Commercial innovation in post-transition economies

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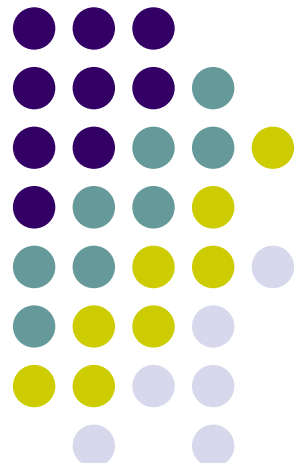
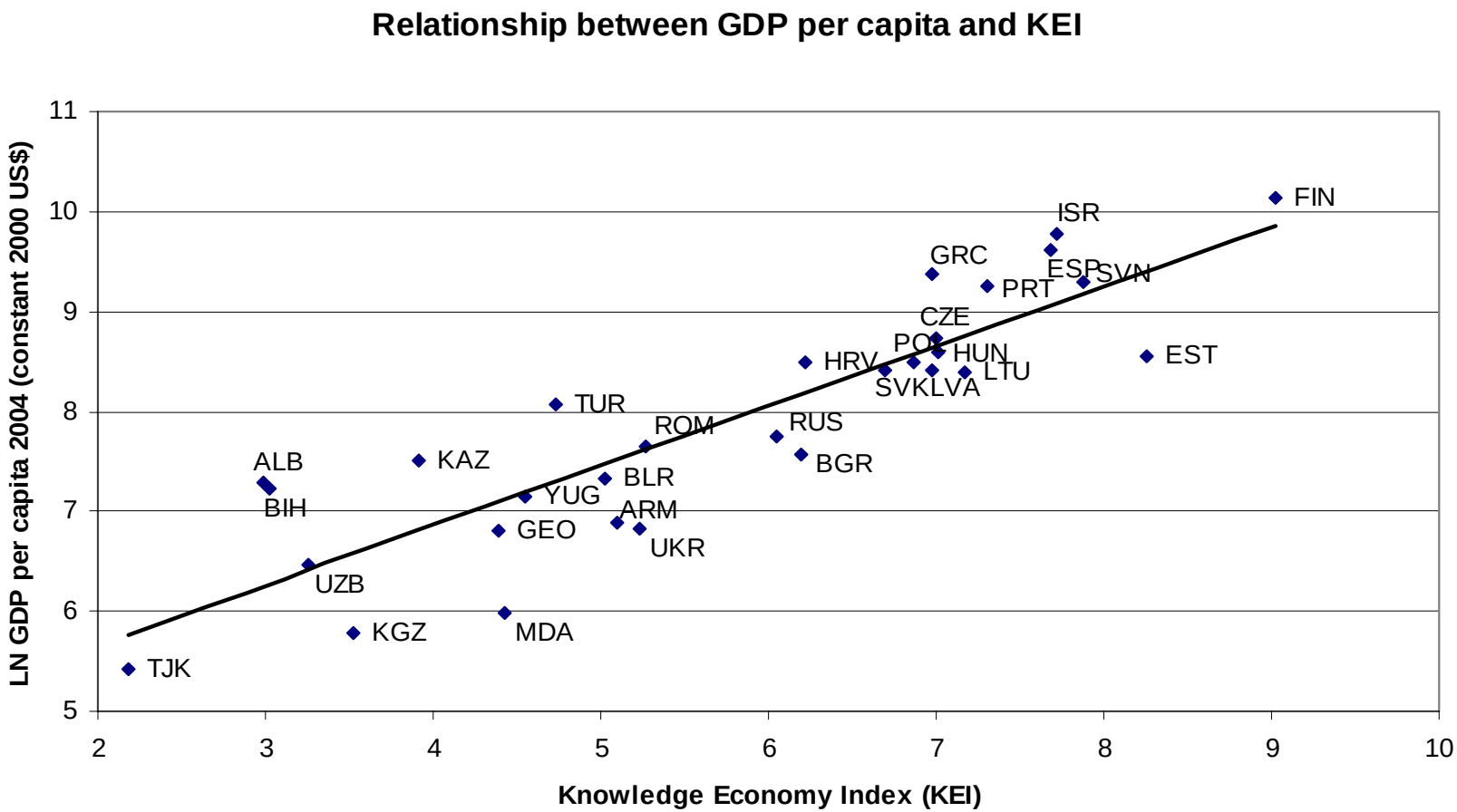


Diversity of Knowledge Economy Index (KEI) follows GDP p/c but...



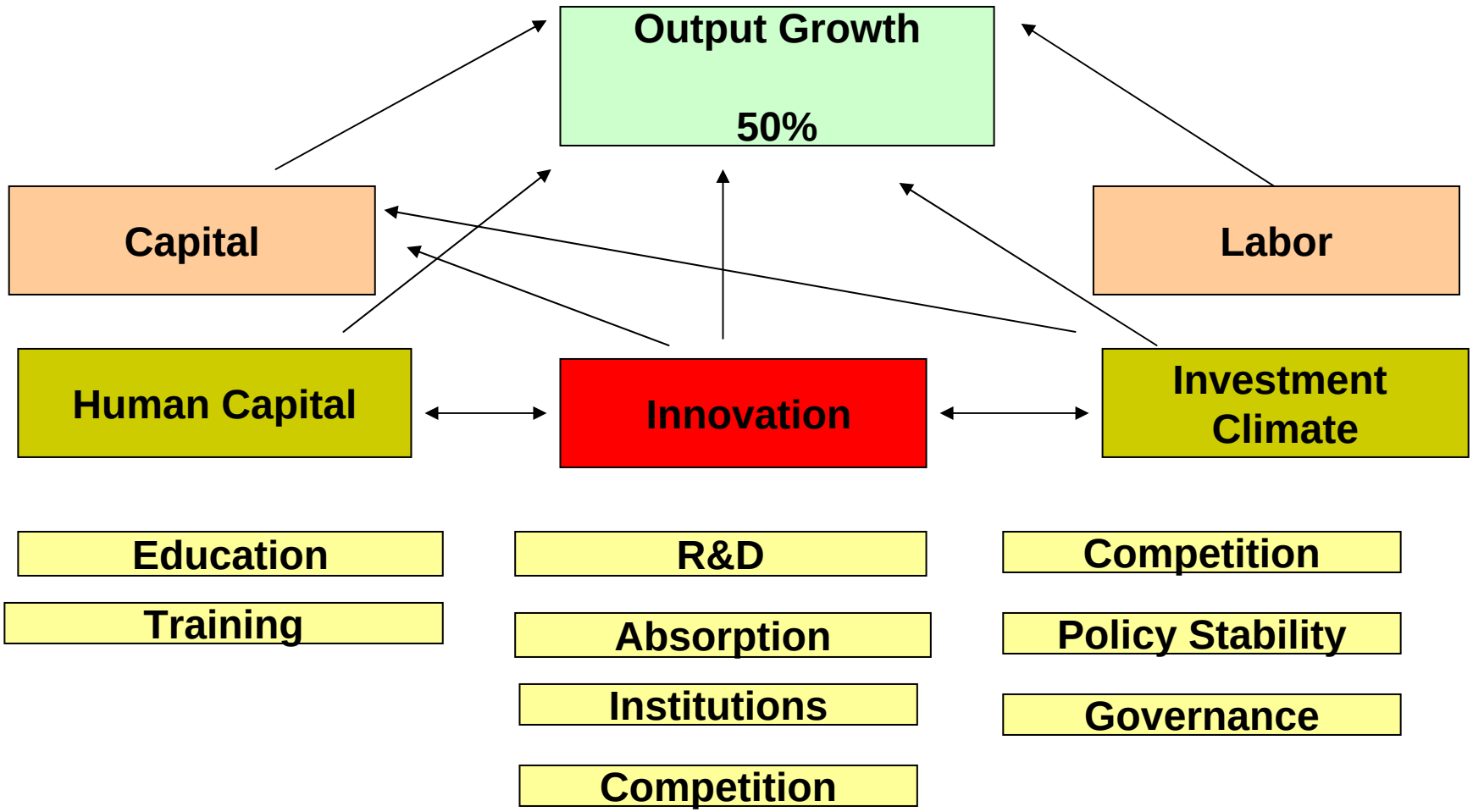
Look for the Bottleneck – the weakest link in the chain

The KEI as a National innovation System is an AVERAGE of Education, ICT, Investment Climate, Innovation (R&D)

- Track each individual pillar to identify specific *bottlenecks.*

Examples: in Russia weak institutional framework (IPRs and Banking System) is bottleneck; in Turkey it is education (years of schooling).

Innovation in the Growth Context



Innovation vs. Absorption

- **The definition depends on whether the new product/technology is new to the world, country or to the firm**

- **Absorption is the process through which an economy learns about innovative products developed elsewhere in the world, not only hi-tech gadgets.**

- **Trade, FDI, licensing are channels to learn and to allow for positive knowledge spillovers.**

  YET – even an absorptive capacity to learn from FDI, imitate and re-engineer imported capital goods requires indigenous R&D, education, etc

- **The forthcoming World Bank Study ECAKE2 will focus on understanding the significance of absorption for competitiveness.**

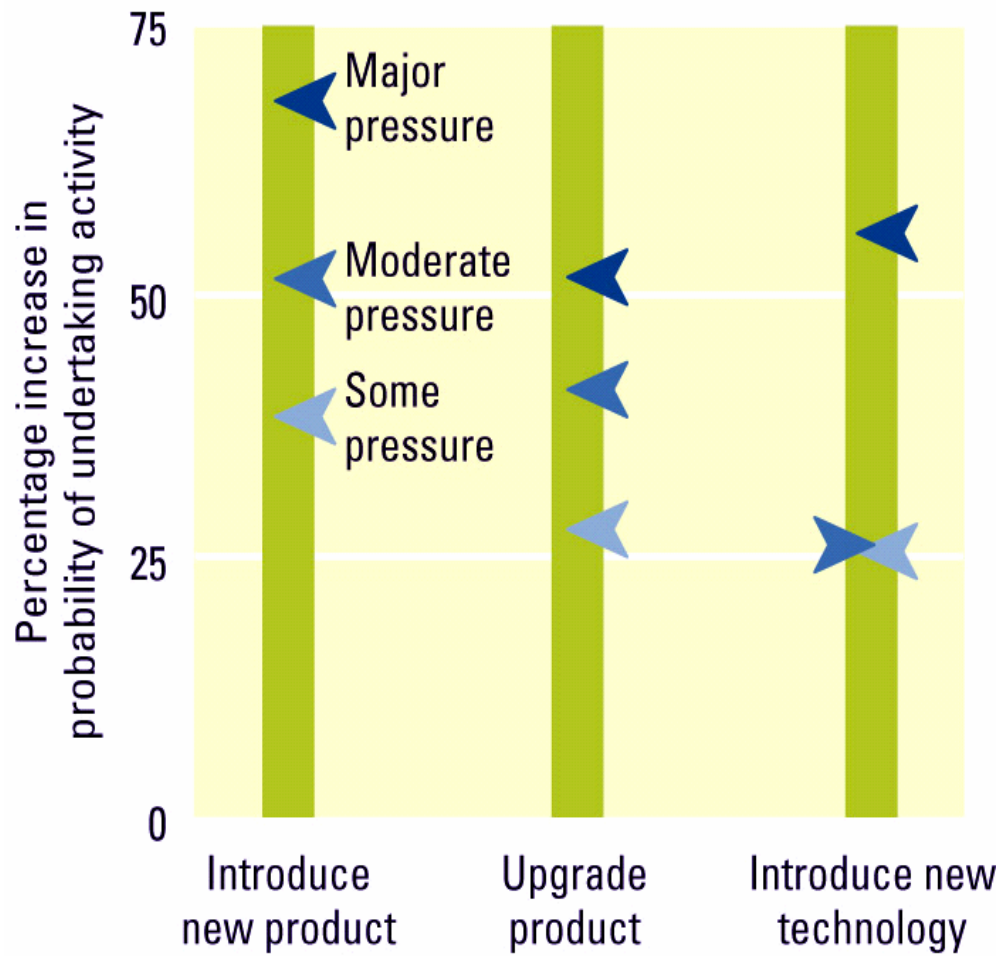
What determines Innovation? Firm Surveys in CEE and Russia

Innovation is considered a function of Size, Exports, Ownership, age of the firm, ICT, R&D, COMPETITION

Evidence from survey data suggests that:

- Innovation is strongly dependent on R&D expenditure
- IT variables help firms absorb more technology
- ISO certification and purchase of patents and machinery and equipment are strongly correlated with innovative activities
- Firms in less competitive environments spend less on R&D and innovate less

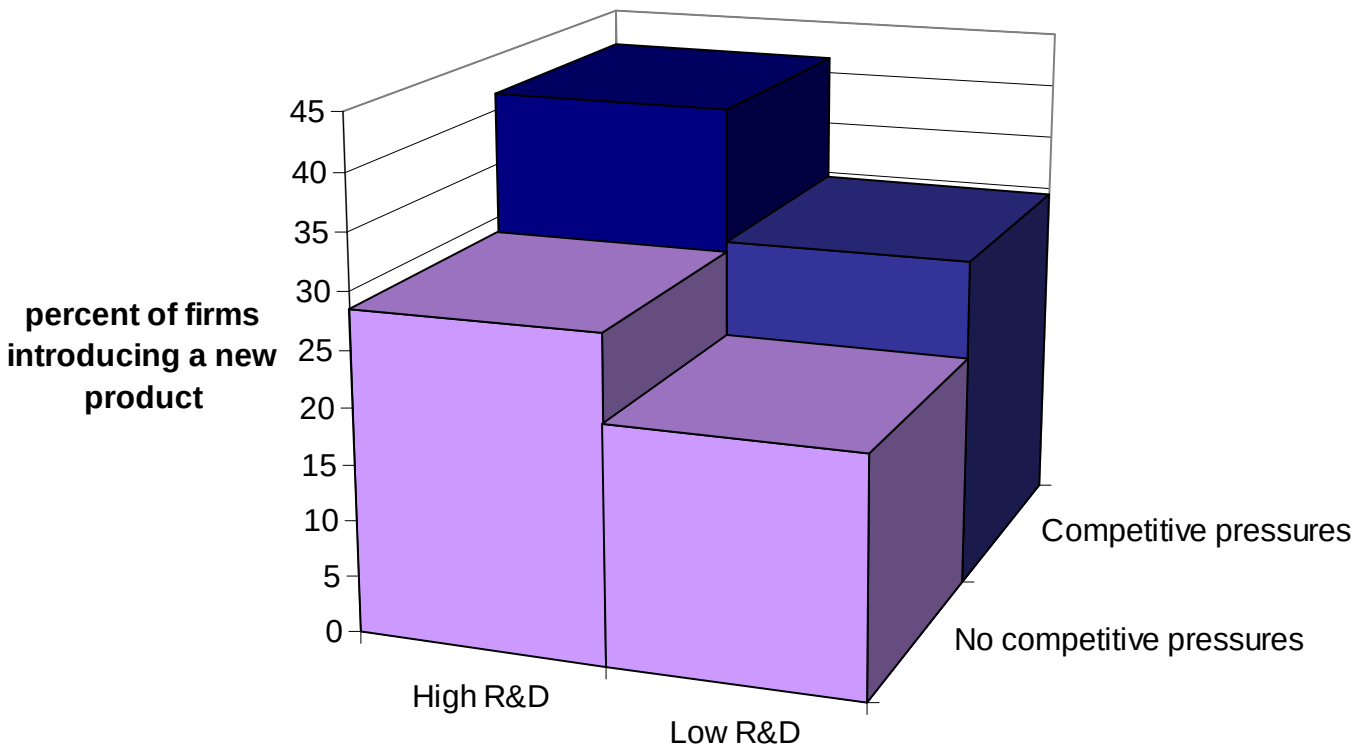
Competitive Pressures Stimulate Innovation Worldwide



Source: World Bank Investment Climate Surveys

Firms in less competitive environments spend less on R&D and innovate less

We find a strong relationship between competition, R&D expenditure and innovation for firms in ECA.



Source: BEEPS

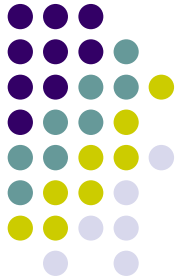
Will competition alone ensure an optimal level of innovation?

- What is the optimal level of R&D/GDP?
  - The EU's goal of 3% R&D/GDP?
- Should the Government help promote R&D and innovation?
  - Most OECD governments provide financial support for commercial innovation.
- Should Governments rush to imitate success stories or set-up Venture Capital funds, etc.?
  - (e.g. Far East, Finland, Israel)

Market versus Government Failures: when is intervention right?

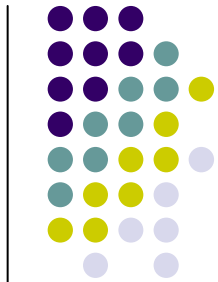
- In the presence of markets failures, can Government intervention correct market failures that inhibit innovation/absorption?
  - ***Yes!*** **- But…**
- Even in a well-functioning market economy, effective Government support requires careful attention to the institutions in place
- In **post-transition economies**, Government intervention might fail, or even cause harm, without an institutional framework conducive to intervention (eg capture and corruption).
- Government failures can do harm! More below.

Does Support for Innovation Mean "Industrial Policy"? Not Necessarily.



- Market failures are a necessary but NOT sufficient condition for government intervention. Beware of other failures…
- A source of government failures: 'picking' winners – industrial sectors or individual firms – distorts markets. Who knows better than the market?
- Targeting (industrial policy) has not proven helpful: India's software success.
- *Neutrality* and transparency are key principles in instrument design to improve outcomes

Principle I: Neutral and Transparent Project Selection



- Funding of projects is decided by independent investment committees.
- International experts and civil society stakeholders should participate in decision-making process
- Technical assessments of the project proposals are based on external (eg international) peer reviews
- All proposals and decisions are made publicly available to enhance transparency.

Principle II: Public – Private Partnership through Risk Sharing

- PPP can be the vehicle to match the needs of researchers and firms BUT mechanism for risk sharing should ensure:

- *Preservation of incentives:* … Risk sharing should ensure that *both* researchers and entrepreneurs have incentives to invest their resources and efforts.

- *Response to market signals:* Besides scientific interest, projects should have a clear commercial orientation that has a good likelihood of success.

Conclusions

1. Private commercial innovation and knowledge absorption are key to growth.
2. Market failures require Government support for commercial innovation.
3. Yet, in post-socialist economies, Government support is prone to Government failures: **capture and corruption**
4. To protect funding instruments, design needs:
    1. Neutrality in regulations; transparency
    2. Public-private risk sharing
    3. Civil society and external stakeholders
    4. Open and participatory decision making process

Conclusions (continued)

5. Apart from protection against capture and corruption, public support needs to ensure feasibility and desirability of success. The cost-benefits needs to be balanced with social benefits.
6. Financial support instruments cannot be implemented in isolation; to be effective, they have to be supplemented by reforms in education, ICT and other support systems – look for the bottleneck