

Brazil next biotech trailblazer in Latin America?

One year on from the enforcement of Brazil's innovation law, the first national innovation law in Latin America, it has already earned praise from the country's scientific community, especially from that part dealing with applied research in industry and agriculture, with an emphasis on biotech. Many say it has broken new ground in inaugurating a different culture, one that supports instead of shuns the profit motive when dealing with science and technology. But old habits die hard in a country with Iberian roots, with both strong Catholic and left-wing prejudices against using knowledge to make money. Both scientists and entrepreneurs complain that there is still a lot to be done. But, at least, the country is now heading in the right direction while forging additional connections with Latin American neighbors to promote innovation across that continent.

Although the Innovation Law was passed in December 2004, its regulating decree was only created in October 2005. In addition, the so-called "Lei do Bem"—known as "The Law of Good" because it was meant for the good of business—was voted in November 2005, but its regulating decree made it enforceable as of June 2006. The new legislation has been discussed since 2001, in the end of the term of president Fernando Henrique Cardoso. The government of incumbent president Luiz Inácio Lula da Silva took its time debating the initiative. President Lula's own left-wing Partido dos Trabalhadores (Worker's Party) was at first hostile to anything related to private enterprise and science and technology. But a pragmatic view has taken over and the new legislation was approved after some delay. "The delay was not good, it led to no significant improvement," says Hugo Borelli, president of the National Association for Research, Development and Engineering of Innovative Companies.

These new laws have three main components: first, incentives to encourage partnerships between universities, research institutes and private companies; second, incentives to stimulate innovation at universities and research institutes; and third, incentives to foster more innovation among private companies. "Those changes were very good, in a general way. We are now close to what developed countries do," says Borelli.

Under the new innovation law, public and private organizations are encouraged to share research staff, funding and facilities. Before this, such cooperation would have been criticized as



Voodoo dolls of President Luiz Inácio Lula da Silva circulated by political opponents in the run up to the election. His government's innovation policy hopes to create the right kind of black magic for biotech.

subsidizing private business with public funds. The government has also promised tax credit to private companies such as biotechs that would allow them to deduct 60% of money spent on R&D from their annual tax. In parallel, a company hiring more than 5% new research staff can benefit from tax cuts of 80% of the scientist's salary. The legislation regarding tax incentives is useful to only 6% of big companies, Borelli says. "We still lack something that could help smaller companies." The innovation law is an improvement, but rather small considering that Brazil has progressed so little compared to the rest of the world in recent years," says Fernando Reinach, executive director at Votorantim Novos Negócios, the new business branch a major Brazilian industry group.

The first big result of the new legislation in terms of government subsidies appeared early this September. A funding agency of the Ministry of Science and Technology, the Financing Agency for Studies and Projects (FINEP), has launched two tenders to select business proposals to receive R&D subsidies. One of these will provide R\$300 (\$139) million to areas considered of strategic interest, including drug development, software and micro-electronics; the other will provide an additional R\$150 (\$70) million to business R&D. "This is something new, something that has never been done before," says Borelli. "We have advanced a lot in terms of legislation, but we still have a lot to learn." However, critics have accused the government of failing to provide a big enough budget to support the new law. In response the Ministry of Science and Technology allocated an extra \$97 million on innovation in the private sector for the 2006 budget.

"And the FINEP tender is the very first time

in the history of this country that a project is being directly financed by the government," says José Fernando Perez, a former scientific director at the São Paulo State Research Funding Agency (FAPESP) and current CEO of PRD Biotech located in São Paulo. He says that the new laws could be particularly useful to biotech companies, as this is an area where investments are risky and profits tend not to come on a short- or medium-term basis. "The legislation creates a new culture among scientists and companies, it facilitates partnerships between the private sector and the university," says Perez. He says he is also encouraged by the fact that this new vision is being seen not as the particular policy of a political party or a government, but as a long-term state policy.

"To reach this cultural shift in the business sector is a challenge," says Brazil's minister for Science and Technology Sergio Rezende. "Only in 2000 the Ministry began to talk of innovation. We are doing now what South Korea did in the 1980s," says Rezende. Carlos Henrique de Brito Cruz, who succeeded Perez as scientific director at FAPESP, recalls that Brazilian companies and research institutes registered only 106 patents in 2004 in the US, compared to 4,428 by South Koreans. But Reinach believes the new legislation is not good enough to provide security to biotech investors both in terms of intellectual property and the access to Brazil's own biodiversity.

Borelli says that a major hurdle to develop innovation in Brazilian companies is that many lack their own R&D teams. Even though a national survey indicated that the number of companies involved in innovation has increased from 31.5% in 2000 to 33.3% in 2003, the number of them who have in-house R&D teams has actually decreased from around 7,400 companies to about 5,000.

But, besides leading Latin America with its innovation policy, Brazil is opening up to its neighbors, too. In August, five member countries and five associate members of the Latin American trade pact Mercosur agreed to work closely to boost trade, create jobs and reduce poverty. Central to this bid is support for closer technological cooperation and a common desire to boost innovation to help regional integration. Mercosur countries—Argentina, Brazil, Paraguay, Uruguay, Venezuela and their associates, Bolivia, Chile, Colombia, Ecuador, Peru—are planning to set up a program for science, technology and innovation.

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