



National Research University Higher School of Economics

Institute for Statistical Studies and Economics of Knowledge

Efficiency of Knowledge Transfer in R&D Sector

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XII HSE INTERNATIONAL ACADEMIC CONFERENCE
ON ECONOMIC AND SOCIAL DEVELOPMENT

WORKSHOP “S&T AND INNOVATION POLICY”

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Abbreviations

Research and development – R&D

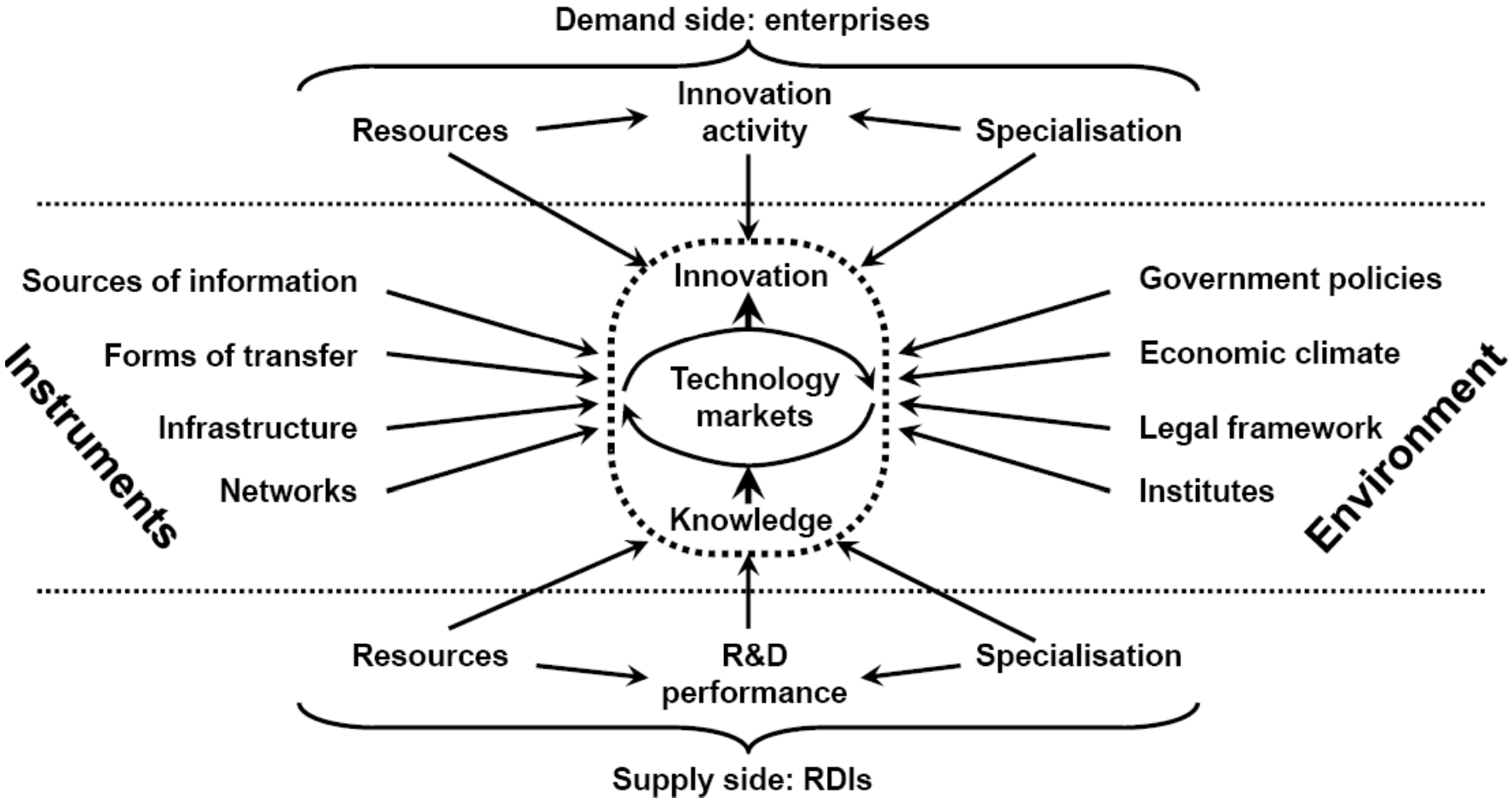
R&D results – RDRs

R&D institution – RDI

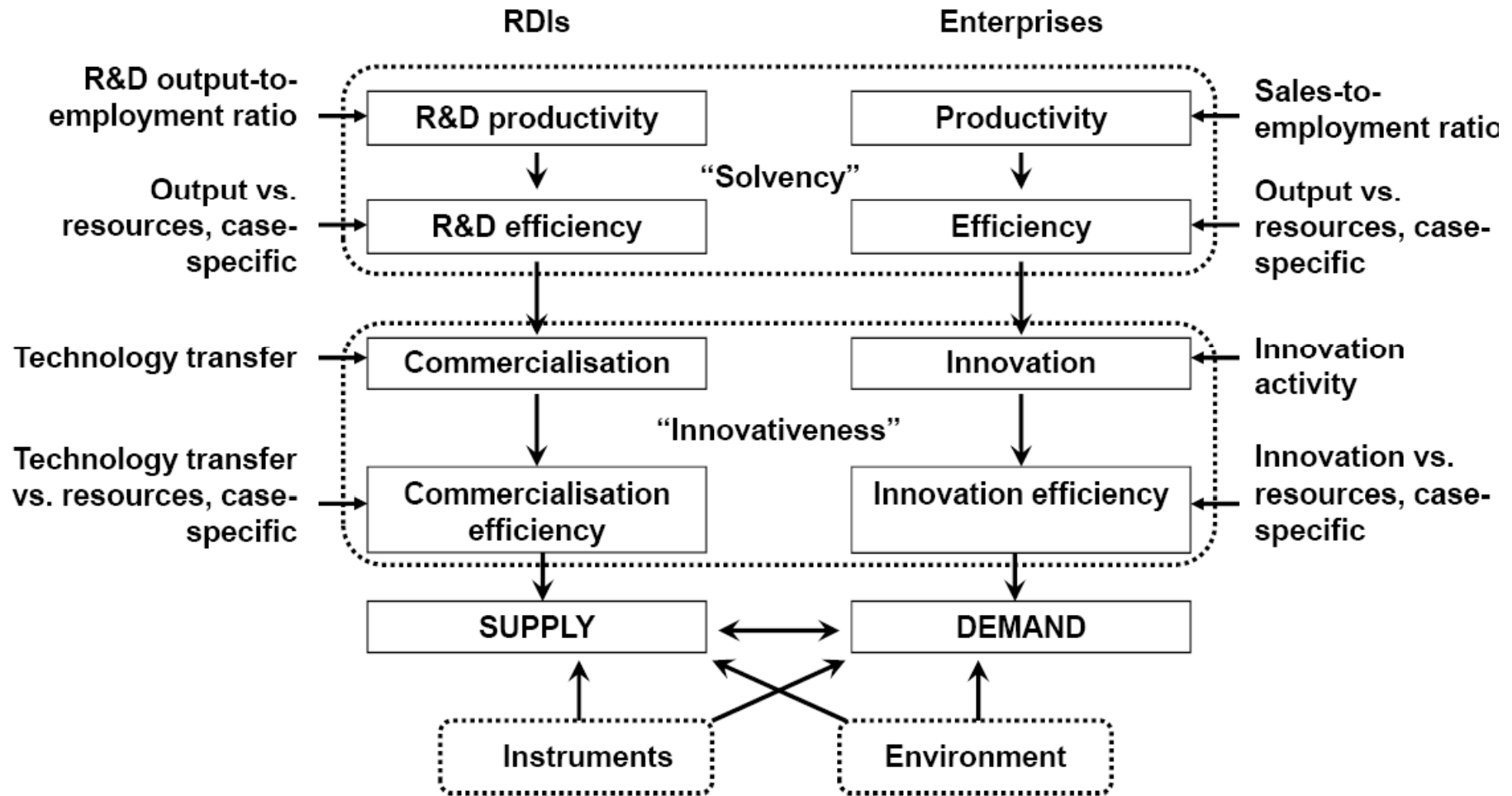
Technology transfer - TT



RDR transfer from RDIs: how to measure at the micro-level?

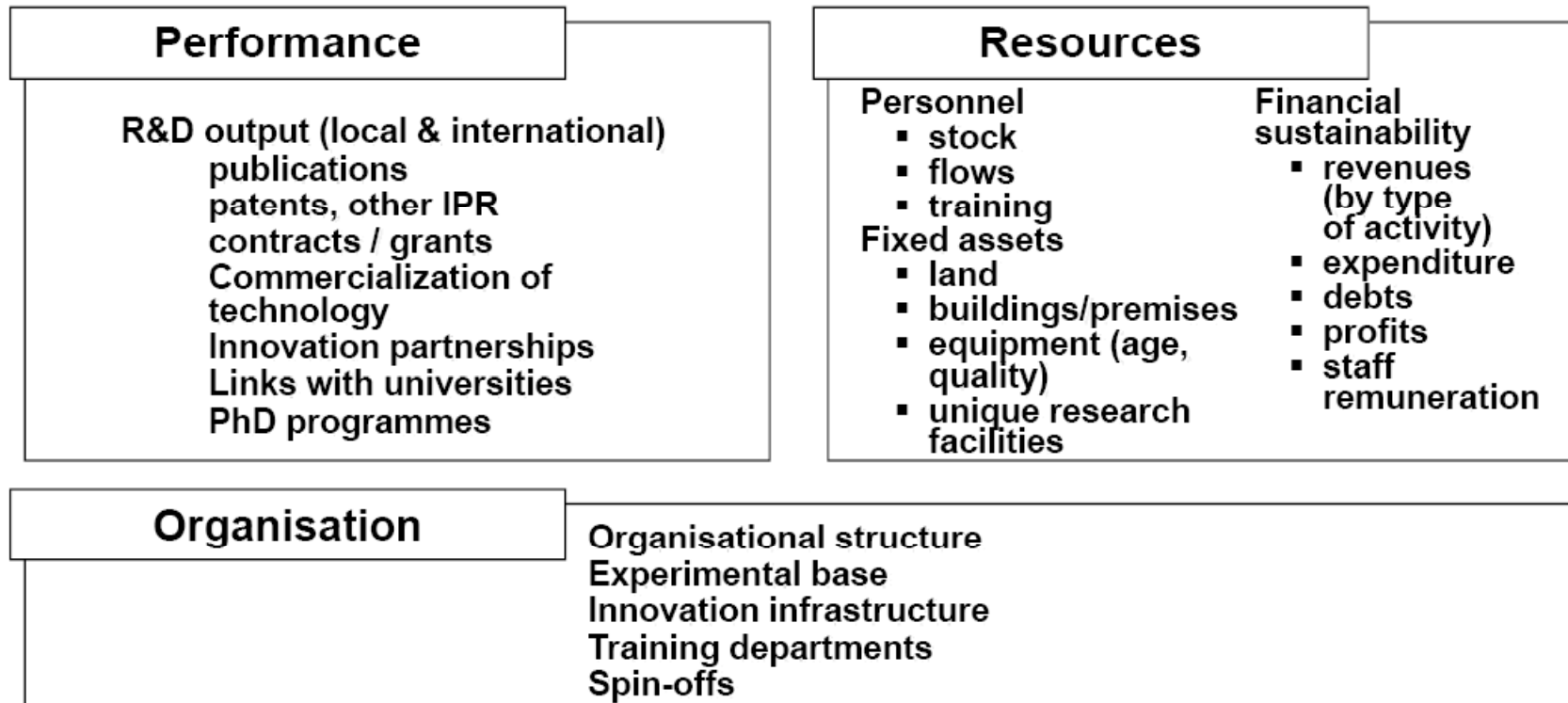


RDR transfer from RDIs: pieces of the puzzle



First complex survey of R&D institutions, 2007

- > Coverage – 119 public R&D institutions (state research centers, state academies for architecture and education, etc)
- > Contents:



2007 survey: effects of technology transfer

- **R&D results:**

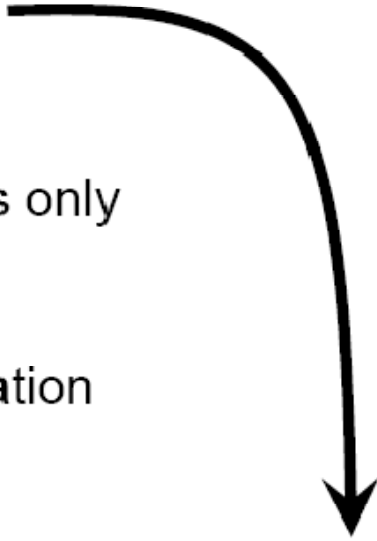
NO SUBSTANTIAL EFFECT

- **Financial results:**

Effect on structure of activities only

- **Organisational mechanisms**

Effect on structure of organisation

- 
- Technology transfer activities do not provide a definite competitive advantage
 - No direct motivation for technology transfer

2007 survey: strategies

CLUSTER 1 (“National leaders”)

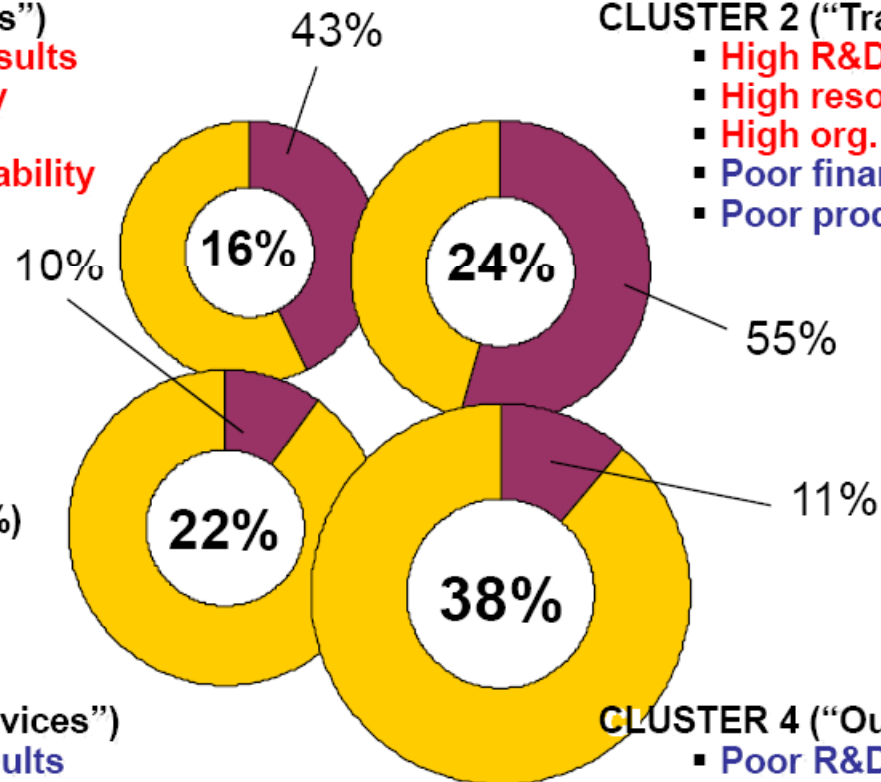
- High R&D quality & results
- High resources supply
- High org. innovation
- High financial sustainability
- High productivity

CLUSTER 2 (“Transitional”)

- High R&D quality & results
- High resources supply
- High org. innovation
- Poor financial sustainability
- Poor productivity

RDIs:

- Engaged in TT (26%)
- Not engaged in TT (74%)



CLUSTER 3 (“Government services”)

- Poor R&D quality & results
- High resources supply
- Poor org. innovation
- Poor financial sustainability
- High productivity

CLUSTER 4 (“Outsiders”)

- Poor R&D quality & results
- Poor resources supply
- Poor org. innovation
- Poor financial sustainability
- Poor productivity

Source: ISSEK calculations based on the Rosstat data



Survey on innovation behavior of RDIs, 2010

Sample: 305 research institutions; 196 perform RDR transfer

Contents: 58 questions; 160 variables

1. Performance

R&D performance; RDR transfer - intensity, forms, level of novelty, etc.

2. Resources

Financial, human, organisational, intellectual, etc.

3. Transfer management

Goal-setting, market monitoring, quality control, etc.

4. Environment

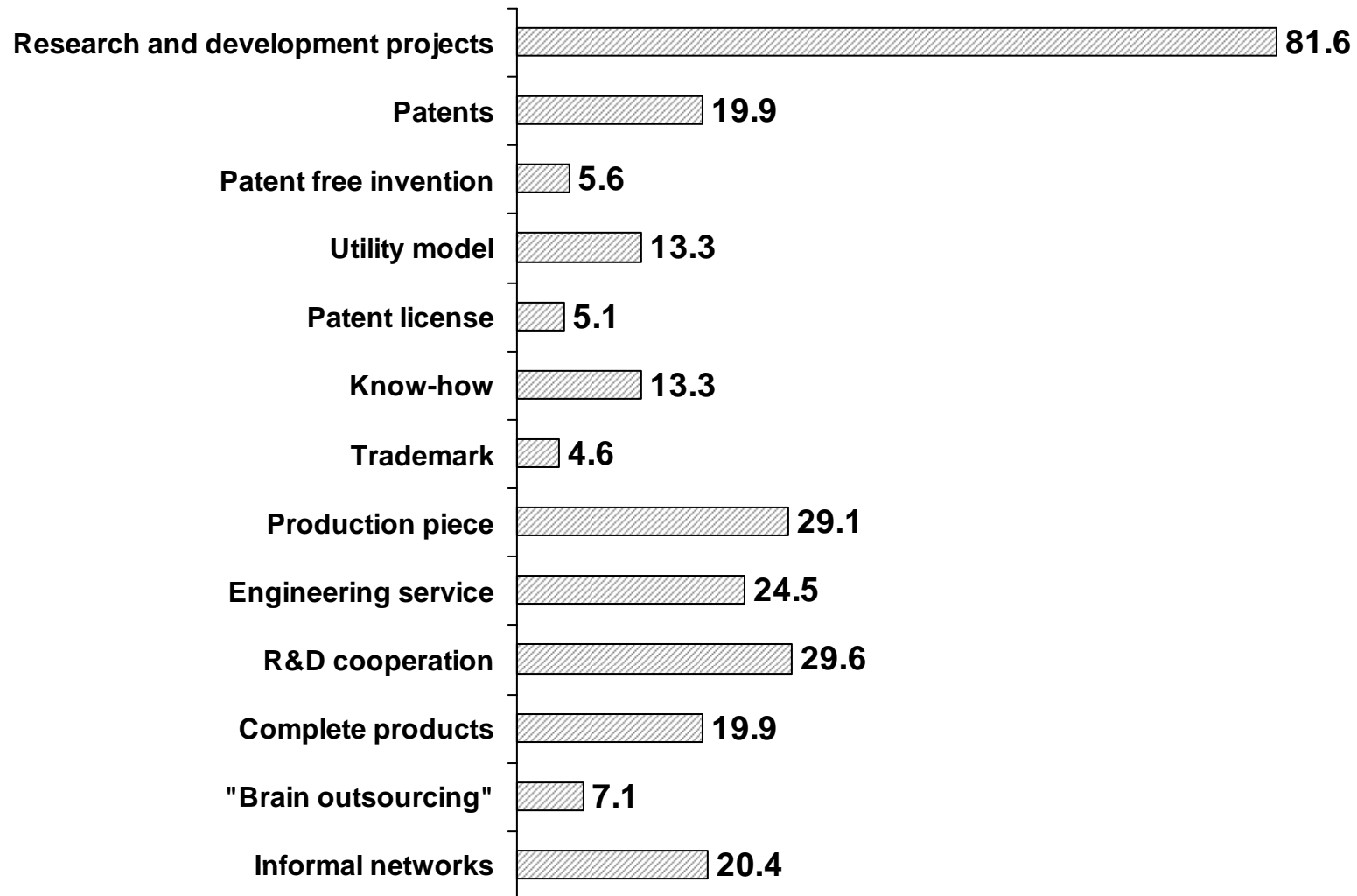
Networks, benchmarks, customers, mediators

5. Transfer factors

Obstacles, sources of information, economic climate, government support, etc



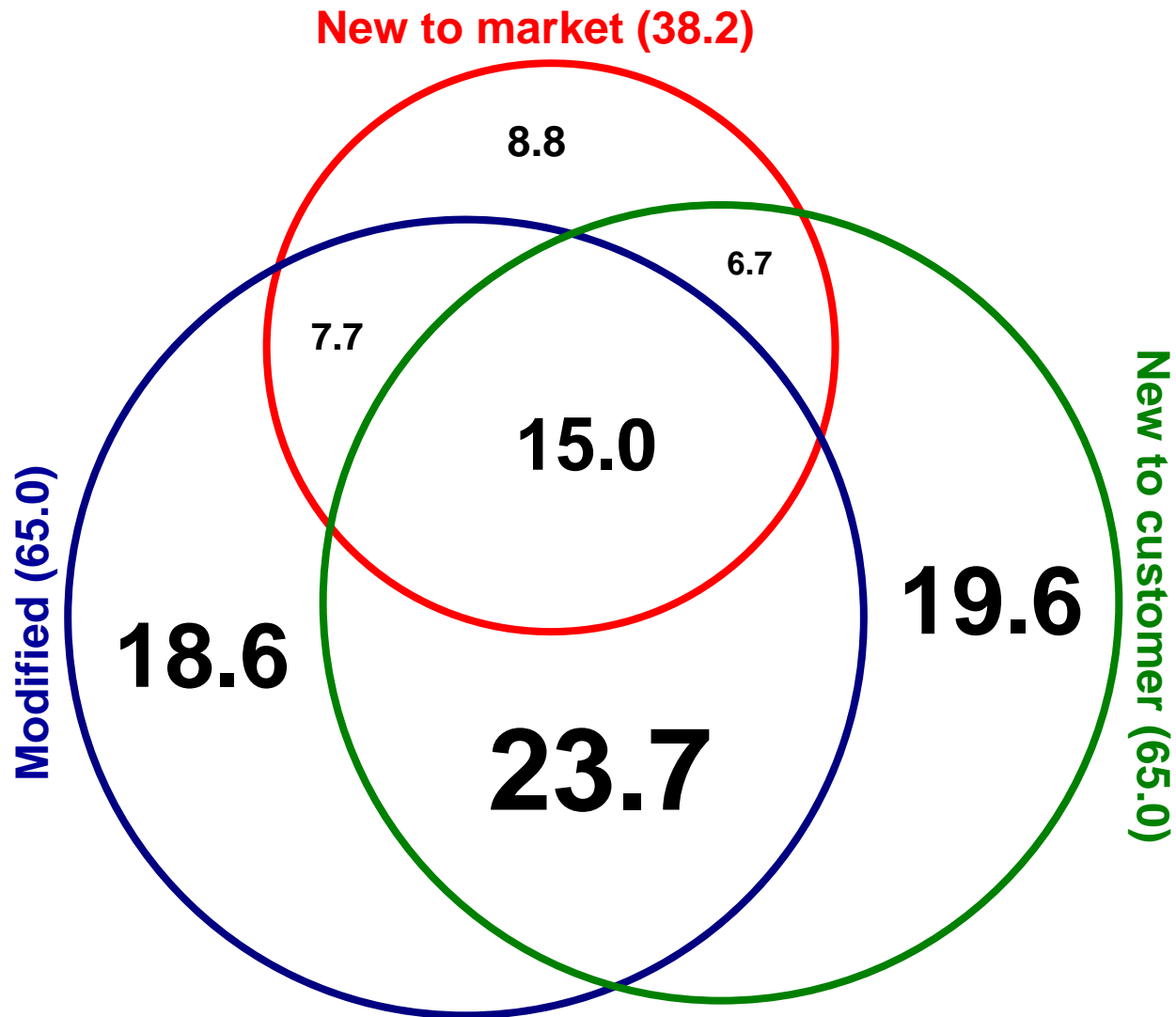
Pilot: forms of RDR transfer (%)



Source: ISSEK calculations



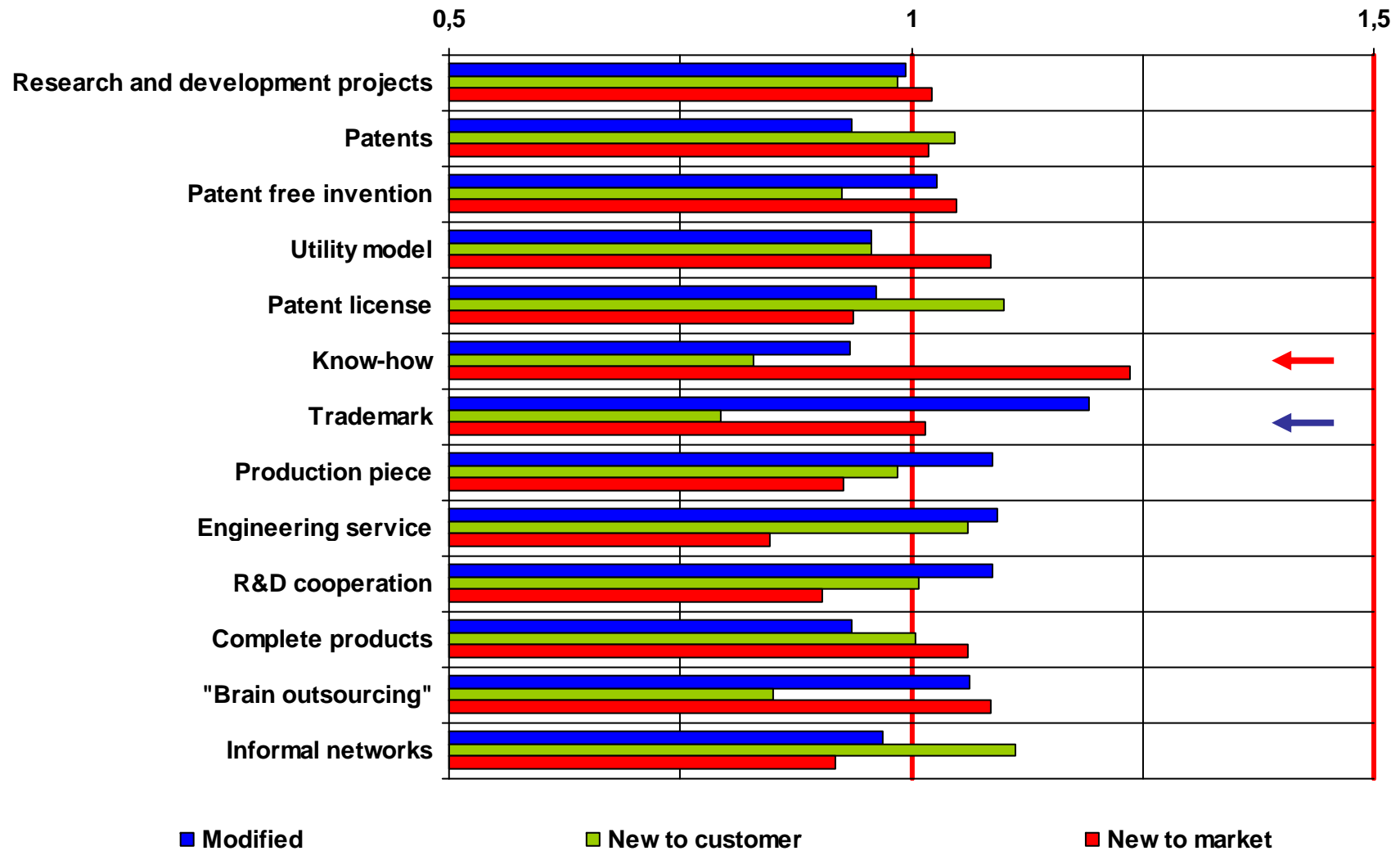
Pilot: transferred RDRs by level of novelty (%)



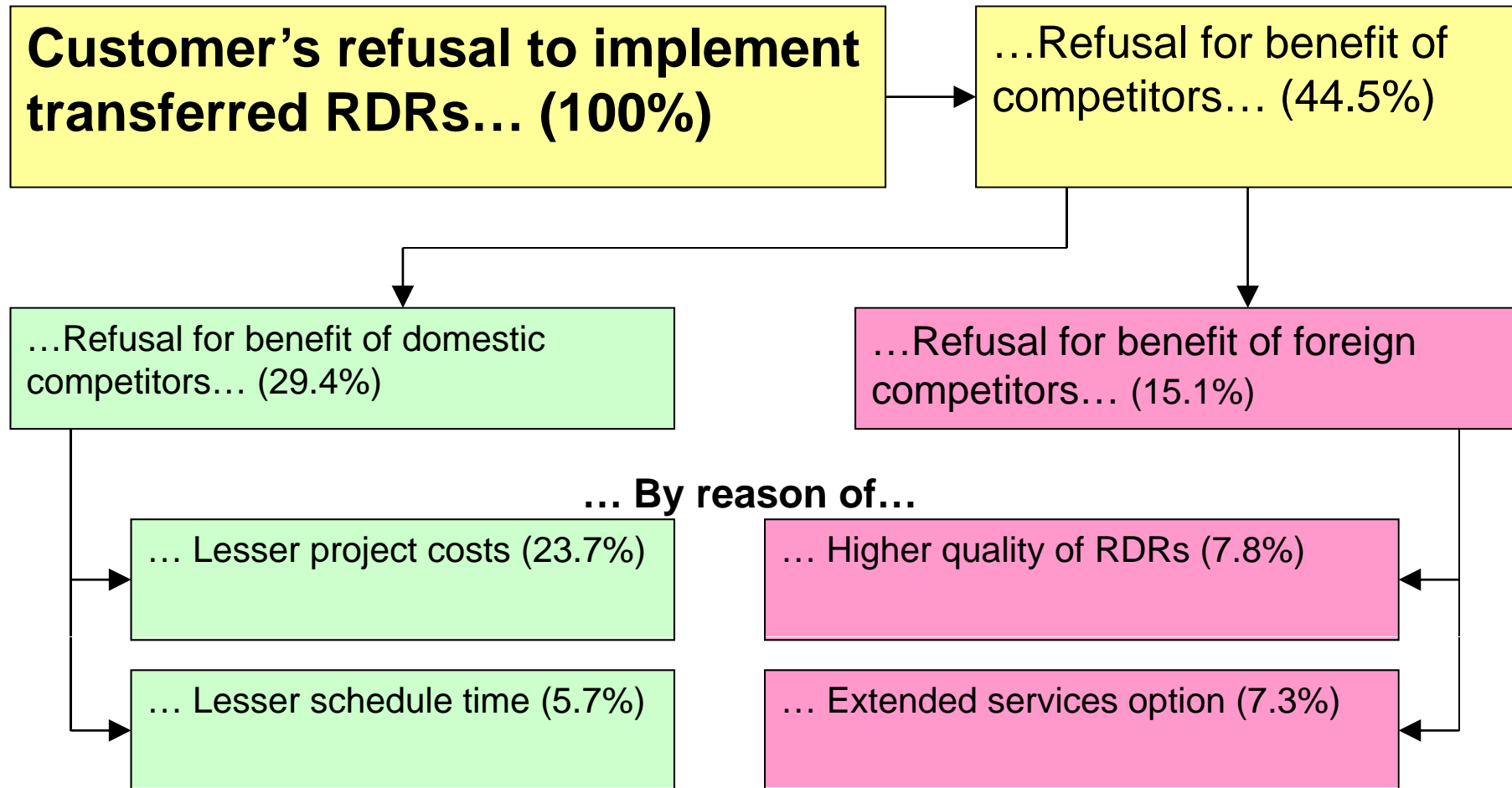
Source: ISSEK calculations



Pilot: forms of RDR transfer, deviation by level of novelty (k_{dev})



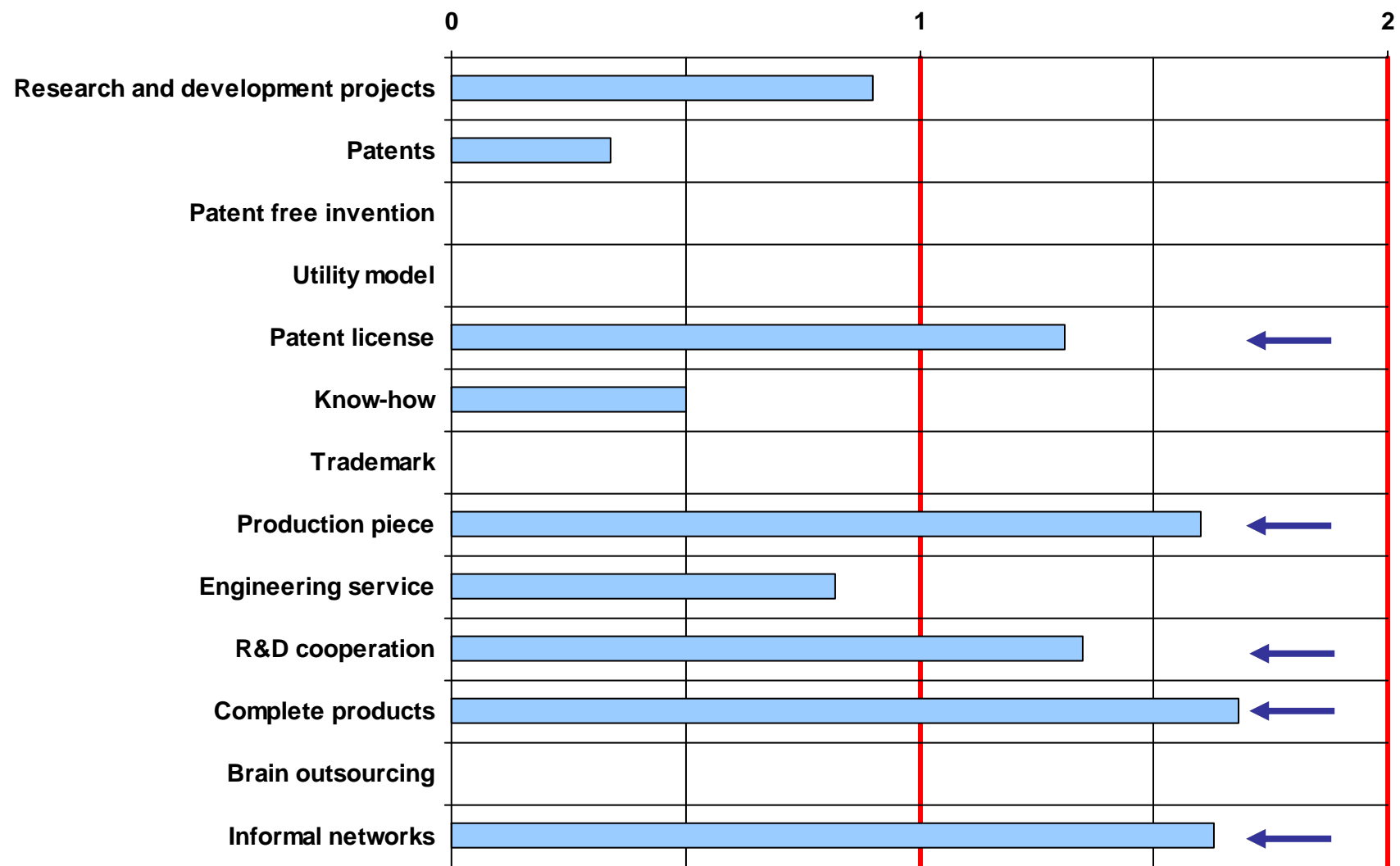
Pilot: competition factors



Source: ISSEK calculations



Pilot: forms of RDR transfer, deviation by customer's refusal to implement transferred RDRs (k_{dev})



Source: ISSEK calculations



Pilot: Innovation infrastructure

