FINEP
The Brazilian Innovation Agency

Incentives to support innovation in the private sector: the Brazilian experience

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IADB - Washington, 16-17 April 2007
Evolution of the Brazilian Industrial Policy

Industrial Policy

Based on foreign technology  lack of policy

S&T Policy


Individual grants  Institutionalisation of research & post-graduation  Policy stagnation
Brazilian investment in S&T and percentage of GDP

![Bar chart showing investment in R$ billions from 2000 to 2005.](chart)

- 2000: 1.22%
- 2001: 1.25%
- 2002: 1.23%
- 2003: 1.19%
- 2004: 1.17%
- 2005*: 1.12%

*Estimated

Source: MCT

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Global framework

- Total of **public** HEI: 207 (83 federal, 65 state and 59 locals)
- Total of private or community HEI: 1,650
- Graduation courses: 16,000
- Master courses: 1,833
- Doctorate courses: 986
- Research institutions: 335
- Researchers: 77,600 (48,000 Ph.D.)
- Research teams: 19,500
- Qualified HR:
  - 65% within universities
  - 30,9% within industry
Published works (source: Science Indicators-ISI): Brazil X More productive countries (except USA), 1981-2004
Scientific Production: Brazil vs Selected Countries
Brazilian industrial firms innovation

- **Brazilian Technological Innovation Survey**
  (PINTEC/IBGE, 2002 & 2005)
  - 2003 Survey: 84,300 firms (10 or more employees)
  - Increasing the firms innovation rate from 2000 (31.5%) to 2003 (33.3%)
  - Decreasing of internal R&D activities as percentage of the revenue: 0.64% (2000) to 0.53% (2003)
  - Low innovation rate compared to other countries

Expenses in innovative activities by selected countries - 2000

The innovative pattern of the Brazilian industry differs from most of the developed countries: there is a high concentration in machinery and equipment acquisition.
Brazilian firms innovation activities: main constraints

Source: IBGE (www.ibge.gov.br) 3ª CNCTI

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Recent Brazilian ST&I System achievements

- **Innovation became a government policy priority**
- **Sectoral Funds (since 1999)**: innovative economic engineering to complement, expand and secure the financial sources for ST&I
- **Industrial, Technological, Foreign Trade Policy (2004)** – re-insertion of these issues within the Governmental Policy Agenda and a pioneering convergence of industrial and technological policies
- **New regulatory and legal environment (2005)**: Innovation, Informatics and Bio-security Laws; grants for R&D HR in companies; regulation of FNDCT; and MSEs Law
- **Decentralisation** of federal governmental ST&I policies and their Integration to the state and local levels
- **Emphasis on regional development and social inclusion**
Sectoral Funds for Supporting Scientific and Technological Development

• Creation: from 1999 onwards

• Financial sources: financially fed from selected productive sectors through the contributions of companies’ invoicing and/or from the earnings arising from the exploitation of natural resources belonging to the Federal Government

• Aeronautics; Agro-business; Amazon Region; Biotechnology; Energy; Informatics; Infra-structure; Mineral; Oil & Gas; Transportation; Health; Space Activities; Telecom; University-Industry Cooperation; Water Resources; and Water Transportation and Ship Building.
New regulatory and legal environment

• Strengthening the interaction between university and industry.

• Promote the shared use of S&T infrastructure by firms and S&T institutions (emphasis on MSMEs).

• Stimulate the creation of new technology based firms by researchers.

• Create new financial mechanisms for grants to HR, R&D and innovation in firms.

• Invest minimum of 20% in MSEs.
FINEP Programs
Reimbursable & non-reimbursable resources

I. Supporting firms’ innovation activities (credit, venture capital, economic subvention, RH, incubators, technological parks)

II. Supporting scientific and technological institutions (modernisation of scientific and technological infrastructure, research)

III. Supporting cooperation between firms and scientific and technological institutions (R&D and technical assistance)

IV. Supporting S&T for social development (health, sanitation, housing technologies, popular cooperatives, family agriculture, etc.)
FINEP total disbursements
(reimbursable & non-reimbursable resources)
FINEP investments in firms’ innovative activities (2003-2006)
FINEPs’ Programs
Loans for projects focusing on product, process and service innovation, aiming at contributing to the improvement of entrepreneurial competitiveness.

- Standard financing: TJLP (6.5%/year) + spread
  (2 - 5% /year)
- Reduced rates financing: up to (TJPL – 5%) /year

*TJLP=Long term interest rate

**Reduced rates application:**

- Priorities and PITCE’s strategic options
  Capital goods; pharmaceuticals & medicines; software & semiconductors; biotechnology; biomass; nanotechnology

- Broadening the research team
  Recruitment of Master and Doctor level (at least 10% of the R&D team)
PAPPE: quantitative results

- 20 out of 27 units of the federation.
- 606 R&D projects developed.
- 11% in biotechnology, 12% in health, 13% in energy, 18% in agro-business (related to Sectoral Funds).
- 46% in other sectors supported by the University-Industry Interaction Fund.
- 549 MSMEs all over the country, being:
  - 62% micro, 21% small, 14% medium and 3% of large firms.
  - 37% incubates and 63% not incubates.
Economic Subvention - R&D activities and HR

**Innovative firms (any size)**
- Strategic sectors (pharmaceutical, ICTs)
- Calls for proposals in 2006 (US$ 150 million): 1,100 firms’ proposals

**Micro and small firms**
- Decentralizing the operation and application of resources in partnership with state foundations, regional development banks, Sebrae, etc.
- Calls for proposals in 2006 (US$ 75 million) for selection of states partners.

**HR absorption**
- Subvention of part of the salaries of doctors and masters employees in firms’ innovative activities
Juro Zero (Zero Interest)

Credit granted to MSEs for their innovative activities

no interest rates

no collateral

no burocracy
**Coopera:**
S&T institutions / large/medium size firms

Non-reimbursable funds for R&D projects focusing on PITCE priorities (pharmaceuticals & medicines, capital goods, semiconductors, software) and broad-based enabling tech. (biotechnology, nano-technology and biomass).

**Total 2003-2006**
- 600 R&D cooperative projects
- US$ 300 millions (FINEP) + US$ 100 millions (firms)
Coopera: S&T institutions and MSE
(partnership FINEP/Sebrae)

Non-reimbursable funds for R&D projects focusing on innovation or technological diffusion of interest of MSEs (APLs, PITCE’s sectors and strategic options)

**Calls for proposals (2005 - 2006)**

- Value of the call: US$ 38 millions (Finep + Sebrae) for supporting projects between US$ 100 and 250 thousands, with firms’ counterpart of 5 to 30% (according to size and region)
- Approved: 167 projects, involving more than 700 MSEs
PROGEX

• Partnership MCT and Ministry of Development, Industry and Trade
• Technological assistance, consultancy and services provided by technological institutes for supporting MSMEs exporting activities
• More than US$ 16.5 millions driven to more than 650 firms for the improvement of more than 1,000 products
• Evaluation: increasing of 153% exporting performance from a sample of 270 firms
• Increasing of 36.5% yearly revenue compared to 18.5% from those not supported firms.
A. INOVAR Program: current lines of action

• **Incubator of Funds:** Since 2001, 24 Funds implemented in Brazil, 12 invested by FINEP/IDB-MIF

• **Seed money** – Inovar Semente

• **Portal Venture Capital Brazil** – First website of venture capital in Brazil (2000) - 2.372 entrepreneurs registered and 635.941 consultations.

• **Venture Capital** – training of 100 professionals for the market

• **INOVAR Network for business prospecting and development** (FINEP, SEBRAE, CNPq, IEL, ANPROTEC e SOFTEX)
Programa INOVAR Semente

Characteristics

- R$300M
- 24 seed-funds
- 40% FINEP
- 40% other investors
- 20% private
- Private management
- Incentives to private investor
- Local

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FOCUS AND FORM EVOLUTION OVER TIME

- 70`s: Focus on building up the S&T system.
- 80`s and 90`s: hard times but still building.
- 2000 and on: Picking up strength.
IMPACT ON ST&I CAPACITY

- Brazil 1970: -230 research teams
  -300 doctor`s degree/yr
  <-0.3% world`s knowledge

Brazil 2005: -19,470 research teams
-10,000 d`s degree/yr
-1.8% world`s knowledge
IMPACT ON ECONOMIC PERFORMANCE

- **Ex-post evaluation survey** (IPEA, 2005)
  - The benefited firms of FINEP’s financial support present better performance, on average, related to R&D activities (50 to 100% more).
  - Brazilian firms invest 80.8% more in R&D, than MNC`s subsidiaries in Brazil (% of revenue).
  - Revenue, exporting value, salaries, job quality and productivity have been above average.
IMPACT ON ECONOMIC PERFORMANCE

- Electronic ballot box (100 million voters-23h result)
- Oil industry: deep water drill (1,886 m); self-sufficiency(2006)
- Aircraft industry: Embraer
- Agribusiness: Embrapa
  Ethanol, soya, sugar, coffee, orange juice, poultry, beef.
LESSEONs LEARNED

• 2003 IBGE`s SURVEY: 83,000 firms.
  -only 21.2% got support from gov. programs;
  65% were large firms(>500 employees).

THEREFORE WE NEED:

- Simplify procedures
- Programs tailored to SME`s (no collaterals)
- Education: more and better
- Adequate financing
- Adequate evaluation policies
Thanks for your attention

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