Brazil After 5 Years Of Innovation Law

By Rosana Ceron Di Giorgio

1. Introduction

This report gives a brief summary of technology transfer landscape five years after the creation of Innovation Law, the Brazilian equivalent of the Bayh-Dole Act.

The research presented here involved 84 institutions, among universities and research centers, private and governmental, distributed among the five existing regions of Brazil. Government institutions, where most of the country's research is concentrated, represented 70 percent of the sample and federal government universities, 48.8 percent.

Among the discussed subjects there are: Brazilian Laws concerned to ownership rights and benefit sharing, government incentives to innovation and progress obtained in patenting and licensing activities, after the Innovation Law was released.

2. Key Issues of the Innovation Law (Law n.º 10.973, Dec. 2004, Regulated by Decree n.º 5.563, Oct. 2005)

Ownership Rights

According to the Brazilian Law n.º 9.279, May 1996, the employer owns its employees' creations. So, universities and research institutions, government or private, own 100 percent of their professors' and researchers' inventions.

In addition, the Innovation Law allows universities to share, with public and private institutions, the resulting IP from their joint projects.

Government institutions are allowed to give up their ownership to the inventor.

Government institutions have to create a Technology Transfer Office to manage their IP and take care of innovation policies.

Technology Transfer and Licensing Agreements

Government universities are allowed to make tech transfer, exclusive and non exclusive licensing agreements. Exclusive licenses of inventions obtained with government funds must be preceded by a public bid. Licensee will lose exclusivity if the commercialization deadline and other conditions established in the licensing agreement are not respected.

Benefit Sharing

Inventors must receive from 5 percent to 33 percent of royalties or licensing income. Professors and researchers may also be paid for any consulting they perform.

Universities may adopt patents of independent inventors, aiming its development, company incubation, use or transfer to the industry. Independent inventors must share benefits with the university.

Entrepreneurship

The government researcher may request unpaid leave to set up a company.

Incentives to Innovation in the Companies

The Innovation Law created mechanisms to fund innovation in the companies:

- Subvention (direct input of financial resources in enterprises for research and development activities)—before the Innovation Law, the funding agencies could not apply grants directly in companies. Instead, they used to fund research institutions, which could apply the grant on joint projects with companies.
- Tax incentives for companies investing in innovative projects, which brought about the Law n.º 11.196, Nov. 2005 (called "Good Law") and Decree nº 5.798, Jun. 2006.
- Government stockholding in private companies (minoritary stake).
- Hiring private institutions to accomplish high risk research and development projects.
- Creation of specific government programs to stimulate innovation in micro and small companies.
- Provisioning of human resources, by allowing the university researcher to work in the company.

Creation of Investment Funds

It authorized the creation of funds aiming investment in companies whose main activity is innovation.

Creation of a collaborative environment between private and government institutions:

Government will stimulate and support alliances and projects between government and private institutions whose aim is obtaining innovative products and processes.

University can incubate companies and share its laboratories with them.

3. Progress Five Years from the Promulgation of the Innovation Law

Number of TTOs created

According to Figure 1, from the 84 TTOs that responded to the research, 70 were created after 2005, which demonstrates that Innovation Law was a catalyst in this process. Most of them (67 percent) were created inside universities and 61 percent of the 84 are not university funded, being highly dependent of governmental funding agencies resources. Among the TTOs funded by the agencies, only 21.4 percent received more than U.S. $286,000; 26.2 percent received between U.S. $57,000 to U.S. $286,000; the remaining received less and 42 percent received nothing.

Licensing Income

According to Figure 2, only six institutions received more than U.S. $286,000 as licensing (or other tech transfer activity) income, being important to observe that 77 percent received nothing. This means that technology transfer activities are starting at the institutions and still there is much to be developed.

Patent Application and Patent Licensing Activities

Figure 3 shows the relation between patent application and patent commercialization, revealing that for only one institution this ratio is superior to 15 percent. The reason still is not very clear: perhaps the TTOs still need to develop competencies in technology transfer and licensing business or the patents produced by the institutions are not aligned to the market needs.

Figure 4 presents the average of filed, granted and commercialized patents per segment, showing that not only the average of patent applications is low, as well as the granted and licensed patents. The universities have the best performance.

Figure 5 presents the comparison between government and private institutions, concerning the average of filed, granted and licensed patents, showing that the best performance is in the government bodies. This can be explained by the fact that the Innovation Law affects only government institutions.

Major TTO's Challenges

Retain and professionalize talents has been the main challenge of the TTOs. Most of the human resources working in the TTOs are not employees. They are temporary collaborators, financed by government funding agencies, which stay some time, learn and leave to other positions in the market. The creation of new positions and careers in the TTOs, to contemplate professionals specialized in innovation and tech transfer management, as well as offering competitive salaries is required. This is difficult to achieve mainly in government institutions, due to the excessive bureaucracy and budget restrictions to create new jobs. These points strongly affect the TTO's performance.

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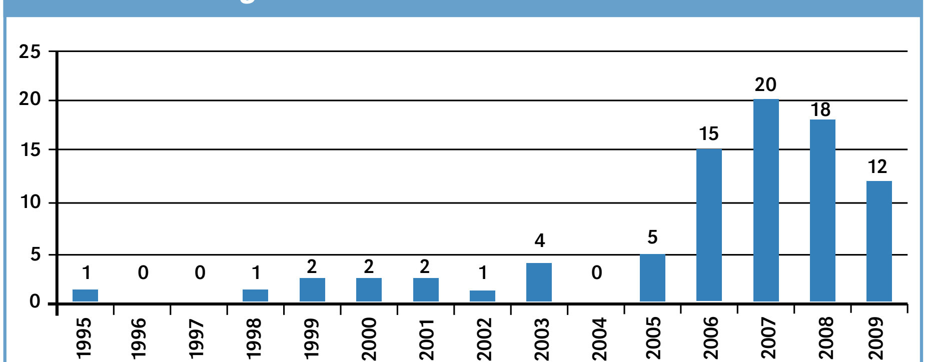
Industries Response to Tax and Subvention Incentives

The tax benefits enjoyed by the companies were U.S. $408 millions in 2006 (130 companies), U.S. $505 million in 2007 (332 companies) and U.S. $882 million in 2008 (552 companies). The companies being benefited from the tax incentives still represent only 10 percent of the companies that perform research and development activities in the country. This is because the Law only benefits a minority of companies that collect income tax by the "real profit" system, while the majority still declares the taxes by the system of "assumed profit" ("real" and "assumed" profits are concepts from the Brazilian Law). (Source: Report from Ministry of Science and Technology, Nov 2009).

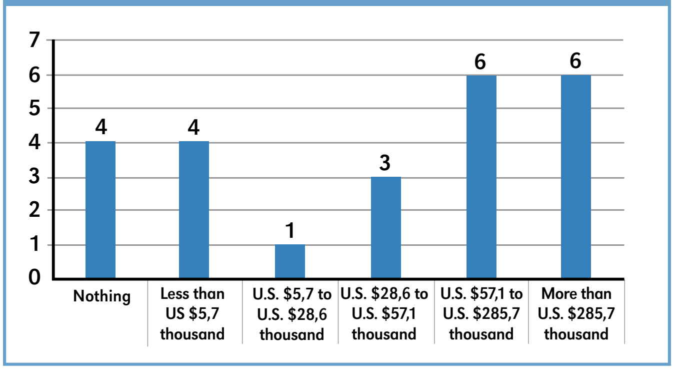
In response to the subvention, FINEP, a government agency which funds studies and projects, created the subvention program in 2006. The amount of money provided by the government to subventions in 2006, 2007 and 2008

Figure 1. Number Of TTOs Created



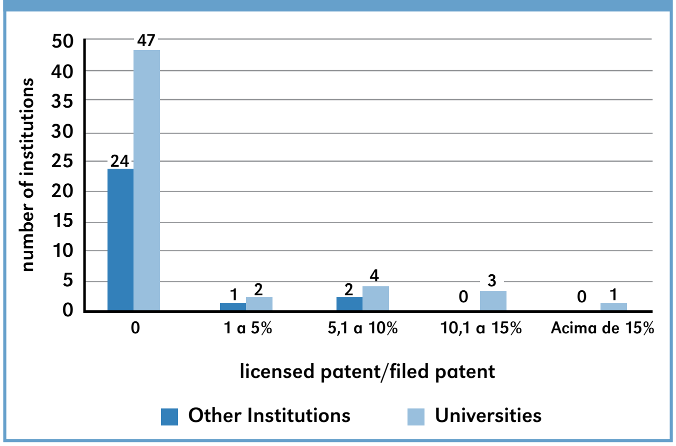
(Source: FORTEC-Management Report, April 2010)

Figure 2. Total TTO Income (Royalties, etc.)



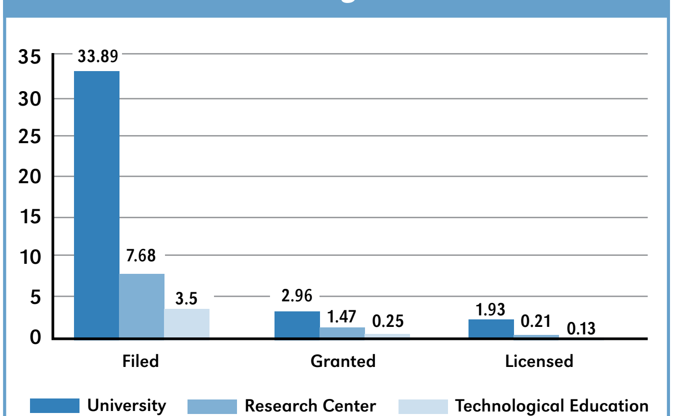
(Source: FORTEC-Management Report, April 2010)

Figure 3. Commercialized Patent/Filed Patent, According To Institution Classification



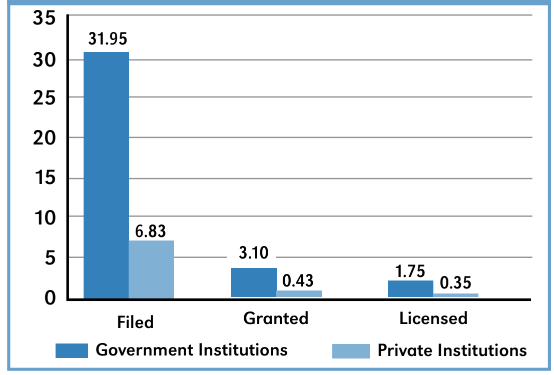
(Source: FORTEC-Management Report, April 2010)

Figure 4. Average Of Patents Per Segment



(Source: FORTEC-Management Report, April 2010)

Figure 5. Average Of Patents Per Government And Private Institutions



(Source: FORTEC-Management Report, April 2010)

were, respectively, U.S. $171, U.S. $257 and U.S. $257 million (source: ANPEI and CGEE—New Instruments To Support Innovation: An Initial Evaluation, 2009).

FINEP subvention program also supplies grants for hiring high level researchers, with Master and Doctor degrees, funding 40-60 percent of their salaries, in order to stimulate research inside the companies. The only public call in this modality was launched in 2006, releasing U.S. $34 million for 3 years. Only 37 companies were approved, resulting in U.S. $6 million to hire 132 researchers (84 MsC and 48 PhD). A small number of companies has applied to the call, which may indicate that this mechanism is still little known or that its capacity to amplify the companies investments in qualified human resources is limited (source: ANPEI and CGEE—New Instruments To Support Innovation: An Initial Evaluation, 2009).

Government Institutions Participation in Companies

Although the Innovation Law allowed government institutions to have shares in companies, till present this has not happened. The reason for this is the nonexistence of legal security, since government and private companies are driven by different legal regimes. While the government companies are driven by the rules of the Public Law, the private companies are driven by Private Law, and they have conflicting points, which the lawyers still have not been able to solve.

4. Acknowledgments

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