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# Intersectoral Mobility of Researchers in Russia: Trends and Policy Measures

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# Mobility: Theoretical Framework

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- Mobility studies are linked to human capital theories. Human capital: the sum of individual researcher's professional network ties, technical knowledge and skills, and sources broadly defined (Bozeman et al., 2001).
- Positive relationship between human capital and innovative activity (Hoisl (2007, 2009), Giuri et al. (2007))
- Recombining different types of human capital is more likely to produce innovation than the mere increase in any one type.

# Forms of Mobility

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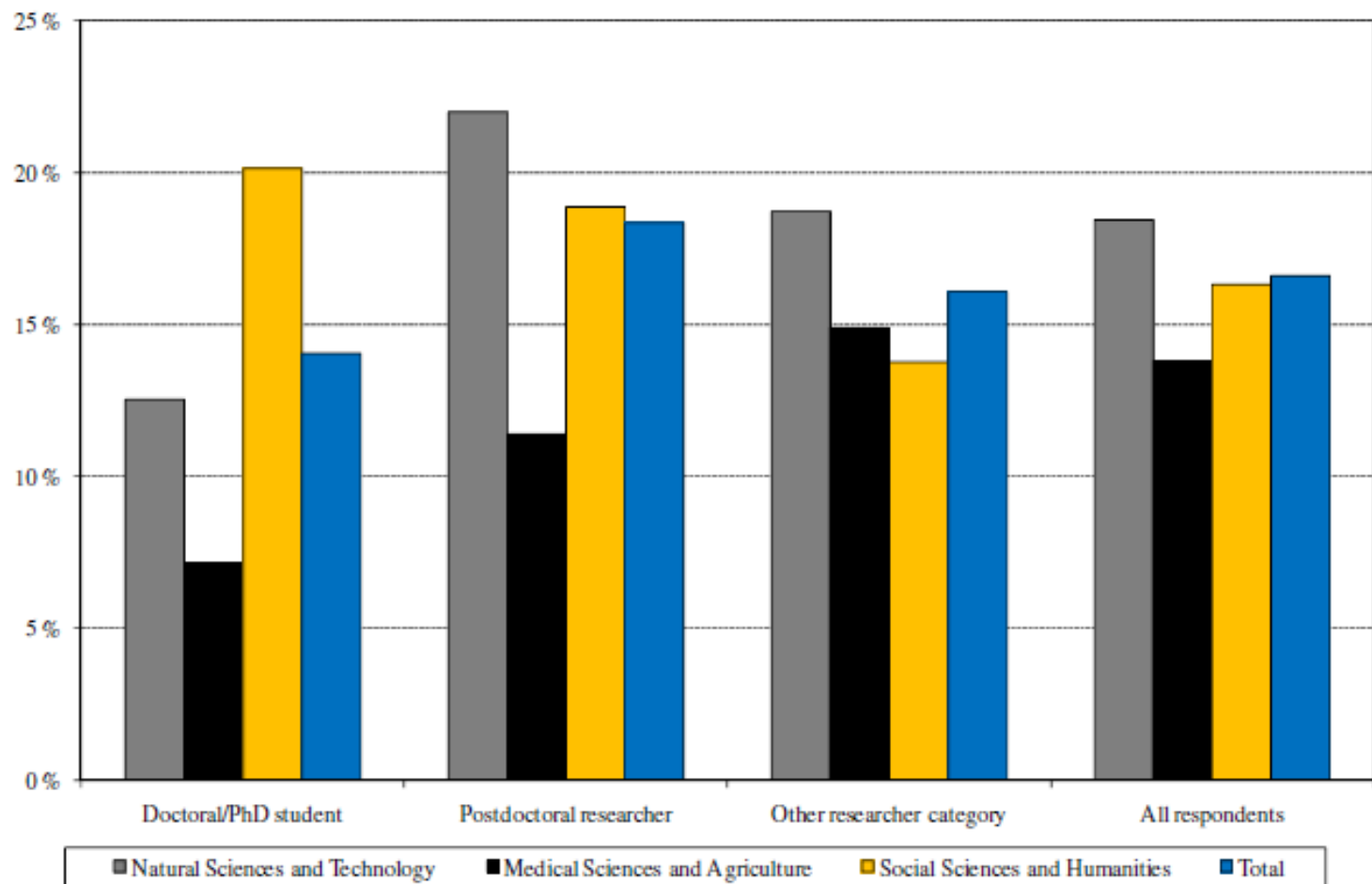
- Mobility may be internal and external (international)
- Internal mobility: **intersectoral** - mostly between PRO – public research organizations (in Russia – universities and Academy institutes) and industry; intrasectoral – between organizations within the same sector (within industry or within PRO)

# Why Intersectoral Mobility?

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- **Empirical evidence** of effectiveness – examples:
- Analysis of 1200 CVs and patent data for university researchers and engineers in USA participated in collaboration with industry - intersectoral mobility has positive impact on productivity (Source: Dietz, J., Bozeman, B., 2005)
- Survey of mobility for university life scientists in USA (consulting, post-doctoral residency with industry) - mobile scientists are more productive - had twice as much publications then those without relationships with industry (Source: Zinner, D. et al., 2009).
- Survey of mobility of R&D workers in 5714 Danish firms for 1999-2004. Hired to firms university scientists contribute more to innovation then R&D specialists hired from other firms (in terms of patent activity). (Source: Ejsing A., et al., 2011).
- Analysis of CVs of researchers in Sweden: more mobile have higher citation of their papers. Average level of mobility – 2 changes during career time (Source: Sandstrom, 2009).

*Estimated shares of researchers in the higher education sector in EU27 who have been employed as a researcher in both the public and the private sector by field of science and by current status as a researcher. n=4,537.*



Source: Study on mobility patterns and career paths of EU researchers. Technical report 2 – Part I: Mobility Survey of the Higher Education Sector. IDEA Consult: Brussels, April 2010. P. 67.

# Hampers For Intersectoral Mobility

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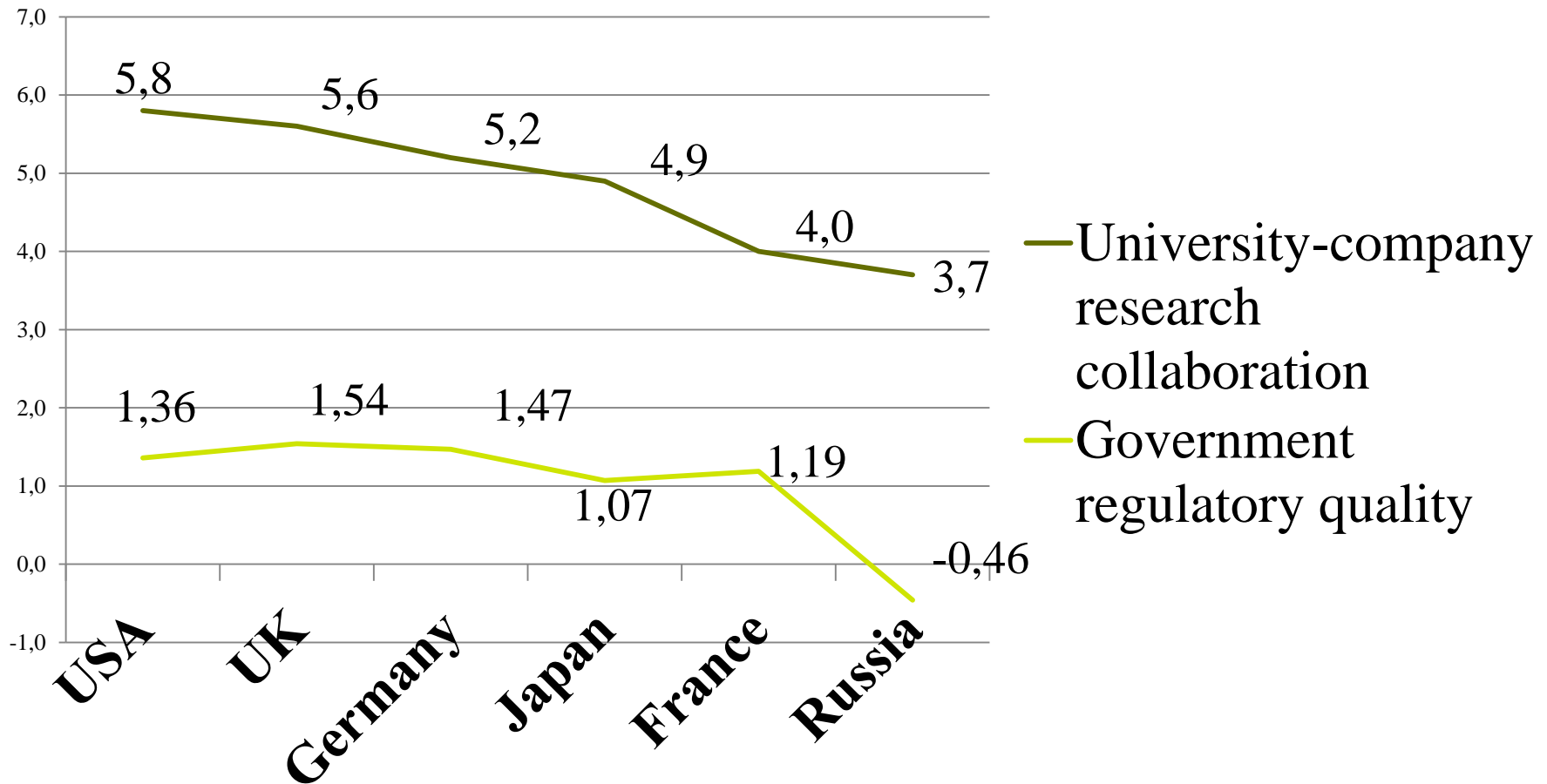
- Privileges (civil servant status; pension schemes applied only within organization)
- IPR issues in companies; secrecy
- Mobility does not influence pace of career development
- **Cultural barriers between science and business**

# Policy Measures: Country Examples

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1. Part-time research positions (Norwegian 'Professor2' – adopted in Germany; USA – Harvard; MIT) -20% combined \ part-time position: industry specialists to be employed in university as add-on to their main position, financed by either party.
  - **Permanent or time-limited (for several years)**
  - **Personal invitation or open calls**
2. CNRS – 3 forms of mobility, up to 5 years work in company
3. GOALI (Grant Opportunities for Academic Liaison with Industry) in USA since 1989 – NSF grants to work in industry / university setting.

# Russia: General Setting for Mobility (WB “Knowledge Economy Index”, data for 2010)

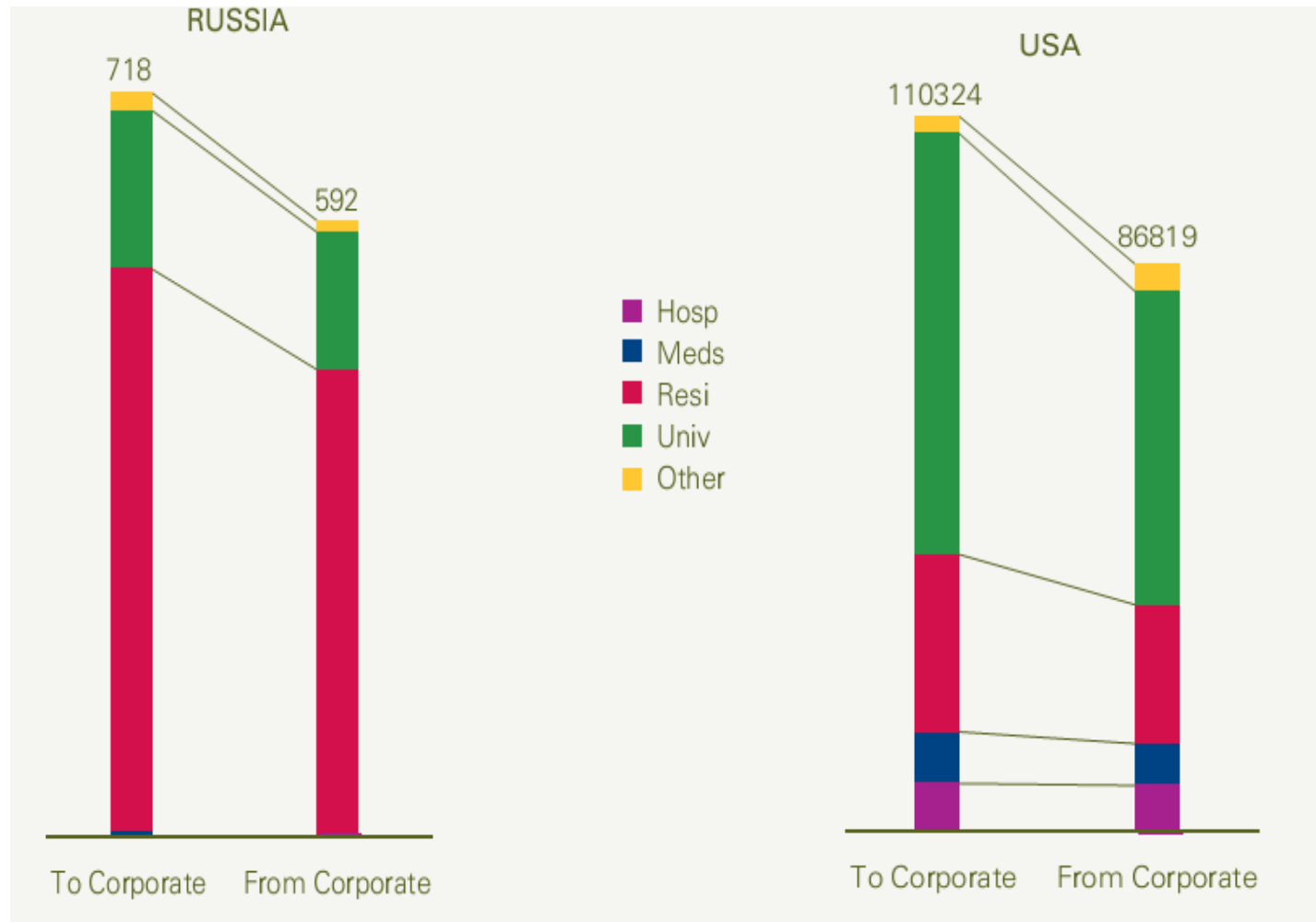




# Benchmarking Mobility of Researchers With Degrees, % (OECD, 2013; data for 2000-2009)

	To business	To higher education institutes
Hungary		
Business	4.6	8.6
Higher education	3.4	27.8
Netherlands		
Business	15.1	4.0
Higher education	9.5	23.8
Latvia		
Business	7.5	21.0
Higher education	5.6	21.8
<b>Russia</b>		
Business	7.9	<b>2.4</b>
Higher education	<b>1.8</b>	6.1

# Mobility Profiles (Russia versus USA)



Source: International Comparative Performance of the UK Research Base – 2011. A report prepared for the Department of Business, Innovation and Skills. Elsevier, 2011.P.77.

# Russia-Specific Hampers for Intersectoral Mobility

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- Favoritism in universities and Academy institutes: preferential hiring of graduates (universities) or own employees (competition based positions in Academy).
- Russian academic culture: attachment to the organization is higher than to profession (Yudkevich, M., 2013).

# Evidence From Case Study: Level of Intersectoral Mobility

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- Mobility is low but big companies have mobility schemes
- Mobility as employment at more than one organization is developed but **within government sector** (research institutes; universities)
- Intersectoral mobility is usually accompanied by the change of profession (from research to management or entrepreneurship)

# Evidence From Case Study: Hampers

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- Companies do not have strategies for R&D development and thus have short-term demand for workforce
- Professors and researchers do not have adequate qualification (to serve as consultants to industry, for example)
- Housing problems (more – for geographic aspects of mobility)
- Absence of even indirect government measures to stimulate intersectoral mobility

# Government Measures in Russia

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→ Federal program “Workforce” (2009-2013):

→ Mobility of young

→ RFBR: mobility of young scholars

**Consulting** under Decree #219  
(innovative infrastructure in  
universities)

**PLANS ?**

# Conclusions

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- Mobility is positively related to productivity of researchers. Intersectoral mobility strengthens university-industry cooperation.
- In the world, variety of government measures to stimulate mobility is growing.
- In Russia intersectoral mobility is very low and there are Russia-specific hampering factors.
- Direct government measures to stimulate internal mobility in Russia are low-scale and mostly for young researchers. No clear plans for the future.