



UNECE United Nations Economic Commission for Europe

**From Applied Research to
Entrepreneurship:
Promoting Innovation-Driven
Start-Ups and Academic Spin-offs
Introductory Remarks**

by the Secretariat

United Nations Economic Commission for Europe
International Conference “From Applied Research
to Entrepreneurship: Promoting Innovation-driven
Start-Ups and Academic Spin-Offs”

Kiev, 9 - 10 November 2010



Structure of the presentation

- Drivers of innovation and commercialization of R&D results
- Status of commercialization in emerging market economies of the region
- Industry-science links and financing
- Intellectual property rights



The UN Economic Commission for Europe (ECE)





The UN Economic Commission for Europe (ECE)

- 56 member countries
- home to 20 percent of the world's population
- including most of the developed economies,
- but also emerging market economies and
- a few low income countries



What UNECE does

- helps to implement global UN initiatives at the regional level
- fosters sustainable development & economic cooperation in its region



What UNECE does

fosters sustainable development & economic cooperation in its region by ...

- providing a multilateral forum for policy discussion and negotiations
- brokering and administering international standards and conventions
- engaging in capacity building and technical cooperation



UNECE's main areas of activity

- Trans-border environmental issues
- Border-crossing transport issues
- Facilitation of international trade
- Trans-border energy issues
- International harmonization of statistics and
- **Economic Cooperation and Integration**



Committee on Economic Cooperation and Integration (CECI)

Established in 2006 to promote

“... a policy, financial and regulatory environment conducive to

- economic growth,
- innovative development
- and higher competitiveness

focusing mainly on countries with economies in transition”



CECI - main areas of work

promoting

- innovation and competitiveness
- public-private partnerships
- **Entrepreneurship**
- **Financing Innovation and**
- **Intellectual Property Rights**



Major drivers of innovation and commercialization include:

- The scope of **Research and Development (R&D)**
- **Human resources** available for R&D and quality of education
- **Regulatory and institutional environment**



Major drivers... (continued):

- **Openness to foreign technologies** and to cross-border cooperation
- Wide use of **information and communication** technology
- **Intensity of linkages** between the various actors involved in innovation



Emerging market economies

lag behind the OECD countries in terms of

- **number of researchers per mn inhabitants (about 45 per cent of OECD average)**
- **R&D expenditures as percentage of GDP (less than 20 per cent of OECD level in EECCA countries)**



Emerging market economies (continued)

- **Private R&D expenditures make up 30 per cent of the total in EECCA countries as compared with more than 55 per cent in Eurozone countries**
- **Private R&D expenditures per inhabitant are equivalent to about 5 per cent of the Eurozone level**



Emerging market economies (continued)

- **Lower public spending on higher education as percentage of GDP and per enrolled student (although situation differs in individual countries)**
- **Insufficient development of telecommunications & information technology (the number of internet users and of telephone lines per 100 inhabitants makes up 24 and 40 per cent, of OECD average.**



Most important:

Overall business environment is still not sufficiently conducive to innovation and entrepreneurship,

and

Emerging market economies lag behind the OECD countries in terms of intensity of collaboration between academia and the productive sector.



LINKAGES

- Key concept in innovation thinking- No linear concept of innovation!
- Key weakness in emerging economies
- Industry-science-education links are a critical dimension of the effectiveness of the national innovation system --- and a major focus of this Conference
- Structural feature – smaller role of enterprises in R&D in comparison with more developed countries. Linkages even more important as policy challenge.



INDUSTRY-SCIENCE LINKAGES

Multiple channels –relations with established companies AND creation of new innovative SMEs.

- Cooperation in R&D – from research contracts to “open innovation” models
- Education :involvement of industry in curriculum design; entrepreneurial education
- Mobility of staff between research institutions and companies

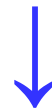
What policy can do? Variety of instruments



LINKAGES AND INSTITUTIONS

Industry-science linkages can be fostered by dedicated institutions

Science parks – variety of tenants, synergy effects, opening to other companies, close relations with universities.



Proximity matters!

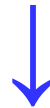
Innovation externalities justify public support



FINANCING

Entrepreneurial ideas need entrepreneurial finance

- Ready to take **risk**
- Providing **advice and support**- *“It is not only about money”*



Specialised financial intermediaries
(business angels, VC AND corporate VC)

Reluctant/scarce investors and **complicated** communication:
How can public initiatives help?



Intellectual Property

Science-Industry links need appropriate IPR protection

- Research cooperations: access to relevant background
- Commercialization and Knowledge Transfer:
 - licensing, sales of IPRs
 - Spin-offs
 - Consulting
 - Staff mobility, education, training



IPR challenges

- Raise IP awareness, create IP culture
- Audit capacity
- Capacity to develop commercialization strategies in line w/ mission and comparative advantage
- ... and available resources
- ... and in partnership w/ industry



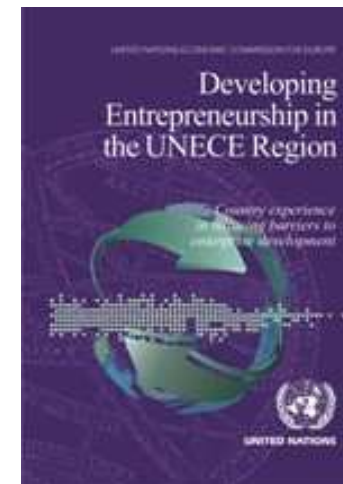
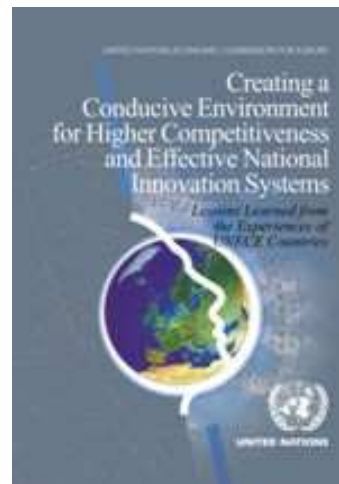
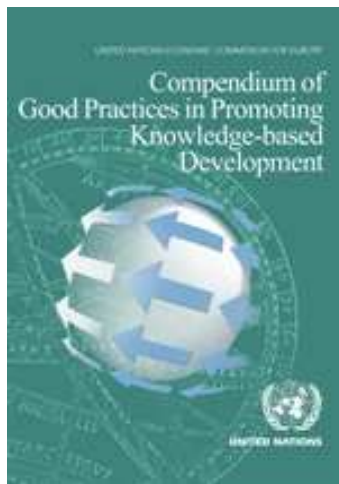
Possible policy support

- Public (co-)funding conditional on demonstrated IP capabilities
- Subsidies for IP commercialization
- Support for professionalization of technology transfer function, incl. IP
- Default IP ownership to academic institution tied to obligation to commercialize



UNECE United Nations Economic Commission for Europe

Some CECI Publications on Knowledge-based Development



www.unece.org/ceci/



Thank you for your attention!

iouri.adjoubei@unece.org

jose.palacin@unece.org

ralph.heinrich@unece.org