THE INFORMATION TECHNOLOGY & INNOVATION FOUNDATION

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December 18, 2012

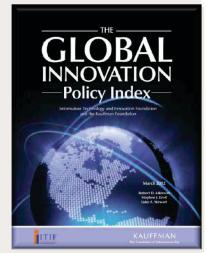
The Global Innovation Policy Index and Brazilian Innovation

Dr. Robert D. Atkinson, President, ITIF

## The Global Innovation Policy Index

Assesses strength of 55 countries on 7 innovation policy areas:

- 1. Open and non-discriminatory market access and foreign direct investment;
- 2. Science and R&D;
- 3. Openness to domestic competition and new firm entry;
- 4. Effective intellectual property rights;
- 5. ICT policies;
- 6. Open and transparent government procurement;
- 7. Openness to high-skill immigration.



### • Where is Brazil?

- Brazil scored in the lower-mid or lower tier in all benchmarks of the *Global Innovation Policy Index*
  - Except for Science and R&D
- ITIF found Brazil to be in the Upper-Mid tier on investments being made in Science and R&D



# Trade and Foreign Direct Investment

#### Tariff Rates

	Upper Tier	Upper-Mid Tier	Lower-Mid Tier	Lower Tier
• NTBs	Austria Belgium Canada Chinese Taipei	Australia Bulgaria Chile Czech Republic	Latvia Romania Turkey	Argentina Brazil China India
<ul> <li>Currency manipulation</li> </ul>	Cyprus Denmark Estonia Finland France	Greece Hungary Ireland Israel Italy		Indonesia Malaysia Mexico Peru Philippines
• # FTAs	Germany Hong Kong Iceland Japan Luxembourg	Lithuania Malta New Zealand Poland Slovak Republic		Russia South Africa Thailand Vietnam
<ul> <li>FDI openness</li> </ul>	Netherlands Norway Portugal Slovenia Singapore Sweden Switzerland United Kingdom United States	Spain South Korea		

## Science and R&D

#### R&D Tax Credits

 R&D Intensity

Univ. R&D

 Cluster development

Upper Tier	Upper-Mid Tier	Lower-Mid Tier	Lower Tier
Australia	Brazil	Argentina	Bulgaria
Austria	China	Belgium	Indonesia
Canada	Czech Republic	Chile	Luxembourg
Chinese Taipei	Estonia	Cyprus	Malaysia
Denmark	Germany	Greece	Malta
Finland	Hong Kong	Hungary	Mexico
France	Iceland	Ireland	Peru
Netherlands	India	Latvia	Philippines
Norway	Israel	New Zealand	Slovak Republic
Singapore	Italy	Poland	Thailand
South Korea	Japan	Romania	Vietnam
Spain	Lithuania	South Africa	
Sweden	Portugal	Turkey	
	Russia		
	Slovenia		
	Switzerland		
	United Kingdom		
	United States		

#### Domestic Market Competition & Entrepreneurship

#### • Ease of start clos busi

	#	New	firms
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Labe mob

Barr competition

e 01				
ting or	Upper Tier	Upper-Mid Tier	Lower-Mid Tier	Lower Tier
sing	Australia	Austria	Bulgaria	Argentina
iness	Canada Denmark	Belgium Chinese Taipei	Chile China	Brazil Greece
	Hong Kong Singapore Switzerland	Cyprus Czech Republic Estonia	France Hungary Israel	Italy Indonesia India
lew firms	United Kingdom United States	Finland Germany Iceland	Latvia Lithuania Luxembourg	Mexico Peru Philippines
or market		Ireland Japan Malaysia	Poland Portugal Slovenia	Romania Russia
oility		Malta Netherlands New Zealand Norway	South Africa South Korea Spain Thailand	
riers to		Slovak Republic Sweden	Turkey Vietnam	
npetition		1	1	<u> </u>

# Intellectual Property Rights Protections

#### Park Index

Integrity of the legal system

#### Software piracy

#### 301 Watch List

Upper Tier	Upper-Mid Tier	Lower-Mid Tier	Lower Tier
Australia	Belgium	Brazil	Argentina
Austria	Cyprus	Bulgaria	India
Canada	Czech Republic	Chile	Indonesia
Chinese Taipei	Estonia	China	Mexico
Denmark	Hungary	Greece	Peru
Finland	Iceland	Italy	Philippines
France	Ireland	Latvia	Russia
Germany	Israel	Malaysia	Thailand
Hong Kong	Lithuania	Poland	Vietnam
Japan	Luxembourg	Romania	
Netherlands	Malta	Slovak Republic	
New Zealand	Portugal	South Africa	
Norway	Slovenia	Turkey	
Singapore	South Korea		
Sweden	Spain		
Switzerland			
United Kingdom			
United States			

# Digital Policies/ICT Adoption

#### • ITA membership

membership	Upper Tier	Upper-Mid Tier	Lower-Mid Tier	Lower Tier
<ul> <li>Tariffs on ICTs</li> </ul>	Canada Chinese Taipei Denmark Finland Germany Hong Kong Iceland	Australia Austria Belgium Cyprus Czech Republic Estonia France	Brazil Bulgaria Chile China Greece India Italy	Argentina Indonesia Mexico Peru Philippines Russia South Africa
<ul> <li>Government IT adoption</li> <li>Broadband plan</li> </ul>	Luxembourg Netherlands New Zealand Norway Singapore South Korea Sweden Switzerland United Kingdom United States	Hungary Ireland Israel Japan Lithuania Malaysia Malta Portugal Spain	Latvia Poland Romania Slovak Republic Slovenia Thailand Turkey	Vietnam
<ul> <li>Telcom market</li> </ul>				

# competition

## Government Procurement

#### • GPA membership

Extent of SOEs

Corruption
 Perceptions
 Index

#### Government procurement of advanced tech

Upper Tier	Upper-Mid Tier	Lower-Mid Tier	Lower Tier
Austria	Australia	Latvia	Argentina
Belgium	Bulgaria	Romania	Brazil
Canada	Chile	Turkey	China
Chinese Taipei	Czech Republic		India
Cyprus	Greece		Indonesia
Denmark	Hungary		Malaysia
Estonia	Ireland		Mexico
Finland	Israel		Peru
France	Italy		Philippines
Germany	Lithuania		Russia
Hong Kong	Malta		South Africa
Iceland	New Zealand		Thailand
Japan	Poland		Vietnam
Luxembourg	Slovak Republic		
Netherlands	Spain		
Norway	South Korea		
Portugal			
Slovenia			
Singapore			
Sweden			
Switzerland			
United Kingdom			
United States			

# High-Skill Immigration

 High-skill immigrants as share population

 Selection rate for high-skill immigrants

	Upper Tier	Upper-Mid Tier	Lower-Mid Tier	Lower Tier
s as	Canada	Australia	Argentina	Bulgaria
	Chinese Taipei	Japan	Austria	Czech Republic
lation	Hong Kong	Latvia	Belgium	Finland
	Israel	Malaysia	Brazil	Greece
	Singapore	New Zealand	Chile	Italy
		Philippines	China	Lithuania
		South Africa	Cyprus	Malta
to for		United States	Denmark	Mexico
ate for			Estonia	Portugal
			France	Romania
			Germany	Slovak Republic
			Hungary	Slovenia
S			Iceland	Spain
			Ireland	Turkey
			India	
			Indonesia	
			Luxembourg	
			Netherlands	
			Norway	
			Peru	
			Poland	
			Russia	
			South Korea	
			Sweden	
			Switzerland	
			Thailand	
			United Kingdom	
			Vietnam	

## Overall Ranks

Upper Tier	Upper-Mid Tier	Lower-Mid Tier	Lower Tier
Australia	Belgium	Brazil	Argentina
Austria	Cyprus	Bulgaria	India
Canada	Czech Republic	Chile	Indonesia
Chinese Taipei	Estonia	China	Mexico
Denmark	Hungary	Greece	Peru
Finland	Iceland	Italy	Philippines
France	Ireland	Latvia	Russia
Germany	Israel	Malaysia	Thailand
Hong Kong	Lithuania	Poland	Vietnam
Japan	Luxembourg	Romania	
Netherlands	Malta	Slovak Republic	
New Zealand	Portugal	South Africa	
Norway	Slovenia	Turkey	
Singapore	South Korea		
Sweden	Spain		
Switzerland			
United Kingdom			
United States			

## Implications for Policymakers

- 1. Innovation is key to growth and the right innovation policy drives growth.
- 2. Effective innovation policy involves more than support for R&D.
- 3. Enabling innovation through openness to FDI; voluntary, market-led standards, and openness to high-skill immigration is critical.
- 4. While supporting ICT production is important, supporting widespread ICT usage is even more important.
- 5. Strong IPR delivers positive results for developed and developing nations.
- 6. Embracing "creative destruction" and competitive markets is key to fostering innovation and entrepreneurship

### How Brazil Can Improve Its Rankings

- Boost competition.
- Avoid "innovation mercantilism."
- Expand support for innovation building blocks (e.g., education, R&D).
- Create the right incentives for innovation (e.g. IP protection; tax policy).

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