



**EUA**

European University Association

# KNOWLEDGE TRANSFER

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## R&D, innovation: the importance of university research

- R&D increases the probability of introducing new products (product innovation)
- Process innovations depend more on capital spending; R&D magnifies the effect of capital spending

See:

Parisi-Schiantarelli-Sembenelli (Eur.Econ.Review, November 2006),

Micro Evidence for Italy (465 Italian manufacturing firms)

## University-Industry Knowledge Transfer (1)

- Science „moves in mysterious ways“ (Milken Institute Report)
- Successful applications of scientific knowledge often occur unsystematically, unexpectedly and by chance (importance of informal university-industry contracts)
- Yet: Studies demonstrate that US universities outperform European universities

## University-Industry Knowledge Transfer (2)

- European universities underperform on all output measures: invention disclosures, patent applications, patent grants, licence agreements, license income
  - except: number of start ups established  
(EURAB plenary meeting 13 December 2006)
- Milken Institute Report on University Biotechnology Transfer and Commercialisation (Sept 2006):
  - 9 European universities among top 50 in publication ranking
  - 4 European universities among top 50 in biotech patent ranking
  - 0 European universities among top 25 in transfer and commercialisation ranking 2000-2004

## Actions proposed by EU

- Harmonisation of IP laws: when will it come?
- Framework Programmes: have university-industry partnerships been impeded by national fragmentations, European bureaucracies and „juste retour“
- EIT: will it come and will KICs lead to increased partnership?
- Green Paper “ERA: New Perspectives”, April 2007:  
more mobility of researchers between institutions, disciplines, sectors and countries; world-class research infrastructure; excellent institutions; effective knowledge sharing; coordinated research programmes?  
(J.Potocnik: “movement of knowledge” as “fifth freedom”)

## Recommendations

- Higher education, research, innovation as European (public) goods (ERASMUS, ERC)
- Autonomous universities as “dynamic agents” with “upstream” strategies in the knowledge triangle; increase financing
- Reorientate doctoral education:
  - professional doctorate
  - commercialisation training
- “match making” institutions  
industry oriented programs: US NIST/ATP Program, Israeli Magnet Program; Lambert study