

The NIS of Kyrgyzstan: Governance, framework conditions, innovation policies and instruments

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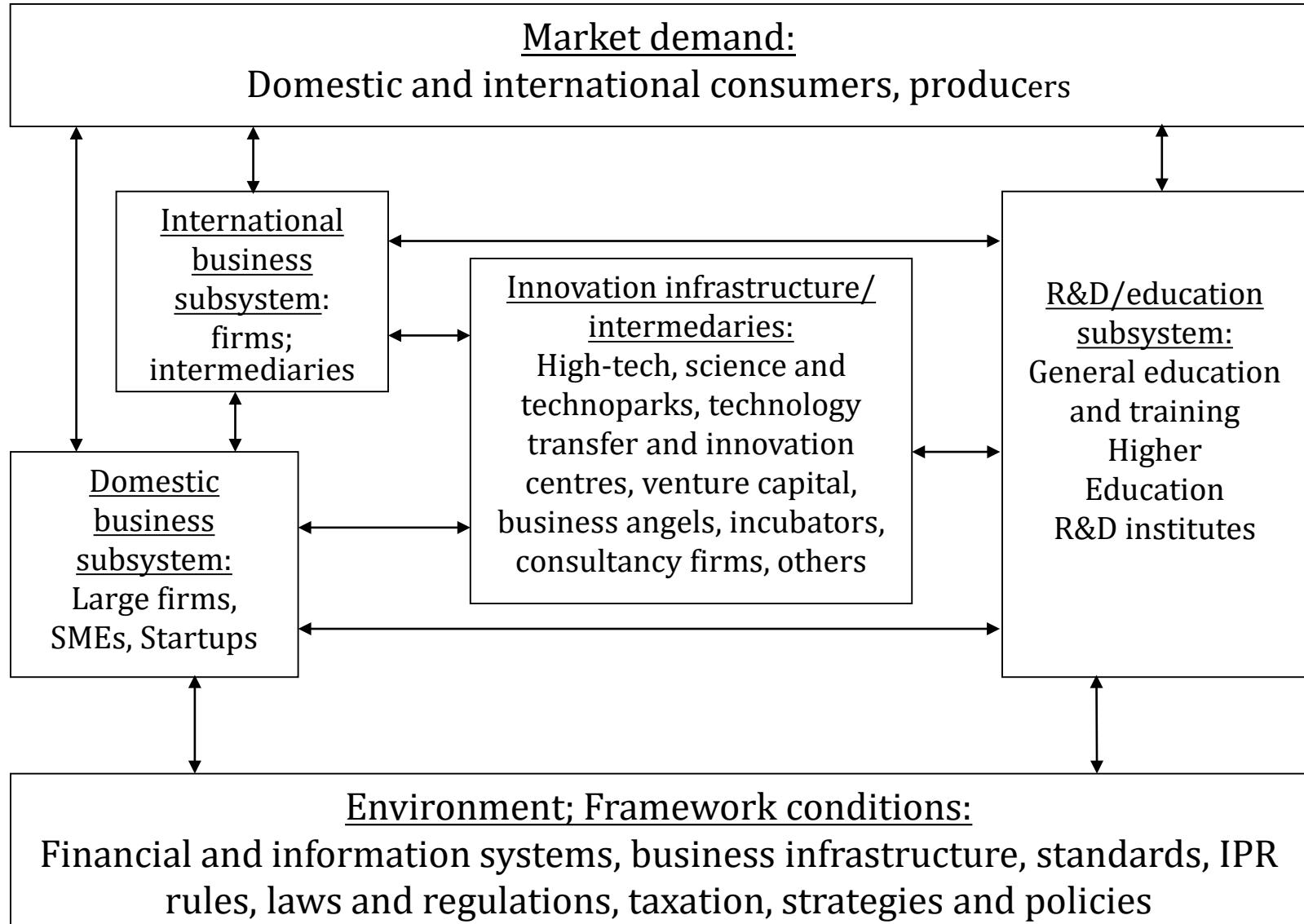
Regional meeting

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Methodological approach: National Innovation Systems

The NIS of a small open economy



The National Innovation System (NIS)

- **NIS:** the network of institutions in the public and private sectors whose activities and interactions initiate and diffuse new technologies and products
- **NIS agents:** knowledge institutions (universities, research institutes, technology-providing firms), firms and government bodies
- The **interactions and linkages** between the elements of the NIS are also part of the system
- The **flows of ideas and knowledge**, as well as **the ability to learn** are also part of the NIS

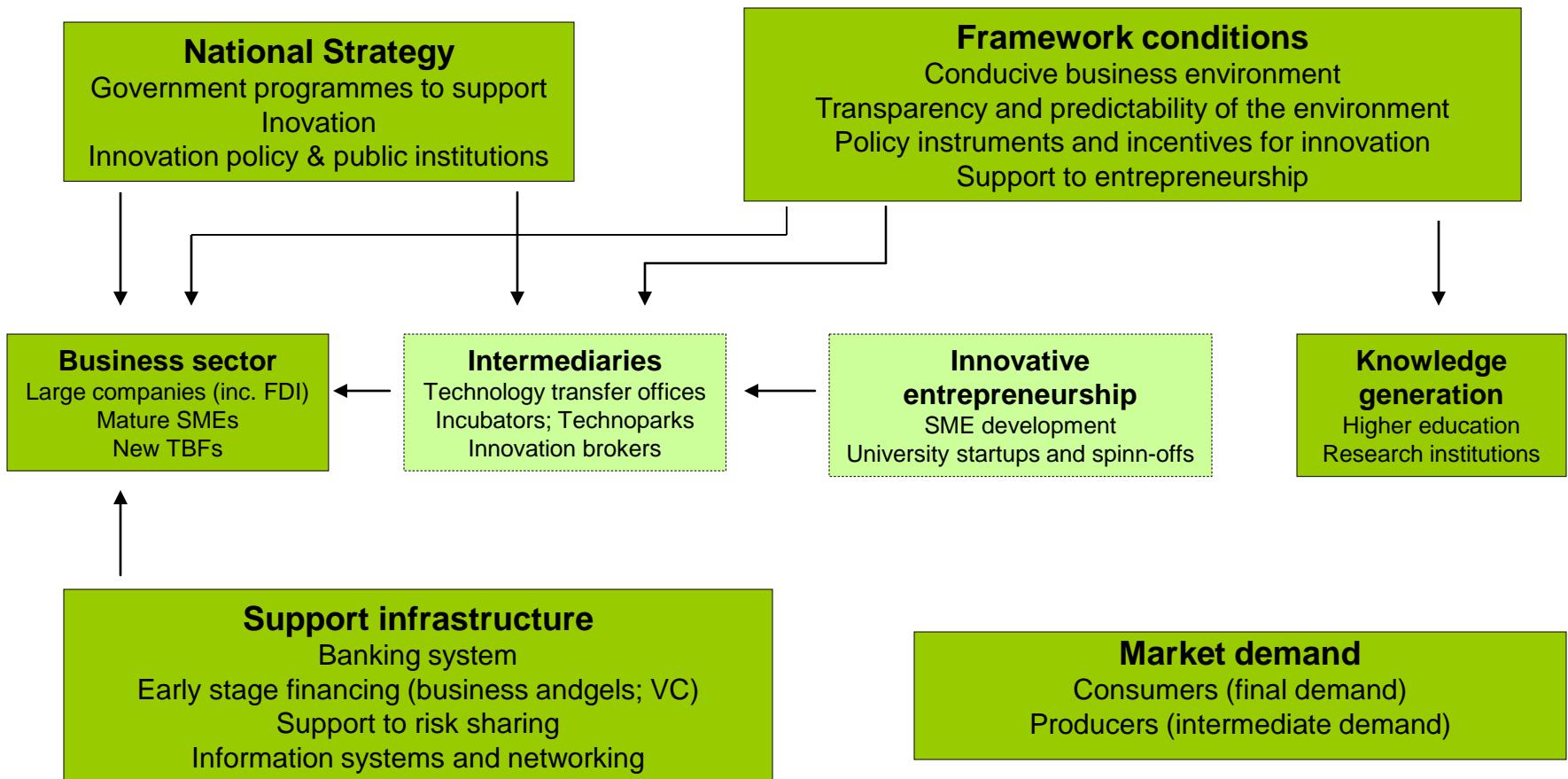
Innovation Governance

- Refers to the efforts by various innovation stakeholders aiming to manage and guide the innovation process
- Includes the **decision-making rules** and **interactions** between innovation stakeholders taking such decisions
- Includes both **public sector** (competent government bodies) and **private sector actors** (businesses, financial institutions, innovation intermediaries, etc.)
- Its **formal component** covers the existing legislation, regulations and other policy decisions referring to the innovation process
- Its **informal or behavioural component** is related to the incentives and motivation of NIS stakeholders/actors

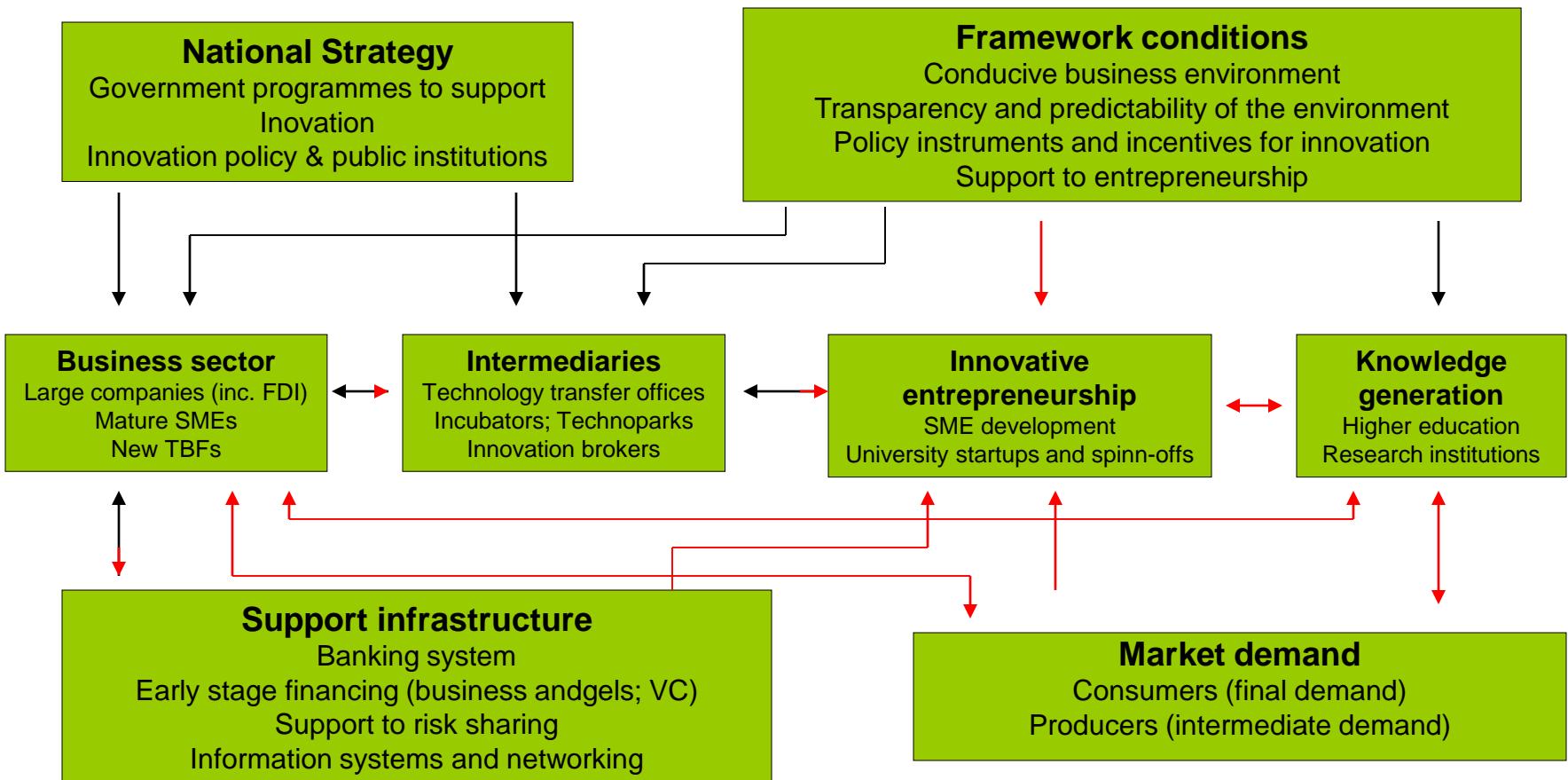
The NIS of Kyrgyzstan is underdeveloped

- Many important NIS building blocks of mature market economies are either still weak or non-existent
- Weak/non-existing innovation intermediaries
- Weak connectivity; weak or non-existent linkages among innovation stakeholders
- The most obvious examples are the weak industry-science linkages; the weak support for the commercialization of the results of research
- Absence of, or insufficient sources of innovation finance, especially early stage finance
- Weak support to innovative entrepreneurship (both in terms of policy instruments and support institutions)

The National Innovation System today ...



...and in the future



**Governance, framework
conditions, innovation
policies and instruments**

in Kyrgyzstan:

Some conclusions

Some conclusions from the NIS assessment

- A notable progress in the institutional build-up and in the establishment of a legislative and regulatory framework of innovative development
- Kyrgyzstan has strong democratic traditions which contribute to the transparency of policy making and implementation.
- The country made considerable efforts to establish a functioning public administration and increase the efficiency of its operations
- S&T and innovation policy are assigned high priority in the policy agenda
- Kyrgyzstan has a commendable tradition in establishing efficient microfinance institutions

Progress in advancing innovation policy

Policy document	Implementing agency
Law of the Kyrgyz Republic on Science and State Science and Technology Policy	The Government of Kyrgyzstan
Law of the Kyrgyz Republic on Innovative Activity	The Government of Kyrgyzstan
Law of the Kyrgyz Republic on the Protection of Entrepreneurs'	The Government of Kyrgyzstan
Concept for the Development of Support of Small and Medium Entrepreneurship in 2001-2005	The Government of Kyrgyzstan
Government Decree "On the financing of scientific, R&D and innovative activities from the Republican budget"	Ministry of Finance
Presidential Decree "On measures for further development of industry and innovative activity in the Kyrgyz Republic"	The Government of Kyrgyzstan
Government Decree "On the Concept for the Development of Education in the Kyrgyz Republic"	Ministry of Education and Science
Law of the Kyrgyz Republic on the National Academy of Sciences of the Kyrgyz Republic	National Academy of Sciences
Law of the Kyrgyz Republic on Education	Ministry of Education and Science
Government Decree "On the State Innovation Fund of the Kyrgyz Republic"	KyrgyzPatent
Law of the Kyrgyz Republic on State Support to Small Entrepreneurship	The Government of Kyrgyzstan
Law of the Kyrgyz Republic on the High-Technology Park of the Kyrgyz Republic	The Government of Kyrgyzstan
State Programme for the Development of Intellectual Property in the Kyrgyz Republic in 2012-2016	KyrgyzPatent
Government Decree "On the State Service of Intellectual Property and Innovation under the Government of the Kyrgyz Republic (KyrgyzPatent)"	KyrgyzPatent
Government Decree "On the strategic directions for the development of the education system in the Kyrgyz Republic"	Ministry of Education and Science
Government Decree "On measures for the development of innovative activity in the Kyrgyz Republic".	The Government of Kyrgyzstan
State Programme for the Development of Intellectual Property and Innovation in the Kyrgyz Republic in 2012-2016	KyrgyzPatent
Concept for the Reform of the Science System in the Kyrgyz Republic	Ministry of Education and Science
Concept for the Scientific and Innovative Development of the Kyrgyz Republic until 2022	KyrgyzPatent

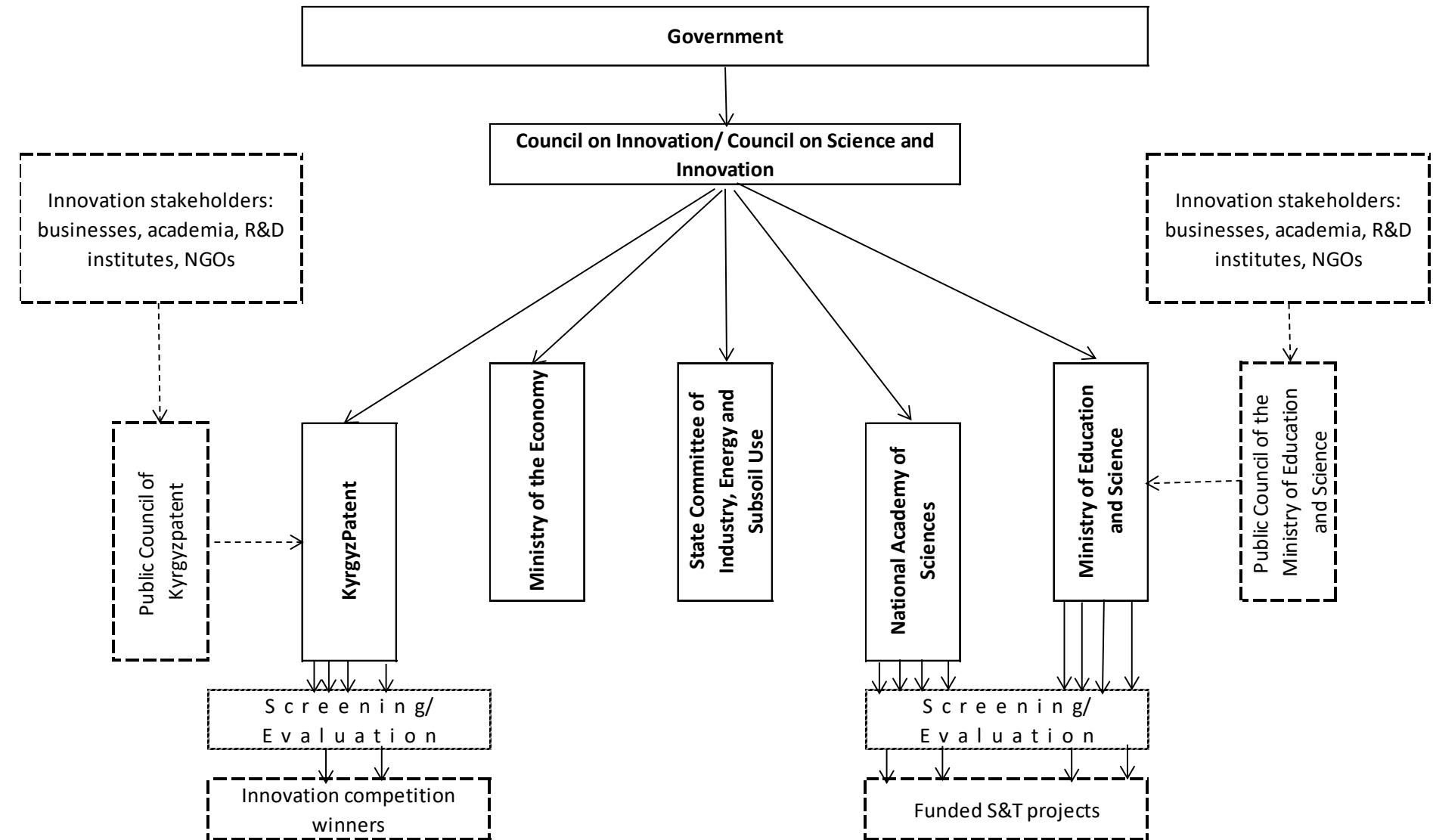
Some conclusions ... (contd.)

- **NIS is still at an early stage of its development: there is significant room for further reform efforts towards the establishment of a well-functioning NIS**
- **One of the acute problems is the availability of early stage financing: such sources are practically non-existent or only in an experimental stage of introduction**
- **The policy instruments to support of technological innovation are limited in scale and scope**
- **The business sector in Kyrgyzstan is practically outside the scope of S&T and innovation policy**
- **One of the NIS weak elements is the underdeveloped infrastructure of support institutions and intermediaries**

Some conclusions ... (contd.)

- Better governance of the NIS could also contribute to the strengthening of innovative activity
- At present the governance system lacks leadership and a central engine of policy development and implementation
- Innovation governance bodies have limited autonomy in policy implementation
- There is a mismatch between prescribed policy responsibilities and policy instruments at the disposal of public bodies, including KyrgyzPatent
- A contradiction: higher levels bodies are not formally mandated with leadership and coordination functions while the body entrusted with such functions is ill equipped to perform them.

The structure of innovation governance



Policy recommendations

Recommendation 2.1

- **Develop an Action Plan to strengthen the innovation infrastructure and innovation support institutions**
 - Based on a needs assessment, develop a programme for setting up needed innovation support institutions; seek to engage donor support;
 - Develop programmes of technical assistance to innovative entrepreneurs, SMEs and grassroots innovative initiatives to be carried out by public innovation intermediaries and support institutions;
 - Establish a collective technology transfer centre as a public-private partnership with the participation of the industry to facilitate the implementation of industrial projects of technological upgrading;
 - Set up a programme to support private innovative entrepreneurship at universities and facilitate establishing university startups and spinoffs;
 - Institute competitive grant financing to innovative startups and ventures and public support to business angels and/or venture capital firms.

Recommendation 2.2

- **Introduce measures to improve connectivity and linkages in the NIS through appropriate policy instruments**
 - Introduce grant project funding to support innovation and technology upgrading projects covering the full innovation cycle;
 - Innovation project funding should be conditional on the establishment, of collaborative linkages between R&D and industry;
 - Discuss within the EEU similar joint instruments aimed at supporting cross-border innovation projects engaging different countries;
 - Complement these measures with non-financial coordination instruments to support connectivity within the NIS;
 - Ensure a match of the above policy instruments with national strategic priorities and policy objectives through their selective orientation.

Recommendation 2.3

- **Develop new policy instruments targeting industrial modernisation through technology transfer**
 - Introduce incentives for the business sector (such as tax and tariff relief, access to subsidized credit, government guarantees, etc.) targeting the technological upgrade of production facilities and the establishment of virtuous supply-demand-chains;
 - Introduce mechanisms facilitating cost and risk sharing among business partners as well as public-private partnerships in implementing modernisation projects;
 - Discuss with the Russian-Kyrgyz Development Fund the development of a special programme for industrial modernisation with additional government incentives for projects that target national priority areas.

Recommendation 2.4

- **Measures for improving the governance of the NIS**
 - Define clearly the functional responsibilities of all public bodies tasked with innovation policy design and implementation;
 - Empower the Council on Science and Innovation to act as the highest body tasked with innovation management and policy coordination, with regular sessions by a plan approved by the government;
 - All line bodies tasked with innovation management would report to the Council and the Council would coordinate policy implementation;
 - Consider raising the administrative status of KyrgyzPatent to a State Agency with autonomous decision-making power to manage innovation policy instruments; other line bodies should also be equipped with policy instruments that match their responsibilities;
 - All public NIS bodies need to be staffed and resourced adequately according to their functional responsibilities; consider a special capacity building programme for this.

Recommendation 2.5

- **Apply a gradualist approach in implementing the reform of the science system**
 - Consult jointly MES and NAS on the scale and scope of the reforms, their sequencing and speed and find consensual solutions;
 - Stage the reforms in steps, starting with an experimental phase applied to selected parts of the science system; invite volunteers to this experimental stage by offering them incentives to be part of it;
 - Review the outcomes of implementing the experimental phase and, based on its lessons, possibly amend the plans for reform;
 - Continue with the next phases following a similar gradualist manner;
 - The reform process may require parallel science management models whereby the old management model will be gradually phased out while the new one will also gradually be stepping in.

Recommendation 2.6

- **Establishing an economywide microfinance-based entrepreneurship support scheme**
 - Liaise with international donors to discuss the concept of the scheme and invite them to contribute donor support for its operations;
 - Consider special incentives for attracting remittances (e.g. privileges for applicants who attract matching funding from remittances);
 - Entrepreneurship in agriculture and food processing can be a specific target of this support scheme;
 - Envisage options for entrepreneurial support to young people, including support to University start-ups and/or spin-offs;
 - Target a economywide coverage of the scheme, with local outposts catering to local needs; facilitate local entrepreneurs in identifying their local development niches.

THANK YOU!

Thank you!

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