2 Tertiary Education	30.8	62
2.3 R&D	23.6	63
<b>3 Infrastructure</b>	<b>31.1</b>	<b>50</b>
3.1 Information and Communication Technologies (ICT)	37.4	44
	20.4	62
3.2 Energy	35.5	67
3.3 General infrastructure		
<b>4 Market Sophistication</b>	<b>47.4</b>	<b>37</b>
4.1 Credit	43.7	52
4.2 Investment	42.5	29
4.3 Trade & Competition	56	40
<b>5 Business Sophistication</b>	<b>41.9</b>	<b>44</b>
5.1 Knowledge workers	55	37
5.2 Innovation linkages	35.3	49

5.3 Knowledge absorption	35.5	56
<b>6 Scientific Outputs</b>	<b>20.4</b>	<b>85</b>
6.1 Knowledge creation	11.6	57
6.2 Knowledge impact	25.6	81
6.3 Knowledge diffusion	23.9	75
<b>7 Creative Outputs</b>	<b>38.8</b>	<b>44</b>
7.1 Creative intangibles	65.9	8
7.2 Creative Goods and Services	11.8	80

Source: The Global Innovation Index 2011

Additionally, the expenditures that can claim the benefit include not only R&D current disbursements but also capital disbursements required by the project and those of copyright registration. The Law will be in force between 2017 and 2025.

### Conclusion

Innovation requires a comprehensive effort, since there are many different actors with different roles that can contribute to this matter. The Government must provide for the environment and correct policies to develop innovating activities. On the other hand, businesses must protect the rights of ownership, increase the investment on R&D and make a better use of innovation development, so that the entire society may look at different aspects that will help them create a greater capacity to innovate.

The amendment to the Law 20,241 adds up to other activities in the last two years, such as the strengthening of Conicyt<sup>iii</sup>, the CORFO program for attracting excellence centers, the work of INNOVA Chile, the Start-up Chile program, the support of the Ministry of Economy to different Chilean universities to improve teaching and research in the engineering careers. Progress is clear, but there is still work to do. Innovation opens the doors to growth and the creation of good employments. Its benefits will highly depend on the businesses' response, and also on the flexibility and promptness of CORFO to exercise its approval and control functions in relation to the qualified projects.

### In brief...

#### CHILE LEADS IN THE REGION IN THE GLOBAL INNOVATION INDEX, BUT THERE'S STILL A LONG WAY AHEAD

- The country holds position 38 out of 125 countries, improving 4 positions in comparison with 2010 (position number 42).
- Chile stands out for its good political and economical institutions and its acceptable infrastructure conditions, but it has deficient indicators on education, research and development effort, and scientific production.
- The national innovation strategy fostered by the Government is committed to the rectification of these gaps, and the amendment to Law N° 20,241 is a significant initiative to drive innovation.
- The Law points in the right direction, emphasizing the business sector, so that innovation is developed in the private sphere and not from the State intervention.

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<sup>i</sup> Production Development Corporation (in Spanish: Corporación de Fomento de la Producción de Chile).

<sup>ii</sup> **UTM**: A currency unit, indexed to Chilean peso inflation, in an attempt to simulate a consistent value of Chilean pesos; for the purposes of paying taxes, fines, or customs duty.

<sup>iii</sup> National Commission for Scientific and Technological Research (in Spanish: Comisión Nacional de Investigación Científica y Tecnológica).