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Discussion of Chapters 2 & 3 of the innovation performance review of Tajikistan
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A quick summary of my comments

- The report has (almost) all the right starting points and concepts, but it could go further in applying them, so that it can reach stronger conclusions
- The right starting points:
  - Innovation systems as the overarching concept
  - The notion of innovation as more than just state-of-the art technology

Innovation systems – main ideas

- Innovation is a process that does not take place in isolation, but rather by formalized and non-formalized cooperation between actors

- Which actors are available, their capabilities and the institutions that govern their (inter)actions determine the outcome of the process (quality and quantity of innovation)

- The reason why a government may intervene is not market failure, but system failure

Innovation systems – what could be expanded

- Who are the actors? A description of the main firms and the sectors they operate in, universities, the Academy, government agencies (Chapter 2?)

- How does the government see its role in the system? Why does it want to intervene, and what is the guiding principle for intervention? Policy starts by analysing the rationale for government action (Chapter 3?)

  – Does the government want to play a developmental state role, or does it take market failure as the guiding principle?

Innovation and catching up

- The process of development is about adopting foreign knowledge, and adapting it to local context
- In order to do this, the actors in the system need capabilities that enable them to assimilate knowledge from abroad
- Capabilities increase over time, and gradually enable a country to climb the technological ladder, from adoption-only to developing frontier technology (=the Asian model, i.e., Taiwan, Korea, China)
- Systems failure may inhibit capabilities development

Catching up in the 21st century – Global Value Chains

- Goods (and services) are now produced in an internationally fragmented fashion, hence the value added embodies in a final good is produced in multiple locations

- Upgrading (innovation) enable actors in the chain to increase their contribution in value added, but this is also determined by governance in the chain (powerful foreign firms)

- Raw materials usually represent a very small fraction of total value in a chain: upgrading means vertical expansion in the chain

Innovation – what could be expanded

- The review seems reluctant to "admit" that adoption of foreign technology is the way to go, and that the innovation system (incl. policy) should be aimed at accessing foreign knowledge and developing capabilities
- But this needs to be the foundation of innovation policy
- Is the innovation system ready for assimilation (Chapter 2)? Is innovation policy addressing the right issues (Chapter 3)?
- Does the GVC perspective add insights?

Some example questions this raises (Chapter 2)

- Which foreign technologies are most appropriate (e.g., in agriculture, given climate and terrain)?

- Which firms are best able to innovate (= assimilate foreign technology)? SMEs vs large firms, state-owned vs (small) entrepreneurs

- Which are the knowledge institutions in the public sector that can enhance knowledge assimilation (both by training and actively)?

Some example questions this raises (Chapter 3)

- Does a consistent view exist on what role policy needs to play in the system?

- Which are the bottlenecks for foreign knowledge assimilation, and how can they be solved by policy?

- Do any foreign best-practice policy experiences exist?

- What is the role of IPR (acknowledge its potentially problematic role)?