Regional meeting

“Making innovation work for the SDGs”

and

Ninth session of the SPECA Working Group on Knowledge-based Development

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JSC “Science Fund”

Republic of Kazakhstan

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Chapter 2. Governance of the National Innovation System: Framework, conditions, innovation policies and instruments

The Review suggests that important elements of NIS should be developed:

- Market for innovative products & services (national & international);
- Business sector (national & international);
- Knowledge generation (academic and R&D);
- Innovation intermediaries (innovation support);
- Business environment and framework conditions (incentives & motivation);
- Network of linkages (collaboration between stakeholders).
Main comments and recommendations

The business sector and RTDI

- Lack of demand for RTDI of business sector as major limiting factor for modernisation and fostering industrial development

- Participation of business sector in policy development process
- Involvement of SMEs in R&D and commercialization programs
- Favourable environment for technology commercialization and start-ups development (with special regard to innovative SMEs)
- Technopreneurship development programs
- Legal framework stimulating R&D activities (e.g. tax incentives in favor of R&D activities)
Main comments and recommendations

Knowledge generation

- Development of human resources as essential input to innovation
  - State support for education abroad (S&T specialization)
  - Include new specializations (needed for STI development in the future) in curriculums of universities
  - Attracting leading international researchers and specialists in S&T fields
  - Promoting entrepreneurship and technological or innovation-driven research (emphasis on new funding programs to increase the number of innovating SMEs and to encourage the creation of new, technology-based firms and early stage funding, e.g. SME RDI Grant Program and Techno-Entrepreneurship initiatives)
  - Development of technopreneurship skills
Main comments and recommendations

Science-business cooperation

- Development of research universities (topics of research directed on the needs of the real sector of economy)
- Identification of technological tasks of enterprises (to link with scientific and academic institutions)
- Matching funds to support collaborative R&D (special grant programs)
- Incentives for collaboration between industry and research institutes and universities (incentives for researchers, teachers and their institutions to collaborate with industry)
Main comments and recommendations

Enhancing STI governance and management

✓ Establish a clear division of roles and responsibilities and hierarchy among STI institutions
✓ Clarify the respective roles of various R&D bodies and development institutions
✓ Coordination and cooperation between ministries and agencies involved in STI management
✓ Competitive funding - project evaluation, selection, monitoring and review
Main comments and recommendations

Network of linkages

✓ Expediting knowledge circulation for R&D and cooperation networks
✓ New programs to expedite cooperation networks and knowledge circulation for STI (e.g. Technology Development Zones, Techno-Parks)
✓ Funding programs for initiatives to establish scientific and technological cooperation networks and platforms (technology platforms, brokerage events, grant programs).
R&D&I System Governance Structure – MACRO Level

President
- Office

Supreme Scientific and Technical Commission

P-M
- Office

National Scientific Councils

MNE – Min. of National Economy
MIF – Min. of Finance
MES – Min. of Education and Science
MINT – Min. of Investments and Development
NATD – National Agency for Technological Development

Experience of Kazakhstan
National R&D management system

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| National Center of Science and Technology Evaluation |
Experience of Kazakhstan

Process of National R&D priorities identification

- Strategic documents. Proposals from ministries and national companies
- Proposals from Academy of Science, Academic institutions and unions
- System analysis and Foresight

**Business, Government, Academy**

- Consensus

**Recommendations of National Scientific Councils**

**Negotiation**

**Science committee (MES)**

**Supreme Scientific and Technical Commission**

**Strategic tasks**

**Programs**

1.1 1.2 1.3 2.1 2.2 2.3 2.4 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 3.10 4.1 4.2 4.3 4.4 5.1 5.2 5.3 5.4 5.5

**Task 1** Task 2 Task 3 Task 4 Task 5

**Areas**

A B C

Programs are formed under the competitive procedures *
Experience of Kazakhstan

The structure of research and R&D commercialization funding in the Republic of Kazakhstan

Pre - R&D → R&D → Pre - COM → Commercialization

Planning
- Identification of priorities
- Identification of technological tasks

Idea
- Basic research
- Applied research
- Prototype development
- Pilot/Test stage

JSC «Science Fund»

Science Committee

Higher Science and Technology Commission
Application Form to be filled in by R&D Centers / Universities to be forwarded to a corresponding enterprise. If the enterprise is interested, the person filling in the application form shall be informed. Later, R&D Center / University and the enterprise can submit a joint application to obtain a grand to commercialize R&D Results (if contest documentations complies with requirements to the type of grant).
implemented 29 joint projects (in biotechnology, ICT, energy efficiency).
Thank you!

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