



*INNOVATION PERFORMANCE REVIEW OF  
TAJIKISTAN*

**Selected Conclusions and  
Recommendations from Chapter 2:  
National Innovation System and  
Innovation Governance**

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**“Practical steps towards a knowledge-based economy”**

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# Structure of the presentation

- **Innovation in the context of Tajikistan:  
Innovation for Development**
- **The national innovation system of  
Tajikistan and innovation governance**
- **Policy recommendations**



**Innovation in the context of  
Tajikistan:  
Innovation for Development**

# What is Innovation?

- **Innovation is a broad concept and a complex process**
  - Product innovation; process innovation; marketing innovation and organisational innovation
- **But it is always associated with the successful commercial application of knowledge:**
  - Bringing ideas to the market in the form of new products and services
  - New business models that enhance the value of existing products or services

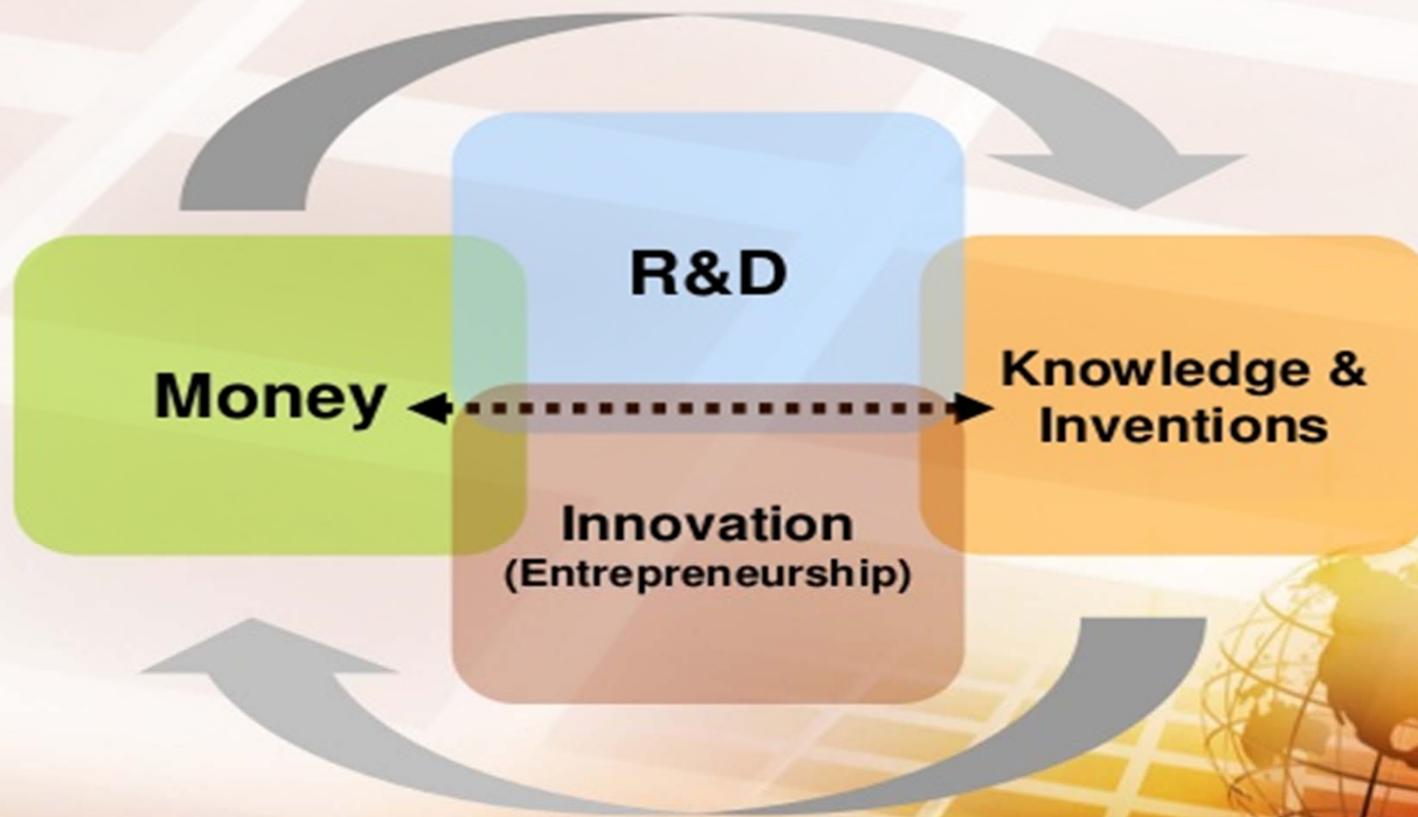
# Innovation is about making money

**“Whereas R&D focuses on transforming money into knowledge  
Innovation is about transforming knowledge into money”**

*Esko Aho, Former Prime Minister of Finland*

# The innovation cycle

STI: Transforming Money into Knowledge and Vice Versa



# Some specificities of Tajikistan's economy

- Tajikistan is a “low-income economy” and a land-locked country, remote from most major markets, with difficult transit routes through its neighbouring countries
- The Tajik economy has a narrow specialization, with only a handful of products that shape the structure of the economy and the composition of exports;
- 3/4 of the population lives in rural areas and 2/3 of the employed are occupied in agriculture; manufacturing accounts for less than 3% of total employment;
- Positive age structure: people <25 years account for 56% of the total population and those <15 years for 35%
- Remittances: important source of income to the local population and balance-of-payments support.

# Innovation for development

- Targets developing specific innovation capabilities;
  - Prioritize the promotion of technology diffusion, adoption and adaptation;
  - Can be pursued with many policy instruments: metrology, standards and quality control, extension services, information and training programs, demonstration and pilot projects;
  - Tailored to the specificities of the business sector;
  - Builds on the existing specialization of the economy;
  - Policy support should be localised in order to be effective
- Successful innovation for development policies tend to be bottom up and not top down



**The national innovation system  
of Tajikistan  
and innovation governance**

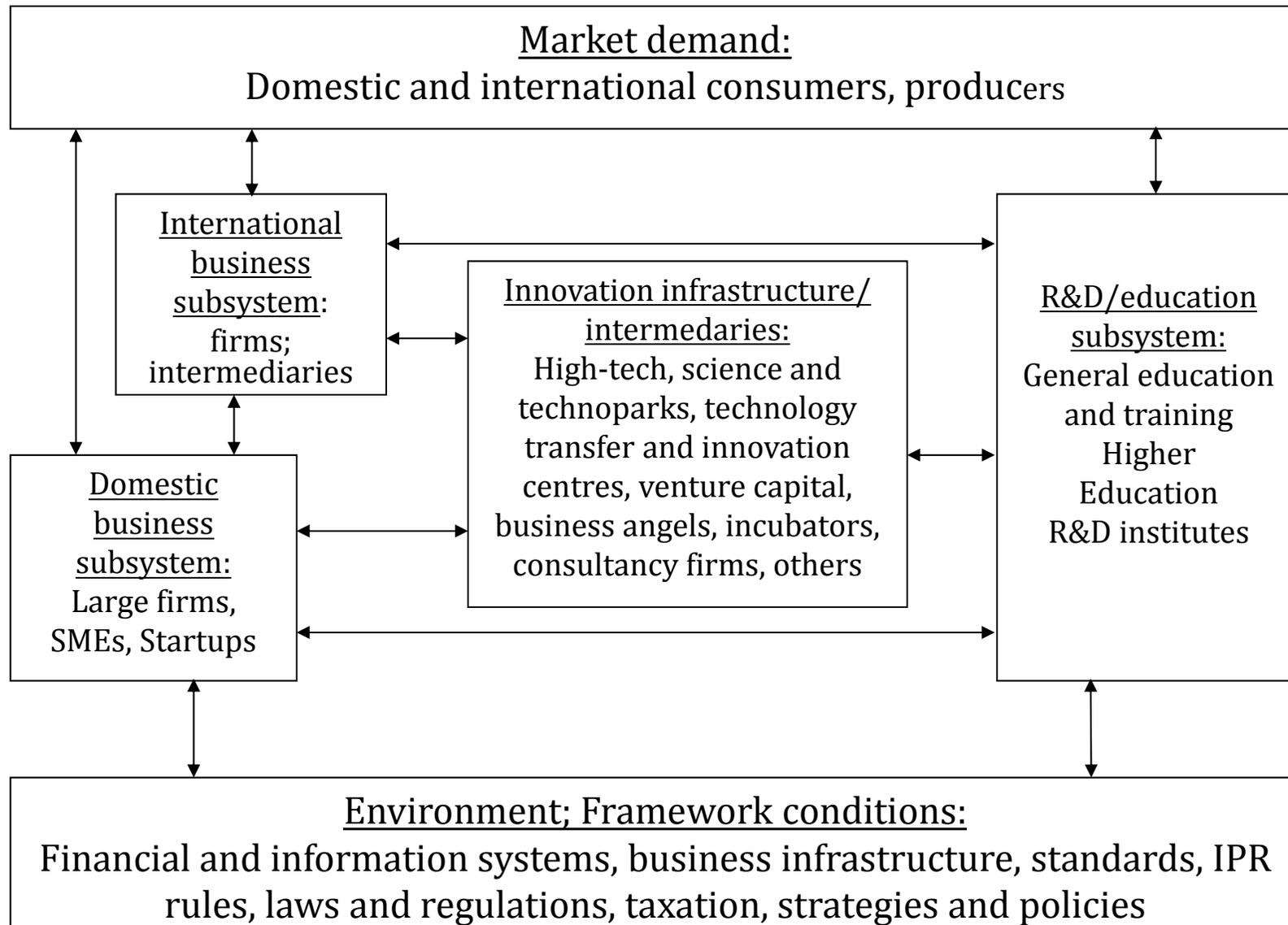
# Innovation in the modern economy

- Innovation requires a combination of different types of knowledge: pre-existing in companies; resulting from new R&D; generated through networking; supplied by markets or users; borrowed from competitors
- Involves the interactions of many “actors” (stakeholders): academic and R&D institutions, firms, public bodies, financiers, users, etc.
- Innovation is a process with uncertain outcomes: therefore there is a need to commit resources to reduce uncertainty

# 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

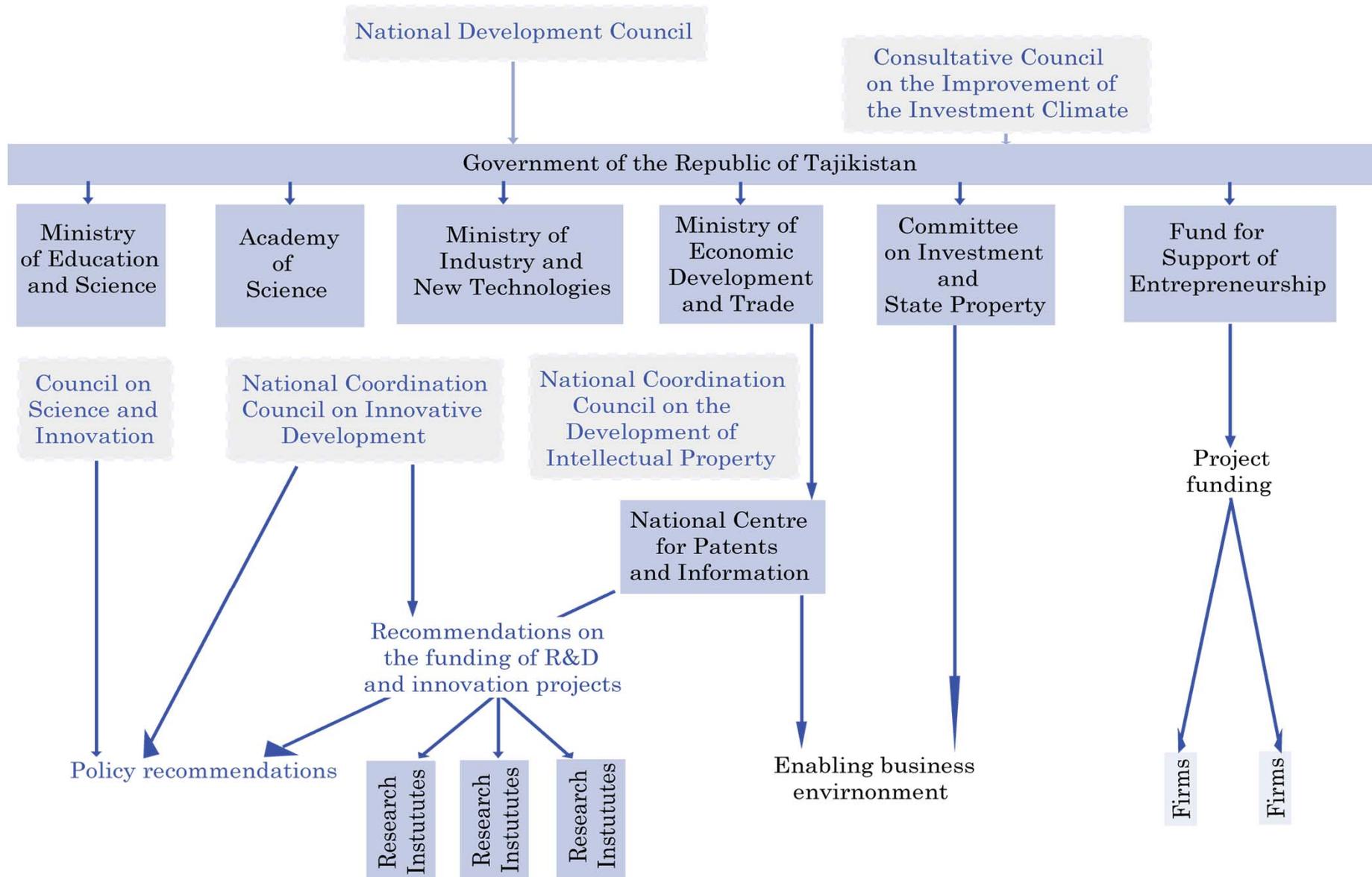
# The NIS of a small open economy



# Key programmatic and legislative measures

Laws, programmes, resolutions	Implementing agency
Law on the Academy of Sciences of the Republic of Tajikistan (2002)	Academy of Sciences of the Republic of Tajikistan
Law on State Protection and Support to Entrepreneurship in the Republic of Tajikistan (2002)	
National Development Strategy of the Republic of Tajikistan for the Period till 2015 (2007)	
Law on Science and State Science and Technology Policy (1998, amended 2004, 2007, 2008, 2013)	
Strategy of the Republic of Tajikistan in Science and Technology for the Years 2011-2015 (2010)	Academy of Sciences of the Republic of Tajikistan
Programme for the Innovative Development of the Republic of Tajikistan for the Period for the Period 2011-2020 (2011)	Ministry of Economic Development and Trade (METD) (programme management)
Law on Innovation Activity (2012)	METD, Ministry of Industry and New Technologies
Program for Human Capacity Development and Intellectual Property Rights for the Period until 2020 (2012)	National Center for Patents and Information (NCPI) at MEDT
(New) Law on the State Protection and Support of Entrepreneurship (2014)	Council on the Development of Entrepreneurship and Improvement of the Investment Climate
National Strategy for the Development of Intellectual Property of the Republic of Tajikistan for 2014 – 2020 (2014) <sup>a)</sup>	National Council for the Coordination and Development of Intellectual Property (coordination)
Government Decree on the State Institution "Entrepreneurship Support Fund" (2014)	Government of the Republic of Tajikistan (2015)
(Draft) National Development Strategy 2016-2030 (2015)	
(Draft) Strategy for the Innovative Development of the Republic of Tajikistan for the Period till 2020 (2015)	Ministry of Economic Development and Trade
(Draft) Law on Science and Technology (2015)	

# Innovation Governance System of Tajikistan



# Challenges and opportunities

- **Need/opportunity to pursue selective sectoral policies**
  - Establishment of sustainable virtuous cycles through the introduction of products new to the local market or substituting imports, and closed within the domestic market
- **Build on the age structure of the population**
  - Policies targeting innovative entrepreneurship among young people
- **Focus on local initiatives (build on successful examples)**
  - Establish a conducive environment for communities to identify and prioritize their own needs and come up with their initiatives engaging key local stakeholders

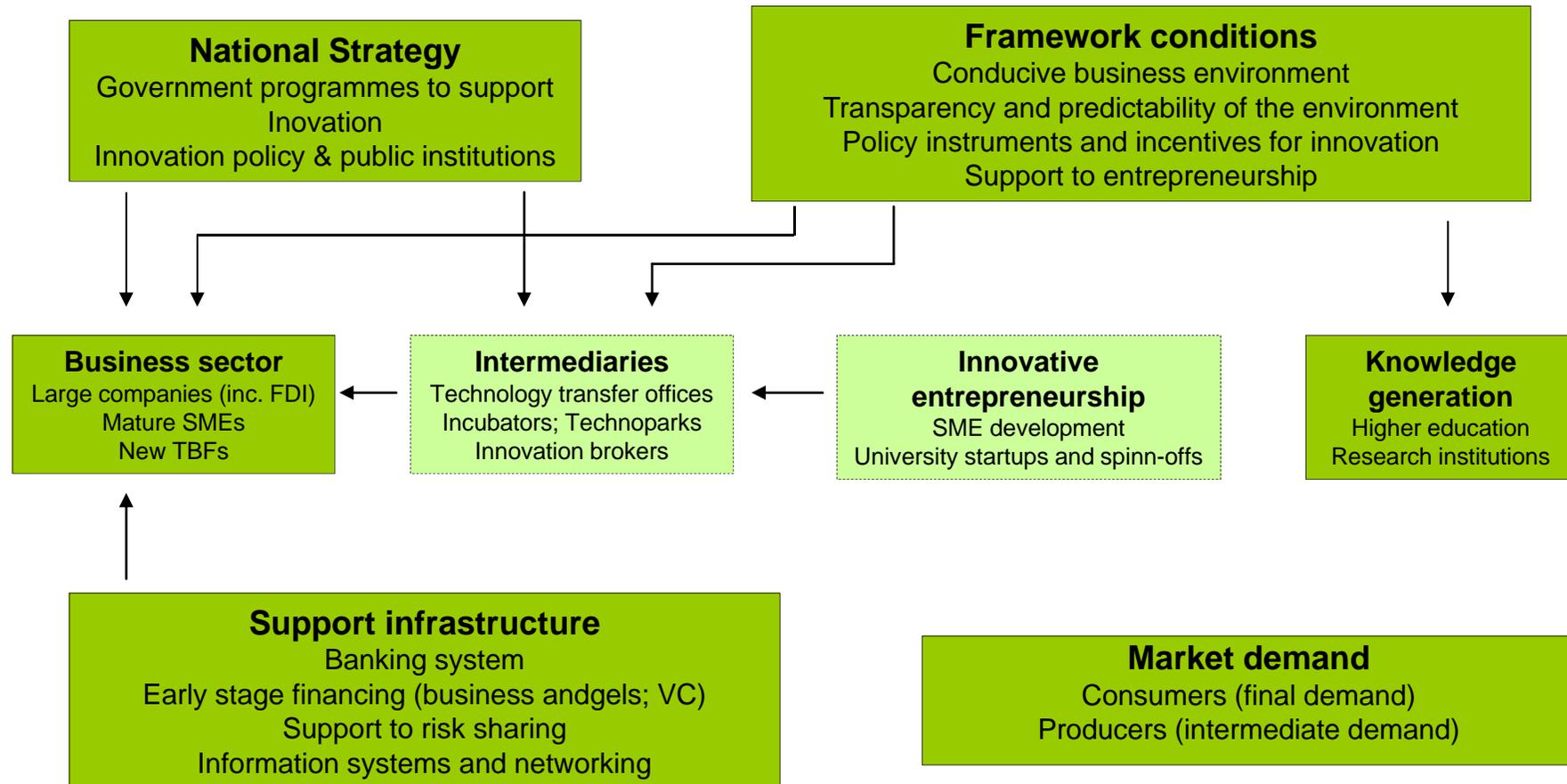
# Challenges and opportunities (contd.)

- **Migration is also an opportunity**
  - Target the entrepreneurial skills of migrants and offer incentives to mobilise remittances
- **Progress in the institutional build-up of the NIS**
  - Regulation is in place; need to make it well functioning
  - Build missing innovation support institutions
- **Focus on improving connectivity and linkages in NIS**
  - Introduce policy instruments promoting collaboration among stakeholders from science and industry, including cross-border

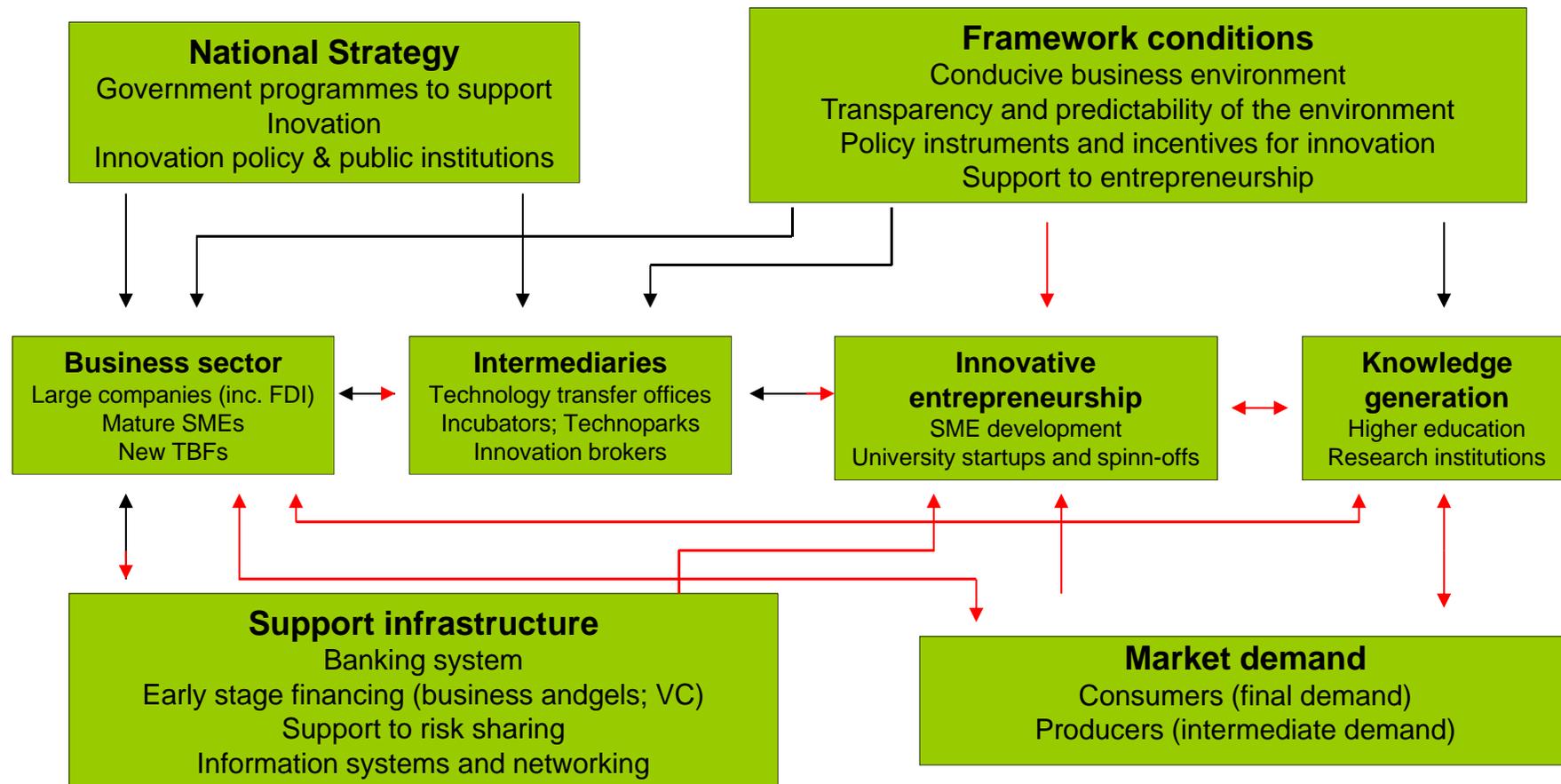
# Challenges and opportunities (contd.)

- **Need for a conceptual change in R&D/innovation funding**
  - Switch from “funding institutions” to “funding projects”
- **Big lacuna in early stage financing**
  - Establish public support institutions
- **Tajikistan’s good practice in micro-credit**
  - Draw on this to establish a mass-scale entrepreneurship micro-support scheme
  - Mobilise international donors for this venture

# The National Innovation System (NIS): today ...



# ...and in the future



# Policy recommendations

## Recommendation 2.1

- **Define the strategic policy orientation of Tajikistan at the level of individual sectors/industries as the basis for further industrial and innovation policy measures.**
  - Undertake sectoral level assessment of the tradable sectors with a view to defining the orientation of industrial policy: export orientation, import substitution, autonomous deepening of the local market;
  - Define sectoral priorities: sectors where pro-active policy measure could bring the most significant and immediate positive effects;
  - Complement the National Development Strategy of the country with the sectoral priorities as defined above;
  - The Consultative Council on the Improvement of the Investment Climate and the State Committee on Investment and State Property Management can contribute to the coordination of the national reform efforts with donor aid and declared investor intentions

## Recommendation 2.2

- **Synchronise policy efforts targeting the modernisation of the economy, economic diversification and innovative development under the integrated notion of “innovation for development”:**

- Undertake a awareness-raising campaign on the broad understanding of innovation as goods and services that are new to the local market;
- Identify intersections in existing government programs and take as a starting point in the design of new programs in the above areas;
- Harmonise policy objectives and instruments across such programmes with a view to achieving synergies and positive spillover effects;

All of the above would be equivalent to the broadening of the front of innovation-related policy efforts with marginal additional effort

## Recommendation 2.3

- **Consider measures for better sharing of responsibilities within the NIS and of streamlining the innovation governance structures:**
  - Increase the autonomy to public bodies in implementing already approved government policies and programmes; delegate bodies with adequate power and authority to implement different components of the national innovation-for-development strategy and programmes;
  - Establish autonomous research and innovation fund(s) to manage the public funds allocated for these purposes, with full responsibilities for final funding decisions and monitoring project implementation;
  - As a consequence, consider reorganising the funding of R&D institutions with reduced amounts of basic funding motivating them to participate in competitive open calls for more funding.

## Recommendation 2.4

- **Set up a program to complete the institutional buildup of the National Innovation System, specifically targeting the innovation infrastructure and support institutions:**
  - A awareness-raising campaign for would-be innovative entrepreneurs; needs assessment: which missing intermediaries are potentially in highest demand?
  - Special emphasis on non-debt early stage financing (not-existent at present). Establish public support institutions emulating private business angels and/or venture capital as a temporary step;
  - Support to private innovative entrepreneurship at universities; this part of the innovation infrastructure is missing at present;
  - Seek to engage donor support for the setting up of some innovation intermediaries and support institutions.

## Recommendation 2.5

- **Take up targeted measures to improve connectivity and linkages in the NIS through appropriate innovation-for-development policy instruments:**

- Introduce grant project funding (through competitive open calls) as the main policy instrument to support innovation-for-development projects and covering the complete innovation cycle;
- To improve connectivity and linkages, such funding could be made conditional on the establishment of collaborative linkages among innovation stakeholders, in particular between R&D and industry;
- Complement these measures with non-financial coordination instruments to support connectivity and linkages (facilitating networking and information sharing among potential stakeholders);

These instruments can be used to pursuing differentiated industrial policy objectives in different sectors (export orientation, import substitution, autonomous deepening the local market).

## Recommendation 2.6

- **Introduce a mass-scale, micro-credit-based entrepreneurship support scheme to drive development based on innovation and entrepreneurship:**
  - Seek support from international donor organisations;
  - Consider special incentives for attracting remittances to the scheme;
  - Draw on the positive lessons from the operation of the Fund for Support to Entrepreneurship but apply this scheme horizontally, to all economic sectors and activities;
  - Implementation sequencing could follow sectoral priorities;
  - Entrepreneurship in agriculture can be a specific target of the scheme
  - Envisage options for entrepreneurial support to young people, including support University start-ups and/or spin-offs;
  - Target a economywide coverage of the scheme, with local outposts catering to local needs.

**THANK YOU!**

**Thank you!**

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