



STI Policy Review of I.R. Iran

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Outline

- Purpose of STIP Review of IR Iran
- Process behind STIP Review
- Content of STIP Review
- Main findings



Purpose of STIP Review of IR Iran

- Assess firm/industry/national STI capacity, national STI policies, regulations, institutions, governance, infrastructure
- Identify gaps, strengths, weaknesses and challenges
- Recommend policy actions to address gaps/weaknesses, foster tech upgrading, improve innovation performance
- Evaluate developments since STIP Review of 2005



Purpose of Review

- Support effective integration of STI policy in development strategy of I.R. Iran.
- Promote policy maker awareness of role of STI policy in sustainable development.
- Stimulate discussion in I.R. Iran on STI policy for sustainable development.



Process behind Review

- Cooperation with Vice-Presidency for S&T
- A team of staff from UNCTAD and a team of international experts + UNESCO-UIS
- Extensive discussions with national stakeholders (government, research institutes, academia, universities, firms)
- 2 fact finding missions, 4 stakeholder workshops, 70 interviews (500 + stakeholders), 4 dissemination meetings



The STIP Review content

- Introduction: major changes 2005-2016
- STI indicators and benchmarking
- National innovation system of Iran
- STI in biotechnology
- STI in oil and gas industry



Main findings

- Good progress on STI since 2005, areas of strength have emerged - but weaknesses remain
- Huge potential exists, but could be better exploited
- Policy action on STI can help improve Iran's development performance
- This critical to benefit from reintegration into global economy



Major progress since 2005

- High level vision and direction supporting STI
- Stronger focus on innovation since 2010 (3rd wave of STI policy)
- More of a systemic approach to innovation by some policy makers
- New institutions for promoting innovation (VPST, 16 technology councils)
- New mechanisms to support KBFs (IPF, VCFs, STPs, incubators)
- Financing for innovation improving



Major progress since 2005 (2)

- New policies to promote STI (NMPSE, Resilient Economy, Policy for S&T, KBF law, MULC, Technology Annex)
- Emergence of many new KBFs
- Increase in production and exports of KB products
- Significant advances in research, higher education, technology
- Better research performance
- Increase in patents



Major progress since 2005 (3)

- Stronger human capital (STEM assets)
- STI capacity has improved
- More diversified economy, lower dependence on oil and gas



Major challenges remain

- Insufficient policy alignment - STI, trade, FDI, industrial policy, financial, competition
- Dual approach to innovation persists - linear vs systems thinking
- Some overlaps in STI organizations
- Some key economic institutions focus on production, too little on innovation capacity
- Low productivity levels and productivity growth
- Need to further improve business environment



Major challenges remain (2)

- More private sector development and competition
- Modernizing an aging infrastructure (energy, transport)
- Financing for innovation still insufficient
- R&D spending relatively low (especially business R&D)
- Commercialization of research - S&T strength to innovation



Major challenges remain (3)

- Large established industries not investing enough in innovation (O&G, autos, steel)
- Funding of universities and public research organizations not performance related
- Tightened sanctions since 2008
- Limited international collaboration
- High university graduate unemployment
- Weaknesses in management of IPRs
- Relatively weak soft skills - marketing, management



Major challenges remain (4)

- Environmental challenges, climate change impacts (reduce carbon footprint)
- Limitations in ICT infrastructure and services
- Low FDI outside O&G, low FDI contribution to building domestic capabilities



Main recommendations

- Improve coherence among key development policies - trade, FDI, education, financial, competition
- Restructure division of functions and responsibilities for STI governance
- Establish an attainable target for R&D spending, and focus on promoting business R&D
- Make funding of universities, research and technology organizations performance-related



Main recommendations (2)

- Modify the approach to evaluation and policy learning
- Adopt a comprehensive strategy to attract and benefit from FDI, promoting linkages, technology flows and technological learning
- Improve the credibility and usefulness of the IPR system, encompassing the entire IPR lifecycle to maximize its relevance to innovation



Main recommendations (3)

- Promote the goal of a knowledge-based economy across traditional industrial sectors, with continued policy support for start-ups and new growth areas



Oil and Gas

- Promote collaborative learning and knowledge linkages in O&G industry
- Promote supplier development, including via MNE-local firm linkages
- Foster capabilities building in O&G firms
- Develop public procurement instruments and shape financial institutions and tools needed to support demand and supply
- Restructure institutional set-up of O&G sector - improve coordination, modernize approach to innovation



Biotechnology

- Improve financing for biotech
- Enhance collaboration between biotech KBFs and mature firms
- Strengthen international collaboration on biotech and biotech firms' access to international markets
- Improve biotech accreditation system - lab and testing facilities
- Enhance local content policies and public procurement in favour of biotech innovations
- Strengthen balanced applications of biotech in its four main subsectors - health, industry, agriculture, environment



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