Challenges for Industrial Policy, Innovation and Competitiveness in Brazil

Luciano Coutinho
• Brazilian assets & challenges
• Brazilian growth trends and prospects
• The State: acting for the short and for the long term
• The profile of a strategic agent: BNDES
• Summary and implications
Brazilian assets & challenges
• Growth in check... for some time... New and old poles of growth.

• Negative externalities associated with climate change.

• Fierce competition in markets.

• Rapid pace of technical progress.

• States actively defending national interests.
Brazil: assets and challenges

• Institutional & political stability

• Sound economic policy
  – Inflation and public debt
  – Reserves

• A complex and diversified economic base

• Infrastructure in need of expansion

• More innovation efforts are needed

• Economic inclusion n the making

• The best performance: job creation
Brazilian growth trends and prospects
Domestic market explains 2004-2008 growth cycle and 2010 recovery

Contribution to GDP
(in percentage points)

Source: Ipeadata
An average 5% p.a. growth is feasible over the next 5 years...

Brazil: GDP Annual Growth Rate

%  


Source: IBGE, BNDES
... with investment leading the way...

Investment/GDP (%)

![Graph showing investment/GDP (%) from 2003 to 2014 with a forecast for 2010 to 2014.]

Source: IBGE, BNDES
... as investment plans are robust and rising

<table>
<thead>
<tr>
<th>Sectors</th>
<th>US$ billion</th>
<th>Growth 2010-13 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005-8 (observed)</td>
<td>2010-13 (forecast)</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>111</td>
<td>172</td>
</tr>
<tr>
<td>Industry</td>
<td>174</td>
<td>305</td>
</tr>
<tr>
<td>Housing</td>
<td>191</td>
<td>258</td>
</tr>
<tr>
<td>Total</td>
<td>476</td>
<td>736</td>
</tr>
</tbody>
</table>

US$/R$ = 1.80

Based on Corporate Investment Plans from 13 sectors – Last Forecast: April 2010

Sample features:

- 10% of GDP
- 52% of Gross Fixed Capital Investment
- 60% of Manufacturing investments; 90% of Infrastructure investments

Source: BNDES Forecast
Investments in Energy stand out

Petrobras’ Annual Investments: US$ 45 billion (2010-2014)
The State:
acting for the short and for the long term
The short term: managing crisis, but with an eye on keeping growth momentum

- Strong financial regulation in place and liquidity ensured
- Effective counter-crisis policies, at low cost (1.2% of GDP)
  - Tax relief on durable goods to maintain household consumption (Incentives have been delivered!!!)
  - Credit expansion thanks to State-owned banks
  - Strong incentives for investment
The long term: investment related policies

Investment policies

S&T & Innovation

Industrial Policy PDP

Infrastructure PAC

Housing

Health

Education- PDE

The challenge: to have them as permanent State policies
### Planned investments - US$ billion

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<thead>
<tr>
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<tbody>
<tr>
<td>Logistics</td>
<td>49.4</td>
<td>52.3</td>
<td>101.7</td>
</tr>
<tr>
<td>Energy</td>
<td>151.8</td>
<td>232.8</td>
<td>384.6</td>
</tr>
<tr>
<td>Social &amp; Urban dev</td>
<td>130.8</td>
<td>194.5</td>
<td>325.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>332.0</strong></td>
<td><strong>479.6</strong></td>
<td><strong>811.6</strong></td>
</tr>
</tbody>
</table>

Effective management by Minister of Coordination and Internal Affairs, close to Presidency

BNDES in PAC 1: 331 projects
Financing US$ 76 bn for US$ 138 bn of investments (70% ➔ energy)
Highlights

• **Political priority**: President leadership

• **Direct involvement & partnership with relevant actors**: Ministry of Industry and Trade, Ministry of Finance, Ministry of S&T, BNDES

• **Policy focus**: Investment, Innovation, Exports, SMEs.

• **Systematic interaction with private sector**

• **Effectiveness**: over 95% of proposed measures are operational
A complex policy framework for a complex productive structure

Consolidating and Expanding Leadership
- Aeronautics
- Oil, Gas and Petrochemicals
- Bio-ethanol
- Meat
- Mining
- Steel
- Pulp and Paper

Strengthening Competitiveness
- Automotive Complex
- Capital Goods
- Textile & Garments
- Wood and Furniture
- Hygiene and Cosmetics
- Housing
- Services Complex
- Naval & Shipping Industries
- Leather & Footwear
- Agribusinesses
- Bio-diesel
- Plastics
- Wheat
- Electronics – consumer
- Toy Industry

Fostering Knowledge
- Industrial Health Complex
- Information and Communication Technologies
- Nuclear Energy
- Defense Complex
- Nanotechnology
- Biotechnology

Strategic Issues
- Expanding Exports
- Strengthening SMEs
- Productive integration with Latin America
- Integration with Africa
- Regionalization and production decentralization
- Clean Production and Sustainable Development
Governance: hierarchical structure and well defined terms for relevant agencies

General Coordination
Industry and Trade (MDIC)

Ministerial Council
Chief Cabinet, Finance, Planning, S&T, Education

Executive Secretariat
Industry and Trade Agency (ABDI), BNDES, Finance Ministry (MF), S&T Ministry (MCT)

- Systemic Actions
  - Coord.: MF
  - 1 Executive Committee
- Strategic Themes
  - Coord.: ABDI
  - 6 Executive Committees
- Fostering Knowledge
  - Coord.: MCT
  - 6 Executive Committees
- Strengthening Competitiveness
  - Coord.: MDIC
  - 15 Executive Committees
- Consolidating Leadership
  - Coord.: BNDES
  - 7 Executive Committees

The challenge: coordinating 500 civil servants; over 60 public agencies
BNDES
The profile of a strategic agent
Main provider of long-term financing in Brazil
100% State-owned company under private law
Institutional funding
2,500 employees
Instruments
- Direct operations
- Indirect operations
- MSME (financing & guarantee)
- Exim
- Project finance
- Equity investments
- Grants

Development Banks

<table>
<thead>
<tr>
<th></th>
<th>Assets</th>
<th>Equity</th>
<th>Disbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Bank</td>
<td>275.4</td>
<td>40.0</td>
<td>18.6</td>
</tr>
<tr>
<td>BNDES</td>
<td>222.0</td>
<td>15.9</td>
<td>68.8</td>
</tr>
<tr>
<td>IADB</td>
<td>84.0</td>
<td>20.7</td>
<td>11.4</td>
</tr>
</tbody>
</table>

Source: BNDES, IADB (Dec./09) and World Bank (June/09).
World Bank as of June 30.

Non-performing Loans 2009: 0.20% of total outstanding debt
The importance of BNDES’ financing

Financing sources for Investment in Manufacturing and Infrastructure (%)(2004-2009)

- Retained Earnings
- BNDES
- External Sources
- Bonds
- Stock Market - Brazil

Source: BNDES
The BNDES’ performance is associated with Brazil’s investment-led growth process.

Approvals and disbursements

U$ billion

2009: BNDES financed US$ 46.8 bn for US$ 93 bn in fixed investments. This generated or maintained 4.5 million jobs (direct/indirect and income effects).

Source: BNDES. R$/US$: average exchange rate for each year.
Summary and implications
✓ Success in facing the international financial crisis
✓ Brazil may grow 5% p.a. over the next few years
✓ Domestic market will lead growth:
  ✓ Consumption: emerging middle class
  ✓ Investments: oil & gas, electricity, logistics, large events (World Cup, Olympic Games), housing

Coming up:
Large number of high-return & low-risk projects
Ingredients to ensure sustained development

✓ **State:** permanent and effective investment policies

✓ **Financing:** institutional investors, capital markets, domestic savings, public institutions supporting investment

✓ **Social:** more and better jobs; quality education

✓ **Infrastructure:** more and better projects; more complex finance/insurance solutions

✓ **Industry:** innovation and competitiveness capabilities

Private sector mobilization and foreign investors are essential!
Innovation: the way ahead

- **Priority for investment, innovation & competitiveness.** Challenges: clean production; competent labor force; renewable energies; health; urban infrastructure; e-gov.

- **Industrial policy as a permanent State policy.** The need to strengthen Intra-State cooperation in Industrial, S&T, Infrastructure and Education policies

- **Public-Private interaction: essential for success**

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**Strategic partnership:** In a challenging and competitive world, the US & Brazil - private and public domains - should develop project-based cooperation to develop each others’ capacities
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ANNEX – Tables and Figures
Brazilian assets & challenges
Interest Rate and Public Debt

Interest Rate (SELIC) % per year

Public Sector Net Debt (%) GDP

Forecast

Source: IMF and Brazilian Central Bank.
Strong defenses against external vulnerability

High levels of international reserves...

...reduced external debt (vulnerabilities)

Source: Brazilian Central Bank
A complex private sector

Industrial Production, 2009

- Labor Intensive: 9.7%
- Natural Resources Intensive: 39.8%
- Scale Intensive: 35.1%
- Engineering Intensive: 15.5%

An attractive economy

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<tr>
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<tbody>
<tr>
<td>Brasil</td>
<td>2.7</td>
<td>1.7</td>
<td>2.7</td>
</tr>
<tr>
<td>China</td>
<td>2.8</td>
<td>2.9</td>
<td>3.4</td>
</tr>
<tr>
<td>India</td>
<td>0.8</td>
<td>2.2</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Source: IMF
Underdeveloped infrastructure

<table>
<thead>
<tr>
<th>Country</th>
<th>Area (million km²)</th>
<th>Paved Roads (1,000 kms)</th>
<th>Railroads (1,000 kms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>8.5</td>
<td>212</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,500 unpaved</td>
</tr>
<tr>
<td>Russia</td>
<td>17.0</td>
<td>755</td>
<td>87</td>
</tr>
<tr>
<td>India</td>
<td>3.0</td>
<td>1,570</td>
<td>63</td>
</tr>
<tr>
<td>China</td>
<td>9.3</td>
<td>1,572</td>
<td>77</td>
</tr>
</tbody>
</table>

Source: Institute of Logistics and Supply Chain, COPPEAD, UFRJ

Immediate opportunity: Sâo Paulo – Rio de Janeiro High Speed Train
- Call to bid: from 7/14/2010 to 11/29/2010
- Emphasis: development of local capacity and transfer of technology
Innovation capabilities are not strong

**R&D/Sales (most recent available data)**

- Germany: 2.60%
- France: 2.20%
- UK: 1.25%
- Norway: 0.97%
- Spain: 0.87%
- Brazil: 0.66%
- Hungary: 0.50%
- Czech Republic: 0.42%
- Portugal: 0.37%
- Argentina: 0.21%
- Mexico: 0.09%

Source: Innovation Surveys, various countries
Mass markets are being expanded

Social Groups (% of total population)

Group C: 26% growth 2003-2009

Social Groups monthly earnings
A&B: US$ 2,700 +
C: US$ 620 – 2,700
D&E: up to US$ 620

* Values in December 2008

Source: FGV and Finance Ministry

GDP (2009): US$ 1.6 trillion
Per capita: US$ 8,200
Despite 0.2% negative growth in 2009, almost 1 million jobs created

Net job creation per year
(THOUSAND WORKERS NET)

Source: MTE/Caged (*) estimated
The State:
working for the short and for the long term
The cost of keeping the economy running

<table>
<thead>
<tr>
<th>Anti-crisis policy measures</th>
<th>R$ billion</th>
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<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>312.6</strong></td>
</tr>
<tr>
<td>Loan to BNDES</td>
<td>100.0</td>
</tr>
<tr>
<td>Freeing retained reserves to banks</td>
<td>100.0</td>
</tr>
<tr>
<td>Tax relief</td>
<td>15.0</td>
</tr>
<tr>
<td>Popular Housing Programme</td>
<td>1.6</td>
</tr>
<tr>
<td>Loans to States and Cities</td>
<td>2.0</td>
</tr>
<tr>
<td>Loan to Caixa Econômica Federal</td>
<td>6.0</td>
</tr>
<tr>
<td>Withdrawing Petrobrás from primary surplus</td>
<td>15.0</td>
</tr>
<tr>
<td>Reduction of primary target</td>
<td>24.0</td>
</tr>
<tr>
<td>Minimum wage increase</td>
<td>20.0</td>
</tr>
<tr>
<td>Wage increase for public servants</td>
<td>29.0</td>
</tr>
</tbody>
</table>

Source: Finance Ministry
During crisis, State-owned banks sustained credit expansion

Credit Growth
(September 2008 = 100)

Contribution to Credit Growth
(Sept/08-Jan/10)

Other State-owned Banks 36%

BNDES 37%

Private Banks 27%

Source: Bacen.
PSI: Interest rate equalization program

BNDES daily disbursement for acquisition of Capital Goods
- Direct and 2nd tier operations (US$ million)

Source: BNDES
BNDES
The profile of a strategic agent
The BNDES is practically alone in providing (and profiting from) long-term loans

Source: BCB/BNDES
Institutional funding

Funding Composition

- Institutional funding
- National Treasury
- Foreign
- Others
- Equity

Recent expand in demand required support from the National Treasury

Institutional Funding (Workers’ Assistance Fund)

Prudential behavior is an asset of credibility

Basel Index (%)

Source: BNDES
80% of the BNDES’ loans goes to industry and infrastructure

Disbursements by business sector (%)

Source: BNDES
Half the disbursements are through commercial banks

Disbursements per type of operation (%)

Source: BNDES
2009 Number of Operations

Total: 304,843

- 112,997 (29%)
- 23,711 (6%)
- 28,725 (9%)
- 225,296 (58%)

Disbursements per size (% total)

Source: BNDES
Export finance is increasing steadily in the recent past.

Export finance from the BNDES

US$ billion

2.100 3.083 2.603 3.948 4.007 3.861 5.862 6.376 6.595 8.309

Source: BNDES
A large and diversified equity portfolio

Sectorial distribution of BNDES equity portfolio (%)

Total Equity Portfolio: US$ 47.5 billion (Dec.’09)
Challenges for Industrial Policy, Innovation and Competitiveness in Brazil

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Woodrow Wilson International Center for Scholars
Brazil - U.S. Business Council - U.S. Chamber of Commerce

July, 2010