

# ANALYSIS OF RESEARCH AND INNOVATION SYSTEMS FOR COOPERATION DEVELOPMENT – CASE STUDY: IRAN

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## PROBLEM STATEMENT

In today's world, innovation is fast becoming a critical factor in the economic growth of countries. Innovative output is enhanced by the efficient functioning and interaction of the different actors in a country's national innovation system. Therefore, to boost innovation, a systemic approach is needed to investigate the structure's players and their functions.

## GOALS









This research aimed to:

- Investigate main actors of Iran's research and innovation system and their function
- Investigate the interaction between the actors in the system
- Conduct SWOT analysis of the innovation system

## SUMMARY

This study analyzed four pillars of innovation systems (Government, Research and Education, Knowledge Intensive Services and Enterprises) by conducting interviews with more than 20 Iranian organizations and two SWOT analysis workshops with 50 Iranian researchers. The results indicate that the country has focused to a high extent on the quantitative output of its research and education system. However, there is still a need to develop the linkages in the innovation system. The weaknesses in R&D linkages between academia and the business sector has negatively impacted the knowledge diffusion and creative output of the country.

## RESULTS

 <p><b>Tertiary Education:</b></p> <p>Students: Approx. 4.5 Million</p> <p>Graduates: Approx. 570,000 (Highest proportion of science engineering graduates in the world)</p>	 <p><b>Universities and Research Institutes:</b></p> <p>Public Universities: 119</p> <p>Medical Universities: 58</p> <p>Islamic Azad University Branches and Private Universities: 700</p> <p>Research Institutes: Approx. 50</p>	 <p><b>Scientific Publications:</b></p> <p>World Rank: 22</p> <p>Regional Rank (in West Asia): 1</p> <p>Thematic Share: Engineering (13.64%) Medicine (13.11%), Chemistry (8.36%), Material Sciences (7.94%)</p>
 <p><b>Share of R&amp;D Projects:</b></p> <p>Industry: 53.3%</p> <p>Research Institutes: 27%</p> <p>Universities: 19.6%</p> <p>(Share of R&amp;D Expenditure in GDP: 0.7%)</p>	 <p><b>Patent Applications:</b></p> <p>2001: 691 (Worldwide Rank 34<sup>th</sup>)</p> <p>2014: 13,683 (Worldwide Rank 9<sup>th</sup>)</p>	 <p><b>Business Incubation:</b></p> <p>Over 3,500 Companies in: 36 Tech-Parks and 161 Business Incubators</p>
 <p><b>Human Capital &amp; Research:</b></p> <p>Expenditure on Education (% GDP): Rank 98 out of 128</p> <p>Tertiary Education: Rank 4 out of 128</p> <p>Research &amp; Development (R&amp;D): Rank 63 out of 218</p>		 <p><b>Knowledge &amp; Technology Outputs</b></p> <p>Knowledge Creation: Rank 26 out of 128</p> <p>Knowledge Impact: Rank 63 out of 128</p> <p>Knowledge Diffusion: Rank 127 out of 128</p>

**Iran Research and Innovation System at a glance (own source; GII, 2016; MSRT, 2013; WIPO, 2016; SCImago Journal & Country Rank, 2016)**