UNECE International Conference on Knowledge-based Development and Innovative Entrepreneurship

The challenges for innovation policies

Dr Julia Djarova
Chair, ECORYS International
24-25 November 2011, Baku, Azerbaijan

Contents

- Why Science,Technology&Innovation (STI) Policy/ Why attention for innovation
- The 3 layers of innovation
- The 3 players of innovation
- The National Innovation System (NIS)
- Main issues of innovation policies:
    1. Strategy and policy measures for innovation
    2. Co-ordination mechanisms for innovation
    3. Enhance networking
    4. Financing innovation
    5. Entrepreneurship for innovation
    6. Promotion/awareness of innovation
    7. Monitoring and evaluation of innovation policies

ECORYS Research and Consulting

Why Science,Technology&Innovation (STI) Policy?

- Knowledge is rapidly becoming today's key production factor
- Innovation is a sustainable competitive advantage; low cost is not
- Science and technology play a major role in innovation
- Commercialised science and technology add real economic value

ECORYS Research and Consulting

Why attention for innovation?

- Improve growth
- Improve competitiveness
- Improve employment
- Improve public sector activities
- Improve environmental conditions

OECD 1995: *"Knowledge in all its forms plays today a crucial role in economic processes. Firms with more knowledge are winners on markets. Nations endowed with more knowledge are more competitive"*

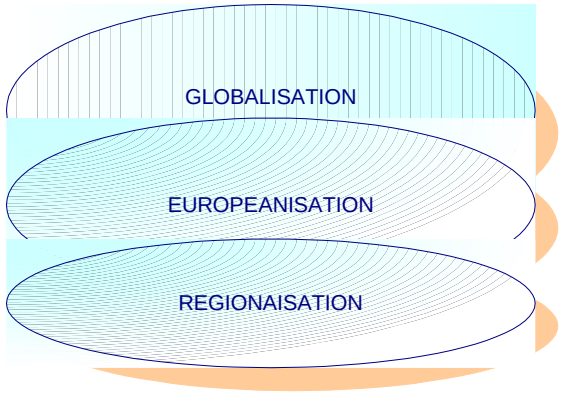
ECORYS Research and Consulting

The 3 layers of innovation

Globalisation:
= Internationalisation of markets
= R&D can be located anywhere

Europeanisation:
= Centralisation of key R&D tasks and adoption of common standards for products

Regionalisation:
= Stronger roles for regional clusters of innovative capacity



Globalisation:
= Pressure to be more competitive

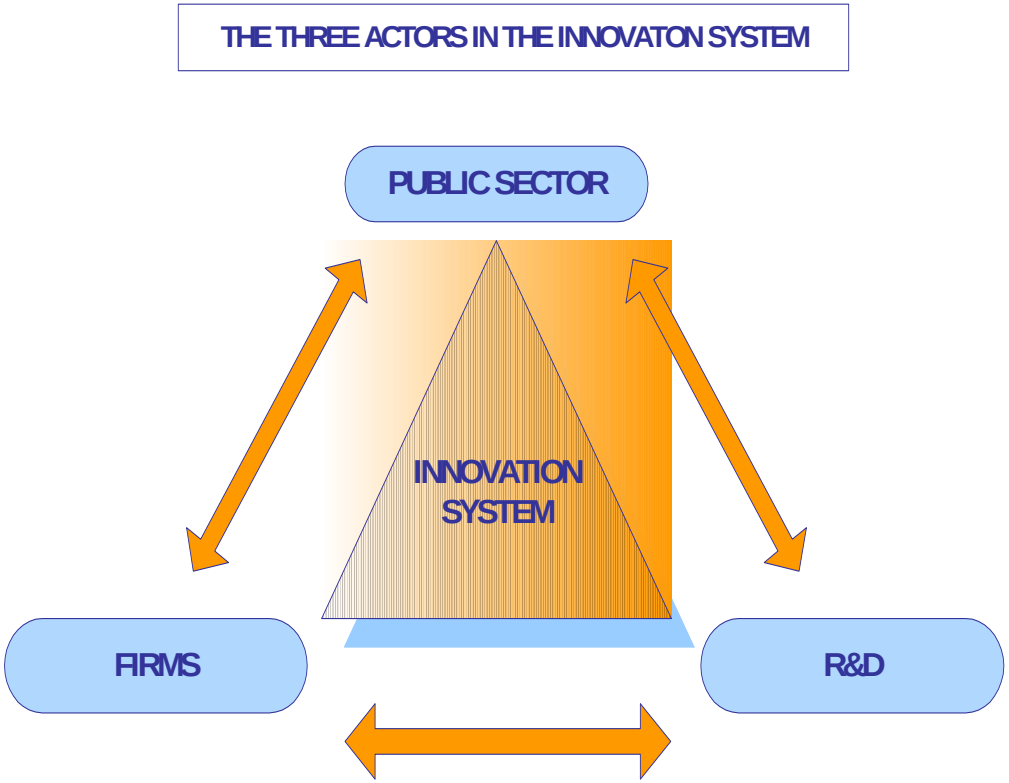
Europeanisation:
= Realising a policy system capable of addressing the diversity in problems and goals

Regionalisation:
= Increase the capacity of regional authorities to strengthen competitive advantages

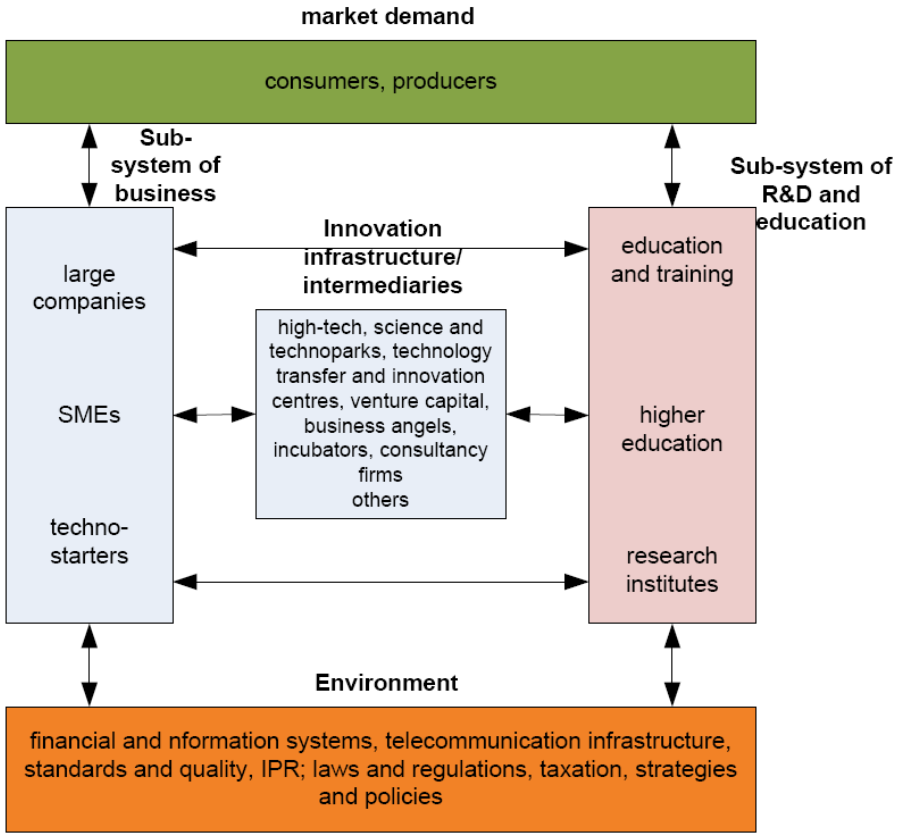
The 3 players of innovation

Innovations do not come about in isolation: they are engendered by a complex interplay of actors.

This has been termed: *"system of innovation"*



National Innovation System (NIS/C. Freeman)



ECORYS Research and Consulting

Main issues of innovation policy

1. Strategy and policy measures for innovation
2. Co-ordination mechanisms for innovation
3. Enhance networking
4. Financing innovation
5. Entrepreneurship for innovation
6. Promotion/awareness of innovation
7. Monitoring and evaluation of innovation policy

ECORYS Research and Consulting

1. Strategy and policy measures for innovation

- **National and regional innovation strategies:**
  - *horizontal approach (e.g. sectors, science fields, departments, etc.)*
  - *based on analysis of the national/regional innovation systems: identifies challenges*
  - *aims at balancing the NIS/RIS*

- **Policy measures:**
  - *based on policy mix – interrelated and reinforcing each other policy measures*
  - *addressing weak links in the national/regional innovation system*

2. Co-ordination mechanisms for innovation

- **Innovation policy is a horizontal policy:**
  - *coordination and cooperation between ministries and other governmental bodies concerned*
  - *coordination and cooperation between national and regional levels*

- **Improved governance and coordination** increases the efficiency of budget spending on innovation

- **The choice of co-ordination mechanism**: centralised (at national level) or decentralised (at departmental or ministry level)

ECORYS Research and Consulting

3. Enhance networking

3-layer networking:

- International
- Sub-regional
- National

3-player networking:

- Public authorities/sector
- Firms/business
- R&D institutions

ECORYS Research and Consulting

4. Financing innovation

- **Difficulties with obtaining finance** are particularly prevalent for *entrepreneurs, spin-offs, start-ups and SMEs*
- **Design of financial measures** addressing the key innovation challenges (*referring to strategy*)
- **Balance between the measures** (see next slide): *economy of scale effect*
- Overall development of the **financial system** and the financial sector in the country

ECORYS Research and Consulting

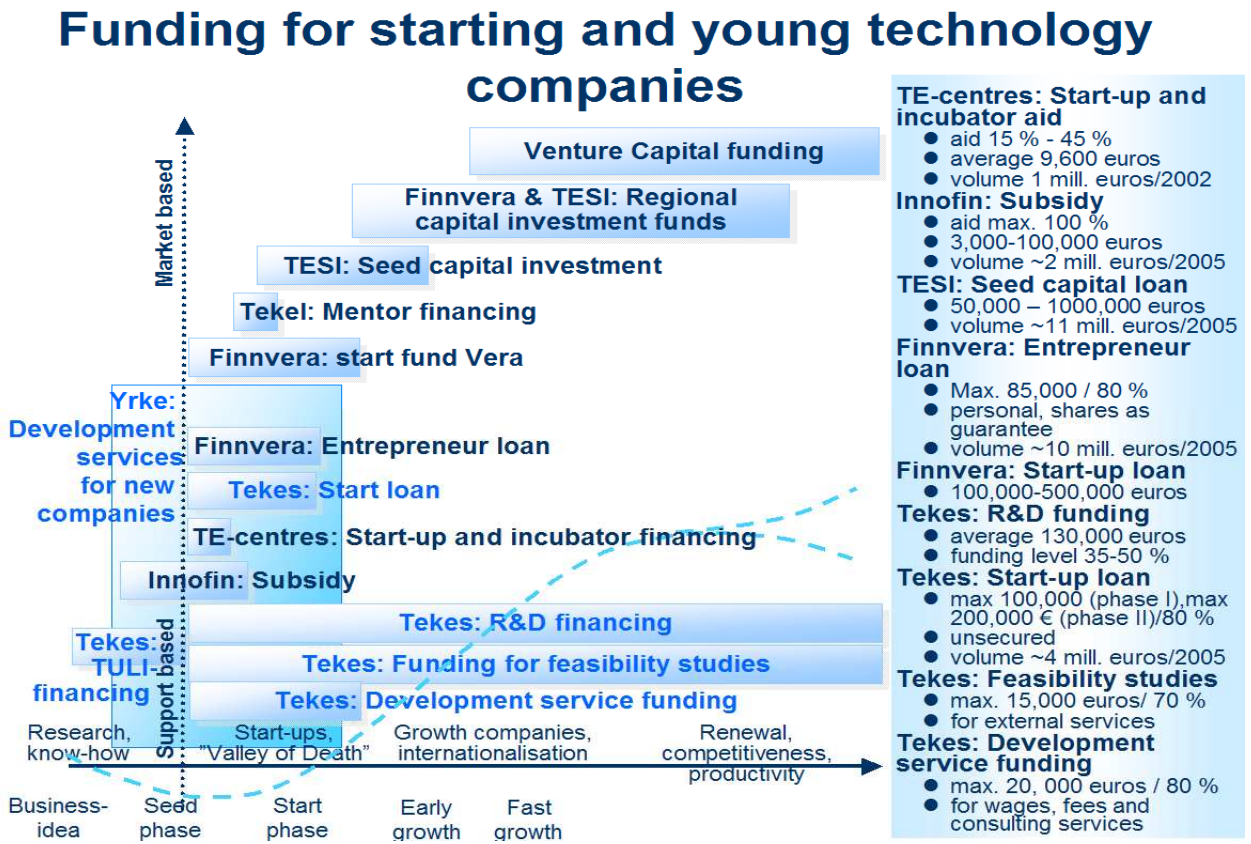
Financing innovation: where do money go*

Awareness	Entrepreneurship for innovation	New companies (high-tech)	Start-up (small SMEs)	Growing innovative SMEs	Total schemes reviewed
29 (11%)	55 (21%)	41 (15%)	65(24%)	76 (29%)	266 (100%)

*** Ecorys own review of financial schemes for innovation across the European Union**

ECORYS Research and Consulting

Financing innovation: where do money go*



*** With compliments to Dr Jari Romanainen (TEKES)**

ECORYS Research and Consulting

5. Entrepreneurship for innovation

- The role of innovative SMEs
- Commercialisation of science through entrepreneurship (*see next slide*)
- Spin-offs from research institutes
- Entrepreneurship education as early as from secondary schools
- Entrepreneurship for innovation as part of the national culture

ECORYS Research and Consulting

The ‘gap’

World of business

- Seeks profit and market shares
- R&D for private use
- Short term orientation
- Information is for commercialisation
- Interpret information versus opportunities
- Communicate via prices/brands

World of science

- Seeks academic eminence
- R&D for moving frontiers
- Long term orientation
- Information is for disclosure
- Interpret information in the context of advancing science
- Communicate via publications

ECORYS Research and Consulting

6. Promotion/awareness of innovation

- Innovation: *national agenda*
- Awareness: *part of policy measures*
- Innovators: *national "heroes"*

ECORYS Research and Consulting

7. Monitoring and evaluation of innovation policy

- Innovation measures can be very expensive:
  - *hence, ex-ante impact assessment*

- The nature of innovation requires different approach to monitoring and evaluation

ECORYS Research and Consulting

3 Main Challenges for Transition Economies

Challenge No 1:

- Identify the weak or missing links between different players in the National Innovation System and initiate strategic measures to improve/build these links

Challenge No 2:

- Build up a strategy how to let entrepreneurship develop faster starting from entrepreneurial education and involving incentives and conducive infrastructure

Challenge No 3:

- Streamline policy formulation, implementation, monitoring and evaluation using horizontal approach as to move from sub-optimisation at sector, field of science, etc. level towards optimisation at national level

Final Note:
Use your biggest advantage – OIL!

- The Netherlands invests % of the revenues from gas in innovation projects
- Azerbaijan can invest a % of its revenues from oil in innovation projects

ECORYS Research and Consulting

THANK YOU!

julia.djarova@ecorys.com

www.ecorys.com

See also Ecorys study on ICT, Innovation and Economic Growth in Transition Courtiers at: www.infodev.org/en/Publication.553.html

ECORYS Research and Consulting