Lessons Learnt
The Case of
Central European Countries

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Who‘s Talking

since 2001 researcher and executive manager at the ZSI
1996 - 2001 Austrian INCO-NCP at the BIT
1994 - 1996 Head of the Branch Office Sofia of the Austrian Institute of East and Southeast European Studies
1991 - 1994 Research Assistant at the Vienna University for Business Administration and Economics

- Partner in ERA-NET RUS (since 2009)
- Partner in BILAT-RUS (since 2008)
- Partner in INCONET EECA (since 2008)
- Evaluation of BRHE programme /CRDF (2007)
- Evaluation of INTAS (2004)
- Development of ININ programme (2003)

Focus

Lessons (to be) learnt from the association of the new EU member states to the European Framework Programme for RTD (FP5).

Focus on political process, programmatic and administrative procedures to enable RTD cooperation between EU and target countries (CEC).

Analyse the participation of CEC in FP in relation with their national research basis.

Analyse differences in scientific and technological specialisation patters etc.

Three Phases of RTD Co-operation with former CEC Candidate Countries

1. contact phase, characterised by creating opportunities for scientific meetings

2. Cooperation phase, characterised by the execution of numerous joint RTD projects

3. association phase, characterised by solving political, legal and operational problems encountered in the process of association

Phase One: PECO

- 2 531 fellowships
- 54 networks
- 179 conferences
- 223 joint projects
- 131 participations in FP3 projects
- and 147 participations in COST-actions
- with an overall final budget of 93 million ECU

- In case of EU-RF relations, a similar phase was concluded (PECO, early INTAS)

Phase Two: COPERNICUS

to enhance collaborative RTD across Europe

to strengthen research capacities and focus research to the socio-economic needs of the **CEECs/NIS**

to transfer and to develop knowledge and technologies likely to contribute to the rehabilitation of the economy in the target countries and

723 projects involving more than 4 000 partners (> 50 % from the CEECs and NIS) were funded

In case of EU-RF relations this phase was characterised by different approaches (COPERNICUS, late INTAS, joint calls; case-by-case participation in FP6 and FP7)

Phase Three: Association

- structural support: FEMIRC/NCP
- accompanying measures for capacity building
- centres of excellence
- association agreements

first discussion at a Structural Dialogue meeting at ministerial level on the 14th of May 1997 and reconfirmation in the conclusions of the Luxembourg European Council (12/13th December 1997)

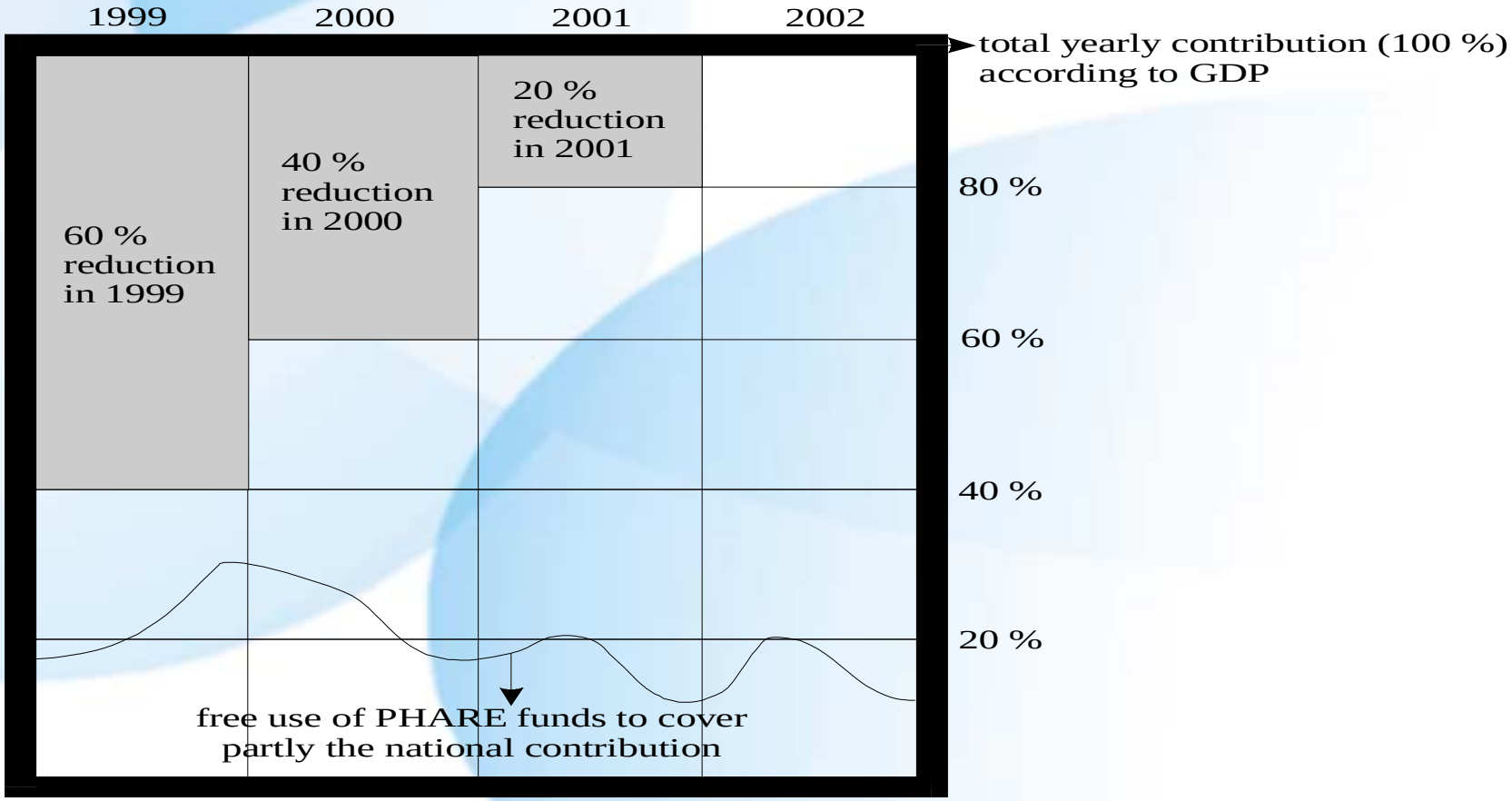
negotiation mandate was received during the Austrian EU Presidency on the 13th of October 1998

Steps to Association

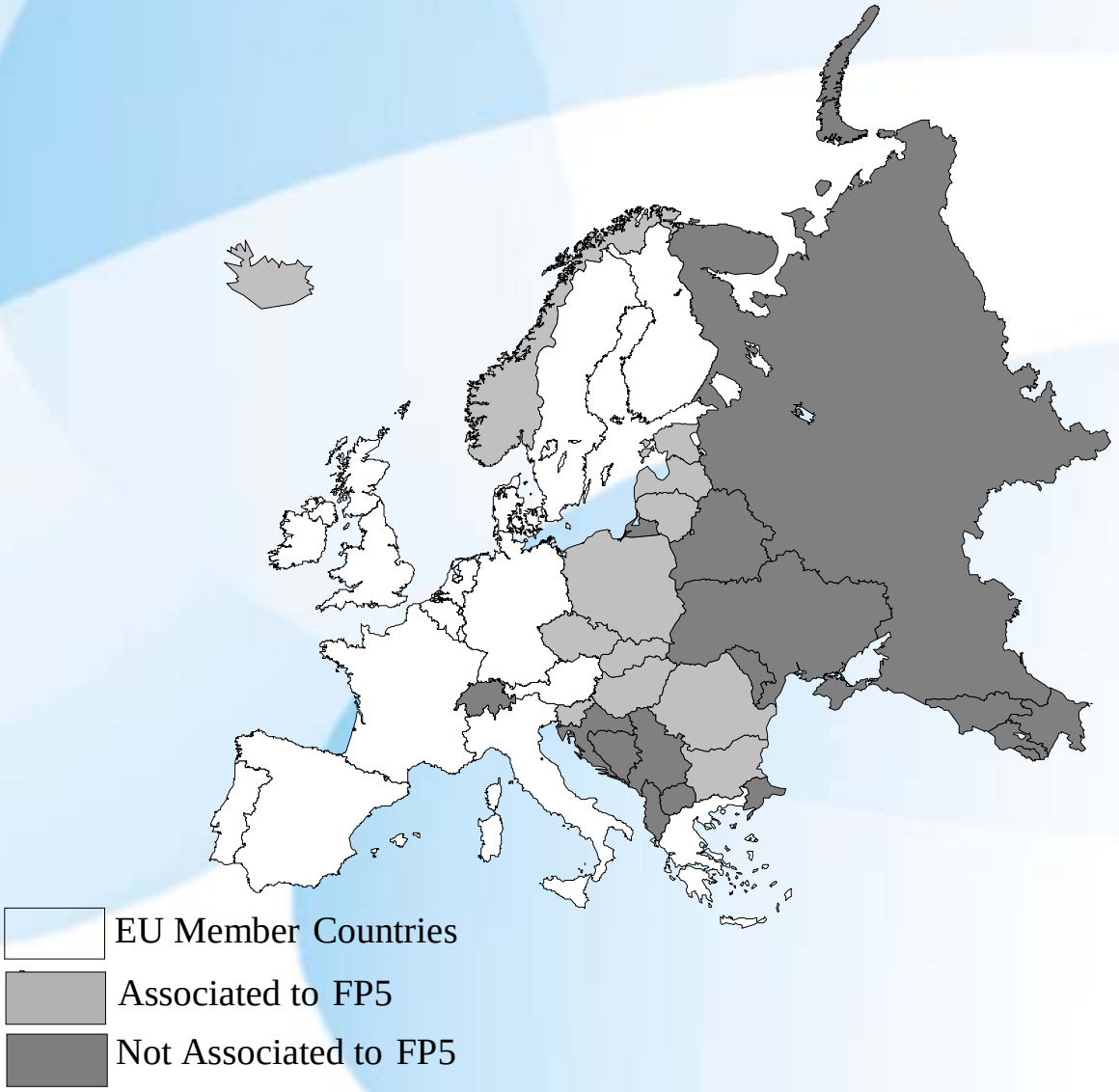
	Start of Exploratory Talks	Decision of the European Commission	Decision of the European Council	Entry into Force
Bulgaria	13.07.98	24.02.99	20.05.99	01.09.99
Czech Republic	22.01.98	08.02.99	20.05.99	01.08.99
Estonia	08.12.97	08.02.99	20.05.99	01.06.99
Hungary[1)]	21.01.98	21.01.98	20.05.99	01.08.99
Latvia	19.03.98	08.02.99	20.05.99	01.10.99
Lithuania	08.07.98	08.02.99	20.05.99	01.10.99
Poland	15.12.97	08.02.99	20.05.99	04.09.99
Romania	15.06.98	24.02.99	20.05.99	01.07.99
Slovak Republic	10.07.98	24.02.99	20.05.99	01.09.99
Slovenia[2)]	16.12.97	08.02.99	20.05.99	01.08.99

Source: European Commission (2000b)

Model of Digressive Financial Support for Calculating the CEC's Contribution to the FP5 Budget



Membership Structure



Expected Benefits from Full Participation

- unlimited access to European know-how
- direct R&D co-operation with EU member states
- significant experience for future full membership in the EU
- stimulation of competitiveness and economic growth
- possibilities for gaining new markets through R&D co-operation
- possibilities for technology stimulation in the business sector and
- creation of new jobs

So Far - So Good?

Experiences from CEC Association to FP5 (1)

Under the first calls for proposals in FP5 all CECs - including the forerunners Poland and Hungary - only scored between the least involved EU member countries under FP5, Ireland and Luxembourg. Organisations of the CECs made up just 5,6 % of all proposers and 4 % of the proposers in proposals retained for negotiations.

Since then the situation improved but most new member states are still complaining about below average performance!

Experiences from CEC Association to FP5 (2)

The economically more advanced Candidate Countries outperformed their economically weaker Central European neighbours in terms of European RTD competitiveness (different to COPERNICUS success rates).

Strong neighbourhood relations existed (historic and cultural ties; matter of transaction costs?). Only the biggest EU players could cooperate on equal terms across all CECs. Under COPERNICUS was a CIS cluster with almost no connections to CECs (politicaly two different trajectories!).

Experiences from CEC Association to FP5 (3)

Although the economically more advanced CEE also showed internal specialisation patterns, they were more balanced with regards to international sector comparisons. They have had competitive research across all S&T sectors, a characteristic feature of advanced national research systems.

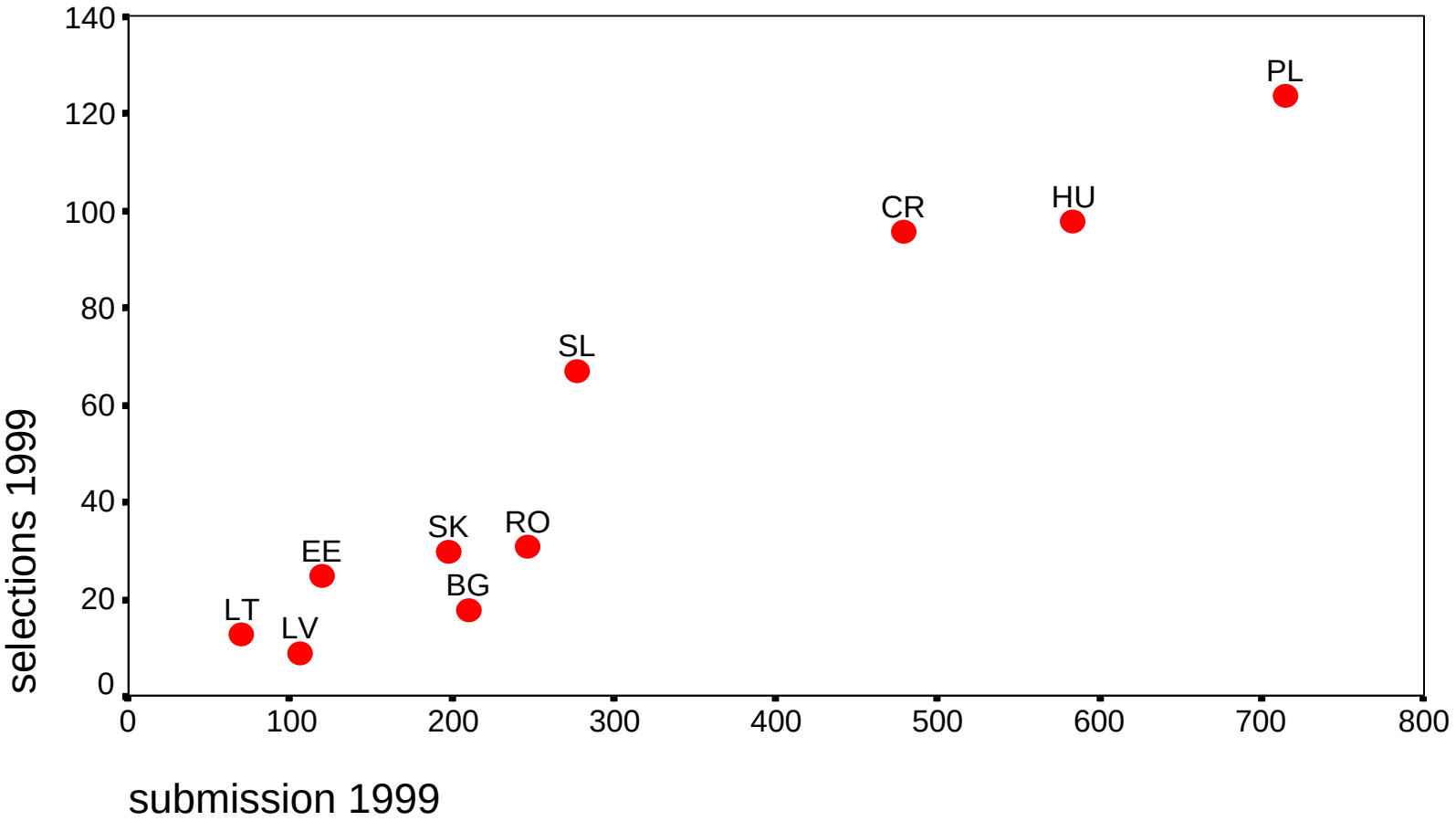
The less economically advanced CEC stood out by pronounced scientific-technological specialisation patterns under FP5 with either striking positive positions or striking negative positions (both in terms of submissions and selections).

Experiences from CEC Association to FP5 (4)

Association does not solve the problem of an unbalanced institutional participation pattern. The dominance of academic cooperation remained basically unchanged!

The Absolute Number of Selections Depends upon the Absolute Number of Submissions

$r^2 = 93{,}12$



Solution: Increase the number of submissions!

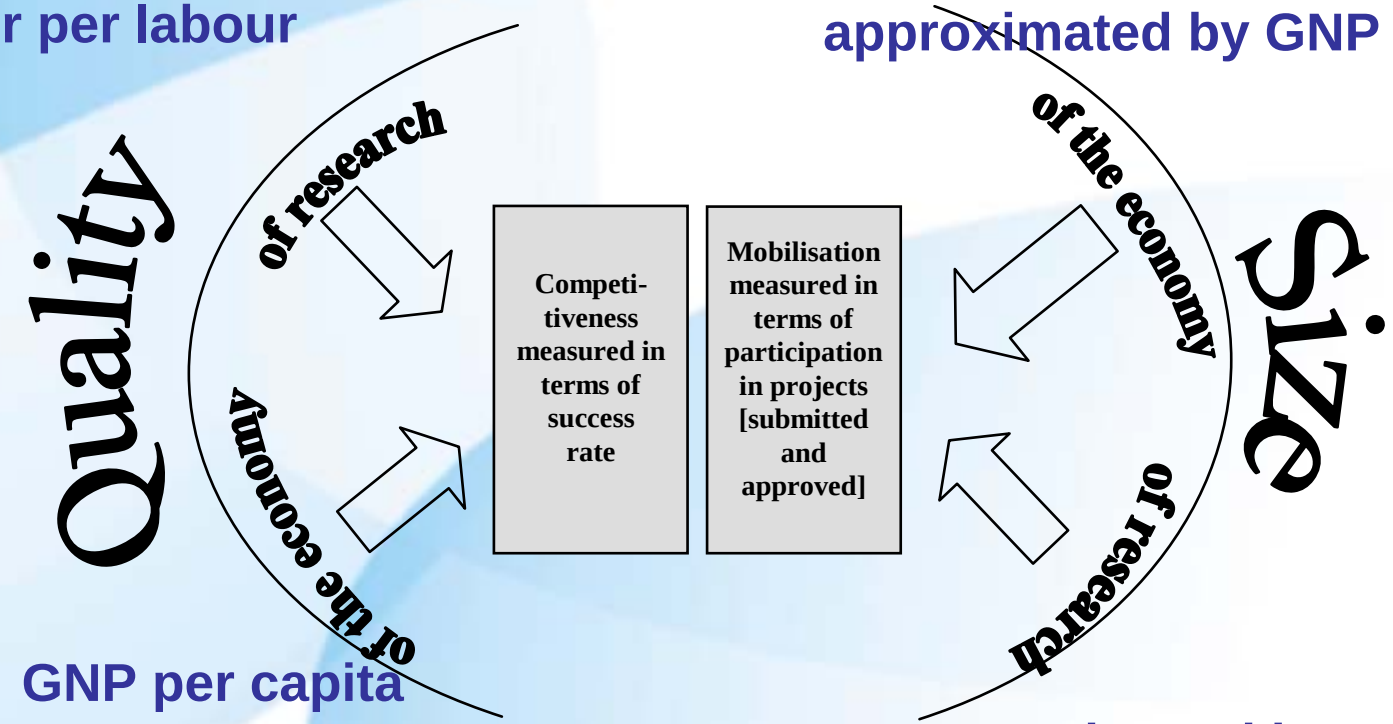
But what is important for a high number of submitted projects?

Hypothesis

The absolute number of submissions and projects selected for funding depends on quality and size factors of the national economy in general and the research system in particular.

Model for the Regression Analysis

GERD per researcher; GERD/GDP; no of researcher per labour force



approximated by GNP

GNP per capita

approximated by GERD; no of filled patent applications; no of researchers

Empirical Basis

Participation of CEC in FP projects submitted and selected:

submitted/selected

- 6.274/1.231 Copernicus
- 2.542/696 Activity 1 of FP4
- 3.003/511 FP5

Total
11.851/2.438 project participations were analysed!

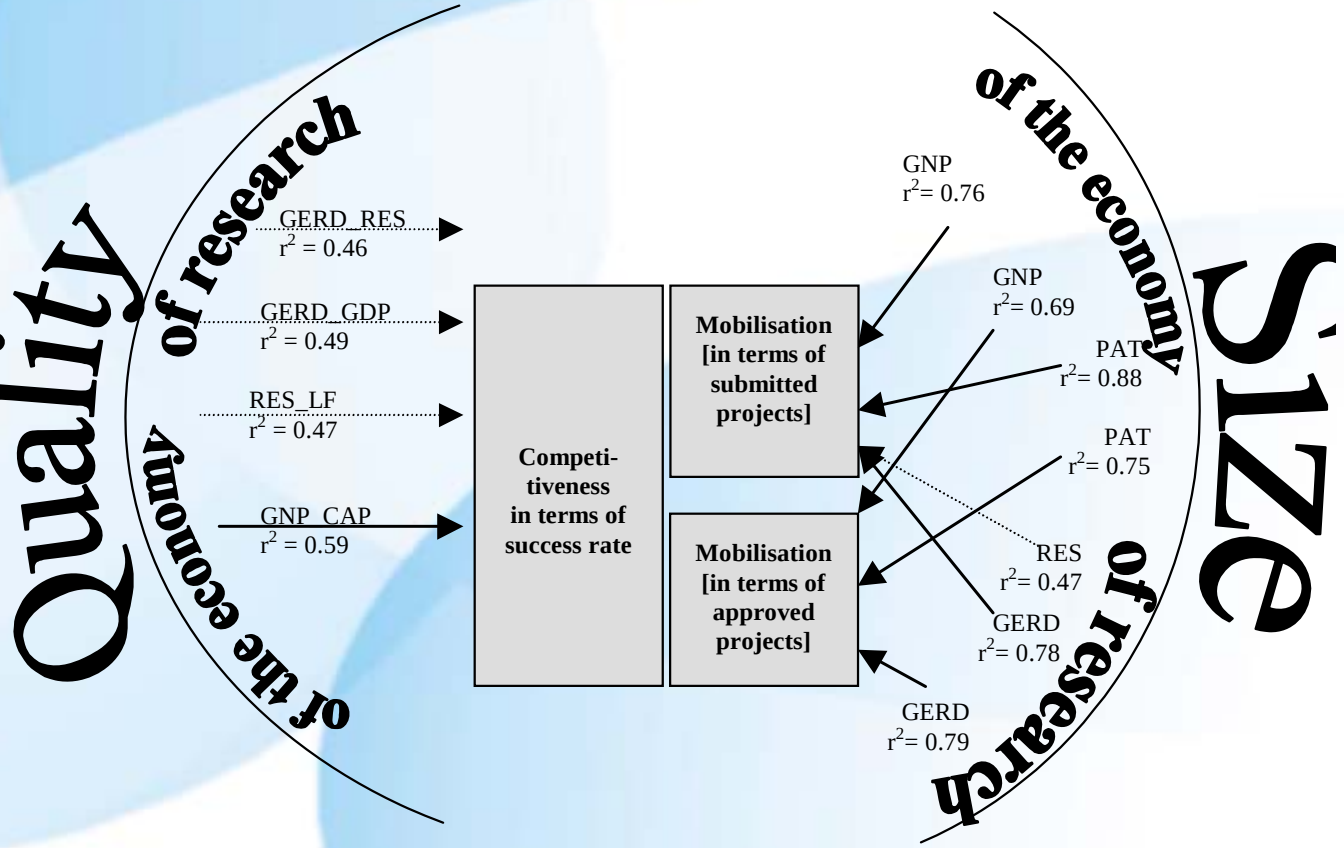
Results of the Regression Analysis

1. The size of the economy and of the research system have a significant influence on the mobilisation of researchers!

2. Size does not influence the competitiveness!

3. Quality factors have a distinctive influence on the competitiveness!

Results of the Regression Analysis



Conclusions (1)

- the better a national system of research, the more likely is a favourable participation in FPs (e.g. Austria)
- THUS: constantly improve the NIS!!!
- internationalisation must be promoted, appreciated and supported (counterbalance the high transaction costs; e.g. co-financing of projects; project preparation grants)
- FP participation should be integrated in the NIS in a harmonised way (not just an „add-on“)

Conclusions (2)

- enlarge the potential participant‘s base towards industry and SMEs, private non-profit institutes, universities and do not solely rely on the „old hands“ *(„you can bring a horse to the well but you cannot make it drink“)*
- Introduce competitive mechanisms (in addition to reduced, but not dismantled, core funding)
- professionalise the NCP support system
- earmark a share of basic funding for internationalisation and QA

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Polish Considerations at the Start of its FP5 Involvement (1)

- low level of research financing
- low involvement of enterprises
- qualifications and equipment of a considerable number of research groups not matching world standards
- strong areas of Polish science only partially corresponding to scientific and technological themes of FP5
- lack of information about EU RTD Programmes
- lack of international contacts to build a consortium or to be invited into an existing one

Polish Considerations at the Start of its FP5 Involvement (2)

- incompatibility of legal and financial rules between the Polish practice and FP5 regulations
- lack of organisational support in legal and financial matters
- weakness in protecting the IPRs
- *lack of resources necessary for preparation of proposals*
- *lack of sources of co-financing*
- lack of manpower and
- *insufficient incentives and lack of motivation*.

Polish Homework: The SCI-TECH Programmes under PHARE

- e.g. institution and capacity building for the National Contact Point network,
- auditing and benchmarking of selected Polish research institutions interested in FP5,
- support to SMEs to prepare for CRAFT projects and participation in FP5,
- implementation of a Feasibility Award Fund and
- establishment of a monitoring system for the Polish participation in FP5

FP5 Success Rates

Participation of CECs in the First Calls for Proposals under FP5

First Calls in FP5	Baltics	Bulgaria	Czech Republic	Hungary	Poland	Romania	Slovakia	Slovenia
No. of Projects Submitted	210	296	479	583	714	246	198	277
No. of Projects Approved	18	47	96	98	124	31	30	67
Overall Success Rate [in %]	**8.57**	**15.88**	**20.04**	**16.81**	**17.37**	**12.60**	**15.15**	**24.19**

Source: own calculations, raw data by EC (1999a)

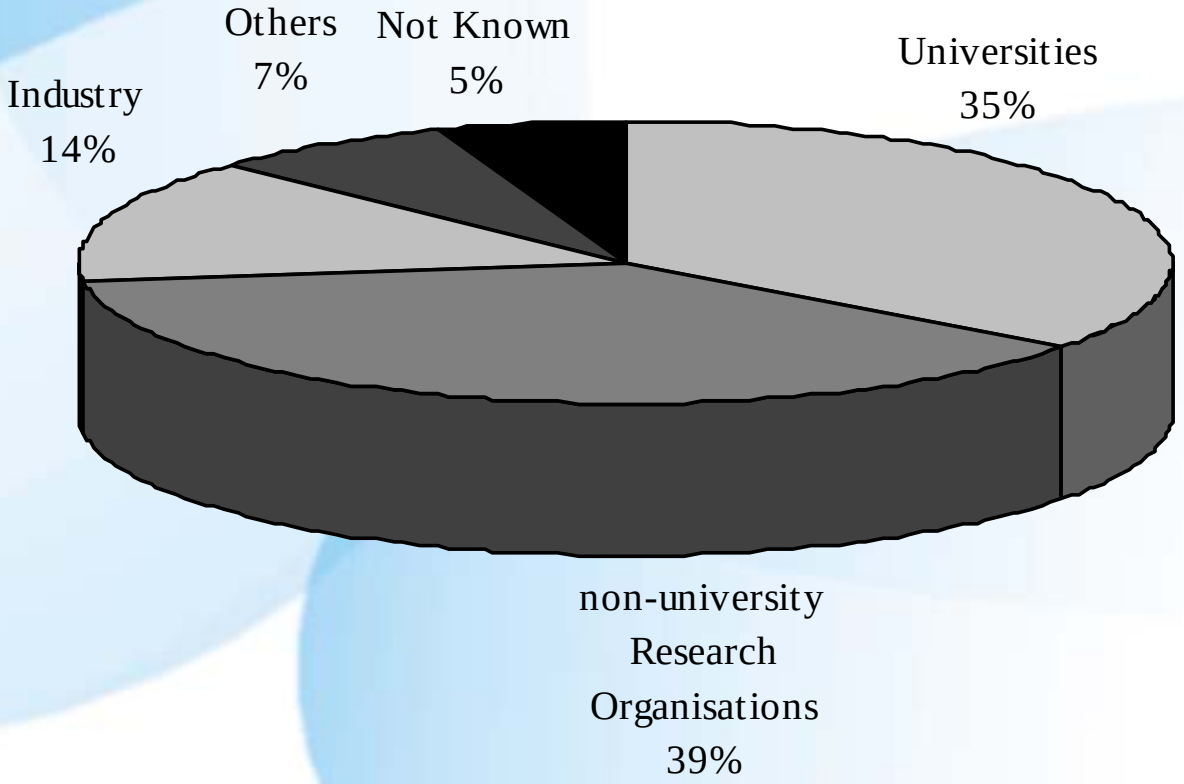
Openness Factor and Input-Output Efficiency

Performance Indicators	Baltics	Bulgaria	Czech Republic	Hungary	Poland	Romania	Slovakia	Slovenia
Openness factor [1)]	13.33	10.99	20.18	28.70	8.45	4.69	12.03	28.38
Input-output efficiency [2)]	3.26	2.52	0.76	1.20	1.44	3.59	1.60	0.87

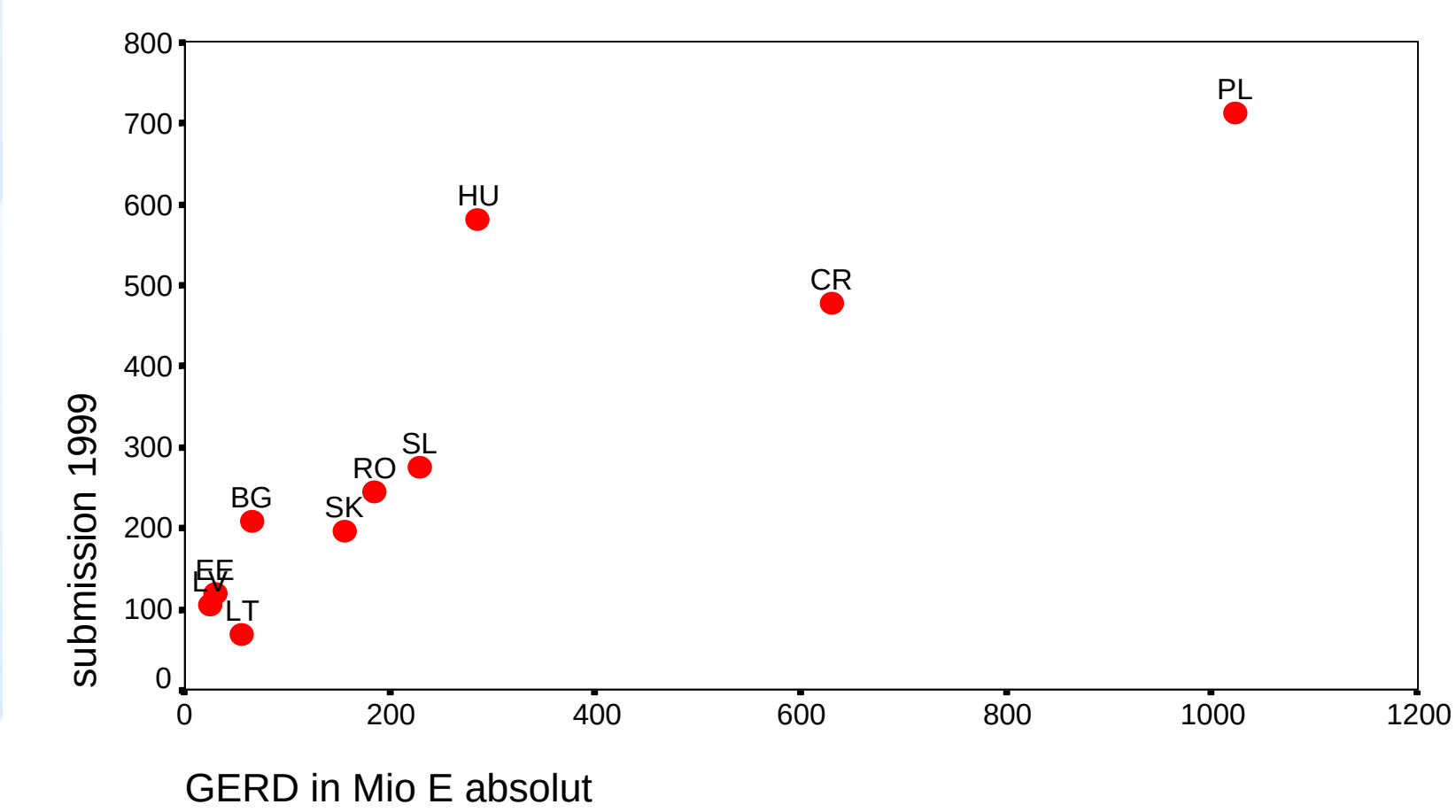
Notes: [1)] measured in projects submitted under FP5 by no. of researchers (*1000)
[2)] measured in success rate under FP5 (output factor) by gross expenditure on R&D per researcher (*1000) (input factor)

Source: own calculations, raw data by EC (1999a)

Institutional Origin of Research Entities from CECs



The Absolute Number of Submissions Depends upon GERD



Result

r^2= 78,14

yi= 139,129926 + 0,601830

Signif F = 0,0007

Sit T = 0,0007

H1 = ✓