OECD country reviews of national innovation system- An introduction

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Outline

• OECD country reviews of NIS:
  – Background of the new innovation reviews
  – Features, objective and focus of the new reviews
  – Scope and Process
  – Impact

• Insights from OECD China innovation review: a special full-fledged county review
  – Background and rationale
  – Objectives and design
  – Implementation
  – Roadmap
  – Experience learned
OECD Country S&T reviews

Historical background of OECD S&T reviews

- Reviews of S&T policy were carried out since early 1960s, until mid-1990s, concentrating in two periods:
  - 1963 - 1974 (19 reviews)
  - 1981 - 1996 (19 reviews)

- 1996-mid-2000: no reviews; a shift of focus on
  - NIS approach as an organising framework for new reviews;
  - thematic reviews to explore specific aspects of S&T policies more in-depth, and for comparisons among smaller groups of countries.
A new wave of country innovation reviews since mid-2000s

- Since 2005, a renewed interest in NIS reviews;
- Completed: Luxembourg, Switzerland, New Zealand, Chile, South Africa, and China;
- Ongoing I: Norway, Korea and Mexico;
- Ongoing II: Hungary, Greece, Turkey;
- Reviews requested for 2008-9: Russia, and a number others under discussion, etc.
Factors behind the renewed interest in innovation policy reviews

- **Knowledge economy**: Innovation a driver for growth, and innovation policy has moved up on the policy agenda, and has become closer to the core of economic policy making;

- **Globalisation**: Many countries perceive a need of making their innovation policy more effective, not least to better respond to the challenges and opportunities of globalisation;

- **NIS framework approach**: Recently there has been renewed interest in *overall* assessments of innovation policy, based on an innovation systems framework

- **Competitiveness concern**: There is a strong interest in the relation between innovation policy and innovation performance and economic performance/competitiveness

- **Broad interest**: The interest for an OECD review is shared by countries of different levels of economic development and innovation performance, both Members and non-Members of the OECD, reflecting an interest in int’l benchmarking and learning.
Features of new NIS reviews

• Carried out under the auspices of the OECD’s Committee for Scientific and Technological Policy (CSTP) – benefits from many thematic work of the Committee and the review, which mutually reinforce each other
• Scope: S&T and innovation
• Voluntary: self-funded
• Timing of the reviews is often chosen according to the client country’s political and strategic policy needs
• An individualized service: Reviews are tuned to specific needs of countries and to address country specific priority issues, etc., through more tailor-made design (scoping and formulation of Terms of Reference)
• Strong orientation towards concrete recommendations across a spectrum of innovation-related policies
• Meanwhile it keeps a common core in terms of approach and cross-cutting issues (such as the impact of globalisation, and systematic efficiency etc.)
• Collective learning process: Coverage of OECD Members and Non-members, contributing to a mixed portfolio of countries, and expertise
Objectives and focus of the new OECD innovation review

- It does not attempt to address all issues which might arise in building a stronger innovation system, but rather concentrates on those concerning the contribution of the public research organisations, including its interaction with business, and public policies.
- It focuses on the governance of public research …
- It builds on recent OECD work, especially on the links between innovation and economic performance, and on best practice policies to foster innovation.
- It formulates a set of policy recommendations, but does not attempt at detailed policy design.
- The deliverable comprises two parts: A short overall assessment with policy recommendations, and a background report.
Mandatory items:

- Innovation and economic performance;
- International benchmarking of innovation performance;
- Framework conditions for innovation;
- Governance of the innovation system;
- Promotion of business R&D and innovation;
- Industry-science relationships,
- Human resources for science and technology (HRST);
- Knowledge infrastructures;
- Internationalisation of R&D;
- Evaluation.
Scope of the reviews: Special emphasis

☑ Special emphasis depending on the country being reviewed, e. g.
  ✔ The role of higher education,
  ✔ Entrepreneurship and SMEs;
  ✔ Sectoral innovation issues and case studies (including services);
  ✔ The regional dimension
  ✔ and specific policy instruments e.g. the role of innovative clusters, etc.
Process

- Joint drafting of Terms of Reference (ToR) signed between the OECD and an agency of the reviewed country (which coordinates with other stakeholders)
- Preparation of Background Report by the reviewed country, based on specifications provided by the OECD, which can be used as a template for self-review.
- Forming of a review team: OECD Secretariat, consultant(s), in the case of complex arrangement (e.g. China) coordinator
- A Fact-finding Mission (normally one week) to interview the major stakeholders in the national innovation system
- The OECD Secretariat prepares a (150-pages) draft final report containing assessments and recommendations which serves as a basis for a peer-review meeting within the OECD
- Comments by reviewed country on the draft report:
- Peer review meeting held in the OECD
- Presentation at a national conference of findings and recommendations of the country review, typically involving high-level decision makers, stakeholders and media in the country being reviewed
- Publication of the Review under the responsibility of the SG of the OECD
An illustration: the case of Luxembourg

- Concern over the risk of erosion of current comparative advantages (in banking and legal services) under knowledge economy, and EU integration and globalisation
- Invested resource in past years to establish a public research infrastructure (government labs and, recently, the University of Luxembourg)
- Need for strategic direction for investing into future comparative advantage (innovation)
- Ready to implement OECD recommendations
IMPACT: Luxembourg

• 9 May 2006: The main findings of the Review were presented to and discussed with key stakeholders at a working meeting, hosted by the Minister of Culture, Higher Education and Research and the Minister of Economic Affairs and Foreign Trade.

• 22 May 2006: the main recommendations of the Review were presented to the Parliamentary Commission for Culture, Higher Education and Research of the Luxembourg Chamber of Deputies (Chambre des Députés).

• 31 May 2006: The Draft Final Report was presented to the public in Luxembourg at a high-level event with the participation of the Minister of Culture, Higher Education and Research, the Minister of Economic Affairs and Foreign Trade, and the State Secretary for Culture, Higher Education and Research.

• June 2006: the Luxembourg Chamber of Deputies had in-depth discussions of the findings of the Review,

• Since then: Major recommendations (improving stirring/funding mechanism for PRIs, moving to performance contracts, creation of high-level advisory board for S&T policy, etc.) of the Review are already put in the process of implementation
The outlook of the review

• Continuing strong demand for Innovation Policy Reviews

• Growing portfolio of countries examined;

• Different clusters of countries, different in terms of needs and policy agendas

• Identification of “good practices”, feedback to thematically oriented OECD work, and collective policy learning
OECD China innovation review: a special full-fledged review
Background and Rationale

• China is Observer in CSTP since 2001:
  – Readiness for the review
  – a search for a sustainable growth model

• China is an increasingly important player in global R&D

• Chinese government embarked in an ambitious strategy for building an innovative nation (2006-2020)

• China wishes to learn from OECD experience in promoting science and innovation

• OECD countries need to better understand Chinese innovation system and policy and its potential
Objectives of the Review

• An in-depth and comprehensive review of the Chinese National Innovation System
• Recommend policies and fine-tuning of existing policies for improving the Chinese NIS performance and for facilitating a smooth integration of the China into the global innovation system
• Facilitate China’s learning from the OECD countries' experiences
• Improve the OECD expertise on China’s NIS
• Strengthen policy dialogue between China and OECD countries, notably on issues of mutual interest and impact (e.g. international mobility of Chinese researchers and the globalisation of R&D, etc.)
• In sum: *Mutual interest, benefit and two-way learning*
The focus and design of the Review

• Four interrelated yet standalone modules:
  – An international comparison of innovation indicators in China and selected OECD countries
  – Policy and institutional analysis of Chinese NIS.
    • Case studies of regional innovation systems
  – Globalisation of R&D and implications for Chinese NIS.
  – Supply, demand and mobility of Chinese human resources for science and technology.
A joint project between OECD and Ministry of Science and Technology, China

2 years for implementation

Experts from OECD member countries (Australia, Austria, Finland, France, Germany, Japan, Korea, Norway, Sweden, United States, etc), participate

Chinese MOST funded local costs and provided experts to work with the OECD review team
PROJECT ROADMAP

CONTENT

Analytical and policy assessment work by e-working teams

Module 1  Module 2  Module 3  Module 4

Integration, synthesis and recommendations

EVENTS

Scoping Mission  Fact-finding mission  Workshop on indicators  Special session in CSTP

Business symposium  Beijing Conference  Report to CSTP

OUTPUTS

Scoping Reports: roadmaps  Background report on indicators  Issues Paper and draft components of final report  Synthesis report  Final report

2006 Q2  2006 Q3  2006 Q4  2007 Q1  2007 Q2  2007 Q3  2007 Q4
Some experience learned

• The quality of the background paper is important to the quality of the review.
• Participative approach throughout the process is important: officials responsible for S&T policy should find time to participate in the review meetings and interviews;
• Scoping is important to help identify priority issues: a review cannot address all problems.
• Benchmarking is the means, and problem solving is the end;
• Policy recommendations are what the review can add most value;
• Due attention given to indicators and statistics - infrastructure for informed decision making, this is particularly, but not exclusively, important to developing countries.
• Field mission should reach all stakeholders at appropriate levels (policy making and implementation)
• Capacity building through participation at appropriate levels is key to maximize the learning effect: policy makers, government, researchers;
• Capacity building seminars can be a valuable side-product.
• Dissemination should be planned carefully from the outset of the project (translation of the report into national language).
• Communication of review results should aim at the highest possible level of decision-making, media and general public as well.
Thank you for your attention!

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Download the review reports at:
www.oecd.org/sti/innovation/reviews