

STEPS Centre

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## Innovation entrepreneurship in emerging market economies: experience to date and policy options

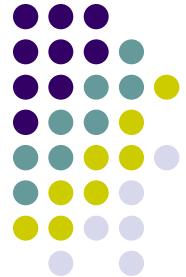


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## Innovative entrepreneurship as a key factor of modern economic development

- The innovative status of a firm can be defined in several ways. The basic definition of an innovative firm is a firm that has implemented at least one innovation, while a product or process innovator is defined as a firm that has implemented either a product or a process innovation.
- The product, process, marketing method or organisational method must be *new to the firm or should be viewed as significantly improved as compared with the existing products, processes and methods.*
- Three other grades or criteria for the novelty of innovations, which are used in innovation surveys, categorize innovations as '**new to the market**', '**new to the world**' and '**disruptive innovation**', which is opening the way for radical changes in the modes of production



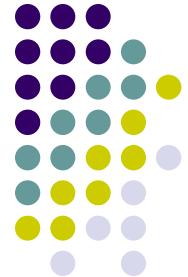
# Why firms innovate?

- The ultimate objective is to improve firm's performance.
- Create a market advantage for the innovator by reducing costs or by implementation of new products, which stimulate sales
- Competitive advantage therefore derives from the ability to make things more cheaply and better, or to make and to produce new things (an '**absolute dimension**').
- It has a **relative dimension**: advantage is found in the activities of firms compared to their competitors.



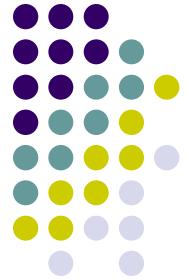
# Innovation Policy Instruments

- Traditional means of innovation support include Government grants and loans encouraging R&D in companies, research institutions and universities. These instruments are often called '**technology push**' instruments of innovation policy.
- The **demand-based innovation** policy instruments are expected to encourage innovation through public procurement policies, development of norms and standards, as well as other market development measures.



## Commercialization and diffusion of innovations

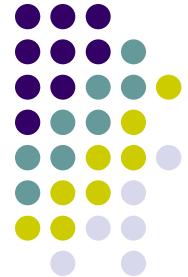
- Processes of commercialisation of R&D results have become especially important for economic growth in many emergent market economies (EMEs) of the ECE region.
- Commercialization and diffusion are the ways, in which innovations spread, through market or non-market channels, from their very first implementation to different consumers, countries, regions, sectors, markets and firms. Without diffusion, an innovation has no economic impact.



# Typical linkage policies

- Collaborative R&D programmes
- Technology platforms
- Cluster policies and regional growth pole policies
- Support for Science Parks and other co-location schemes
- Support for other University-Industry linkage mechanisms (e.g. University Liaison Offices)
- Support schemes for spin-offs

# **Commercial utilisation of results and knowledge created in R&D programmes are channeled through**



- Publications, scientific discussions and other open distribution of information
- Patents, contracts and other formal agreements for the application by others, including selling, licensing, franchising or donating the results for other users
- Application of knowledge and results in further research work among the research partners, and/or in generating further projects
- Consultation and collaboration work by researchers
- Transfer and mobility of personnel to other research groups, users and industry
- Creation of new start-up companies, products and services by the researchers
- Informal diffusion / spill over of knowledge and information



# Mechanisms of innovation policy

- **Direct, financial investment measures** relate to the direct transfer of public support to innovation performers. These can be distinguished between:
  - *Thematic (or vertical) policies*, which focus on specific themes such as Biotechnology, ICT, Sustainable Development, Security Research and others, and
  - *Generic (or horizontal) policies*, which have no thematic priorities but cover issues such as scientific quality of academic research (grants from science funds), Public Private Partnerships and other forms of collaboration.
- (Source: Reinhold Hofer and Michael Dinges: Thematic report: R&D – R&D Policy Interactions. Monitoring and analysis of policies and public financing instruments conducive to higher levels of R&D investments: The “Policy Mix” project. May 2008. A study funded by the European Commission – DG Research)

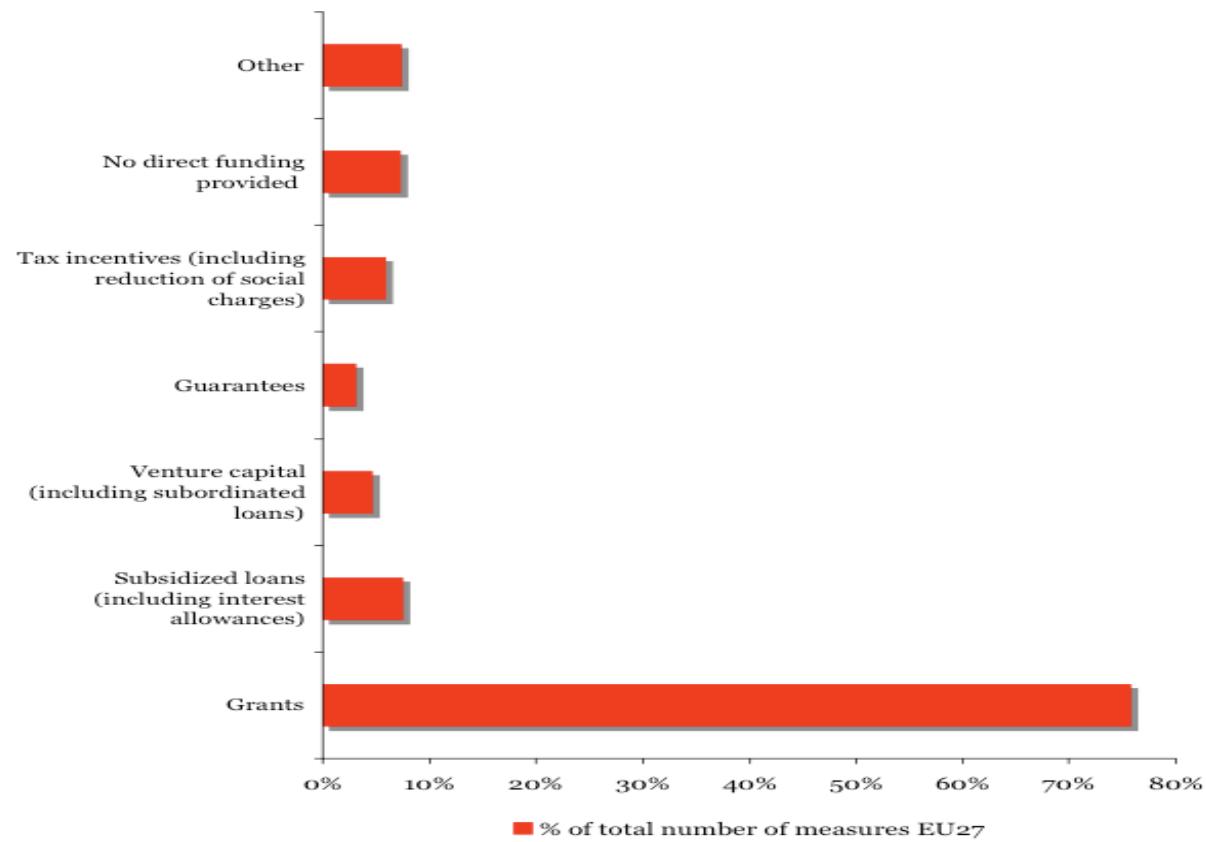


## Mechanisms of innovation policy- II

- **Fiscal, indirect policy measures** provide incentives for higher private sector R&D and innovation investments as the public sector is forsaking tax income in exchange for R&D investments.
- **Catalytic financial policy measures** seek to provide better access to private sector sources of finance. Typical catalytic innovation measures are:
- **Risk Capital Measures**, i.e. measures taken by the public sector which catalyse the flow and use of risk capital for both R&D and innovation-related activities likely to increase R&D investment levels in the future;
- **Loan and Equity Guarantee Measures**, i.e. measures whereby the public sector tries to encourage additional investment in innovation by offering to share part of the risk involved in the provision of support for R&D and innovation-related activities.
- **Structural R&D policy measures** focus on the provision of research infrastructure and knowledge pools which include university research funding, public sector re- search institutes, centres of excellence, and human resources funding and policies.

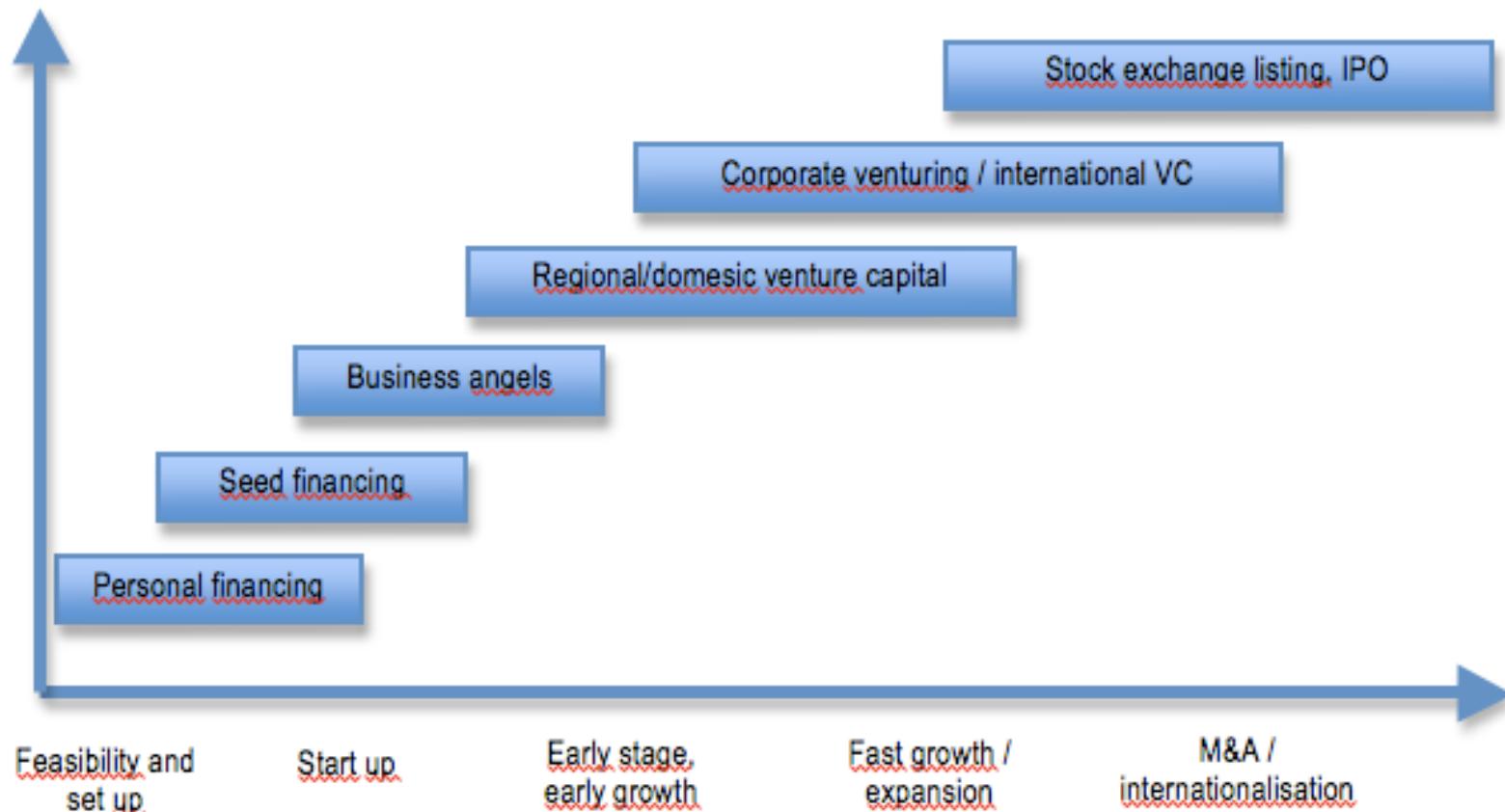


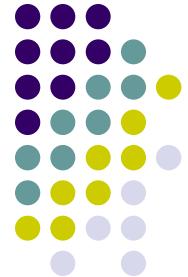
# *Sources of funding of innovation support measures in Europe, EU TrendChart, 2009*



Source: TrendChart database of support measures (data downloaded on 7 October 2009); analysis Technopolis Group. N=959

# Various types of equity financing during the growth path of a new company (K. Halme, 2010)



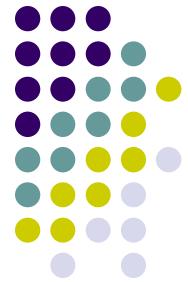


## Example: business angels in the UK

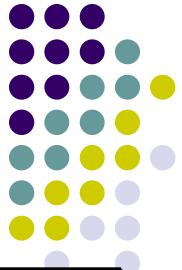
- According to the information collected in UK for 2008-2009, there were 25 networks of Business Angels in Britain. Their activity included the following:
- 8685 business plans were evaluated
- 824 ventures were further analysed
- 233 investments were made, with average investment of 70 000 €
- Most investments were syndicated with VC funds, banks, etc.
- Follow-up investments have been increased (due to the financial crisis)

(Source: Colin Mason, University of Strathclyde, BBAA Winter Workshop, January 2010)

# **Support through to business incubators from the side of government**

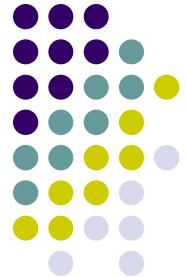


- Awareness and benchmarking of different incubation and business promotion concepts
- Business incubator management
- Business prospect assessment, due diligence process management
- Expert pooling and mentoring
- Development and conceptualization of business support services



# Comparison of innovation based firms with global model (source: Radosevic and Woodwadr, 2008)

	New technology based firms in developed countries	Innovative enterprises in EME
Mode of growth	Generic expansion	Productivity-based expansion
Strategic objective	Commercializing results of IPR	Diversifying to exploit organizational capabilities
Model role	'Gazelle'	Knowledge broker/specialized supplier
Structural feature	Trendsetter	Trend spotter
Market orientation	Global market	Domestic market or product
Key competitive advantage	New world frontier technology	Customer-oriented Organizational capabilities
Threshold barrier	Initial public stock offering	From domestic brand builder and networker to established exporter



## Possible dynamics of GDP per capita in Ukraine and some CEE countries in 2006-2024, USD, PPP.

Country	Level of GDP per capita in 2006, thousand USD	Level of GDP per capita in 2006, if the EU average level is equal to 100%, %	Level of GDP per capita in 2006, thousand USD, if the growth rate for 2001-2006 will be preserved	Level of GDP per capita in 2024, if the EU average level is equal to 100%, %
Czech Republic	21,7	79%	43,0	100%
Poland	14,0	51%	25,4	59%
Hungary	18,5	68%	35,3	82%
Romania	9,0	33%	21,5	50%
EU average	27,3	100%	43,0	100%
Ukraine	6,1	22%	20,2	47%



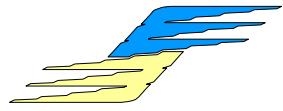
# Conclusions

- Entrepreneurship is interrelated with innovation activities. The ties between them have become stronger in recent years, as innovation has become a precondition for successful business.
- Innovation policy approach to societal development invites countries that rely now on raw materials, energy resources and mature technologies to launch themselves on a path that takes them from the present resource-driven economy towards a knowledge-driven economy.
- The first task could be to foster collaboration between universities, research centres and business enterprises by launching programmes for collaborative research in fields that are deemed important by businesses and challenging by knowledge institutions.
- Eventually new sets of institutions are needed to manage and finance such programmes and support the development of advanced research facilities.

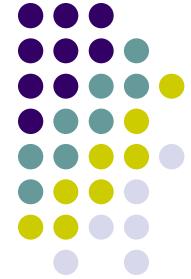


# Conclusions

- Many of the investments required involve new technologies, some of which have to be imported, while others can be sourced from the home country. If the investments are successful, development and production of increasingly differentiated products become possible.
- As the country's enterprises become able to develop competitive brands of their own and protect associated intellectual property, their some low-added-value activities such as manufacturing assembly, can be outsourced from abroad.
- Processes of commercialisation of R&D results have become especially important for economic growth. Countries in which authorities, entrepreneurs and the general public trust each other and can find collaborative solutions to economic and societal problems, gain in competitiveness as risks and costs related to investment and legal problems are reduced.



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**Thank you for attention !**