

Contributors and Detractors: Ranking Countries' Impact on Global Innovation

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Why Write this Report?

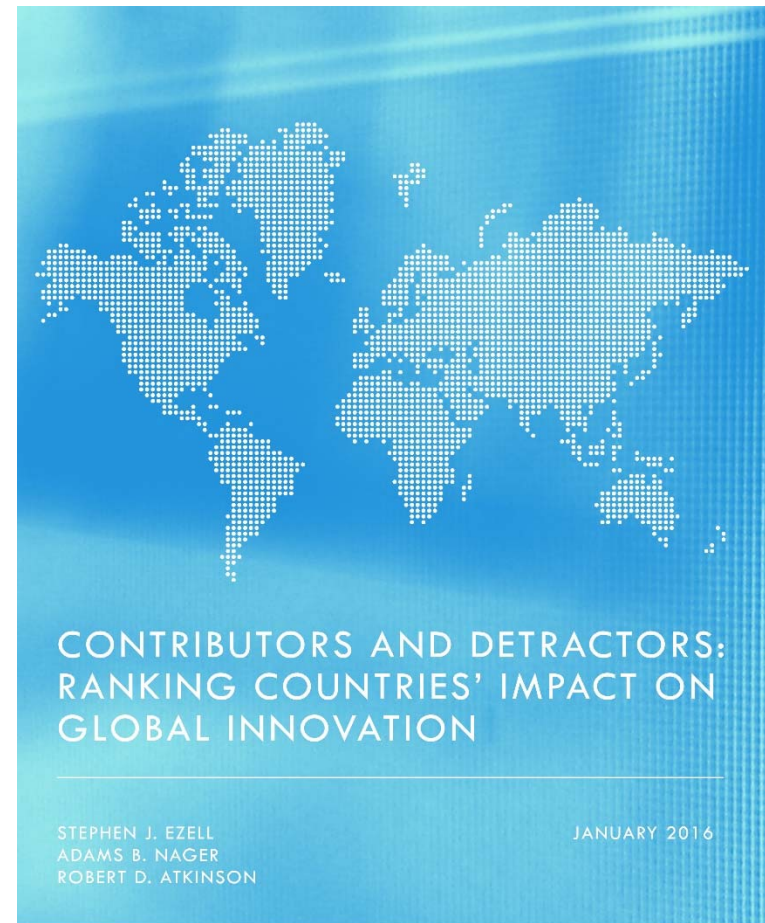
1. The world is not producing as much innovation as is possible—or as is needed.
2. Innovation policy is still largely conceived in terms of how it impacts national economic growth.
3. Studies have ranked countries on innovation capabilities and outcomes, but none on how countries' policies impact global innovation.
4. Policies have significant positive and negative geographic spillovers.

National Policies Impact Global Innovation



The Report

- Assesses 56 countries on 27 indicators, grouped into “Contributions” and “Detractions.”
- Measures the extent to which, on a per-capita basis, countries’ economic and trade policies contribute to, and detract from, global innovation.



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Report Indicators - Contributions

Contributions Indicators (Weight=6)	Data Type	Category Weight
Taxes		2.5
Effective Corporate Tax Rates	Raw Number	
R&D Tax Credit Generosity	Raw Number	
Collaborative R&D Tax Credits	Binary Variable	
Innovation Boxes	Binary Variable	
Taxes on ICT Products	Raw Number	
Human Capital		2.5
Expenditures on Education	Composite Score	
Science Graduates	Raw Number	
Top-Ranking Universities	Composite Score	
Scientific Researchers	Raw Number	
R&D and Technology		5
Government R&D Expenditures	Raw Number	
“Bayh-Dole-Like” Policy	Categorical Variable	
National Innovation Foundation	Binary Variable	
Research Citations	Composite Score	
Government Funding of University R&D	Raw Number	

Report Indicators - Detractions

Detractions Indicators (Weight=4)	Data Type	Category Weight
Balkanized Production Markets		4
Non-tariff Trade Barriers	Raw Number	
Number of Types of LBTs	Categorical Variable	
Foreign Equity Restrictions	Raw Number	
Currency Manipulation	Categorical Variable	
Export Subsidies	Raw Number	
IP Protections		4
<i>Special 301 Report</i>	Categorical Variable	
Ginarte-Park Patent Rights Index	Raw Number	
Intellectual Property Protection	Composite Score	
IP and Reimbursement Environment Supporting Life Sciences Innovation	Composite Score	
Software Piracy Rate	Raw Number	
Balkanized Consumer Markets		2
Services Trade Restrictiveness	Raw Number	
Simple Mean Tariff Rate	Raw Number	
Tariffs on ICT Products	Raw Number	

Report Methodology

Factors that bolster the global innovation economy

14 Indicators

Weighted ↓ Standardized

3 Categories

Weighted ↓ Standardized

Contributions

Factors that hamper the global innovation economy

13 Indicators

Weighted ↓ Standardized

3 Categories

Weighted ↓ Standardized

Detractions

Weighted

Standardized

Final Score

Results: Country Ranks

Top 5	<u>Overall</u>	<u>Contributions</u>	<u>Detractions</u>
	1. Finland	1. Singapore	1. Finland
	2. Sweden	2. Korea	2. The Netherlands
	3. United Kingdom	3. Finland	3. Belgium
	4. Singapore	4. Sweden	4. Ireland
	5. The Netherlands	5. United Kingdom	5. Sweden
	10. United States	17. United States	6. United States
Bottom 5	<u>Overall</u>	<u>Contributions</u>	<u>Detractions</u>
	52. Ukraine	52. Colombia	52. Russia
	53. Thailand	53. Argentina	53. Argentina
	54. India	54. Indonesia	54. India
	55. Indonesia	55. Mexico	55. China
	56. Argentina	56. Costa Rica	56. Thailand

Relative Country Positions and Typologies



Typologies

- Schumpeterian
- Adam Smithian
- Advanced Asian Tiger
- Innovation Mercantilist
- EU Continentalist
- EU Up and Comer
- Innovation Follower
- Traditional Mercantilist

Results: Analysis

- Countries' scores on contributions and detractions are positively correlated (0.60).
 - Suggests that countries that do more to support global innovation do less to harm it.
- Countries that have better innovation policies have better innovation outcomes.
 - High correlation (0.84) between “Contributions” score and two measures of innovation outcomes from the *2015 Global Innovation Index* (“Creative Outputs” and “Knowledge and Technology”)

What U.S. Would Have to Do to Be #1



Five changes could make the U.S. the top performer for both contributions and overall:

1. Reduce its effective corporate tax rate from 27.7% to 18.2%;
2. Increase its R&D tax credit from 14% to 24%;
3. Implement an innovation box;
4. Increase government funding of university R&D by \$68 billion per year; and
5. Increase number of tertiary graduates in STEM fields by 20%.

Policy Recommendations - Framing

1. Global policymakers need to treat innovation as important as trade in optimizing global economic welfare.
2. Push back on perspective that developed-nation innovation occurs at the expense of developing nations, and that we need “innovation redistribution.”

Policy Recommendations - Action

1. Development organizations should reduce assistance to countries continuing to use innovation mercantilism.
2. WTO should produce its own *Global Mercantilist Index*.
3. Organizations like the IMF and WTO should increase staff expertise on innovation economics and policy.
4. Countries should launch a Global Science and Innovation Foundation (GSIF) to fund scientific research on shared global challenges.
5. Have your think tanks join ITIF's Global Trade and Innovation Policy Alliance (GTIPA).

Thank You!

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