



Institute of Education,
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System(s) of higher education

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1. Higher education systems
2. Federal higher education systems
3. Regional higher education systems and their role in social and economic development

“I consider it impossible to know the parts without knowing the whole, or to know the whole without knowing the parts.”
(Pascal)

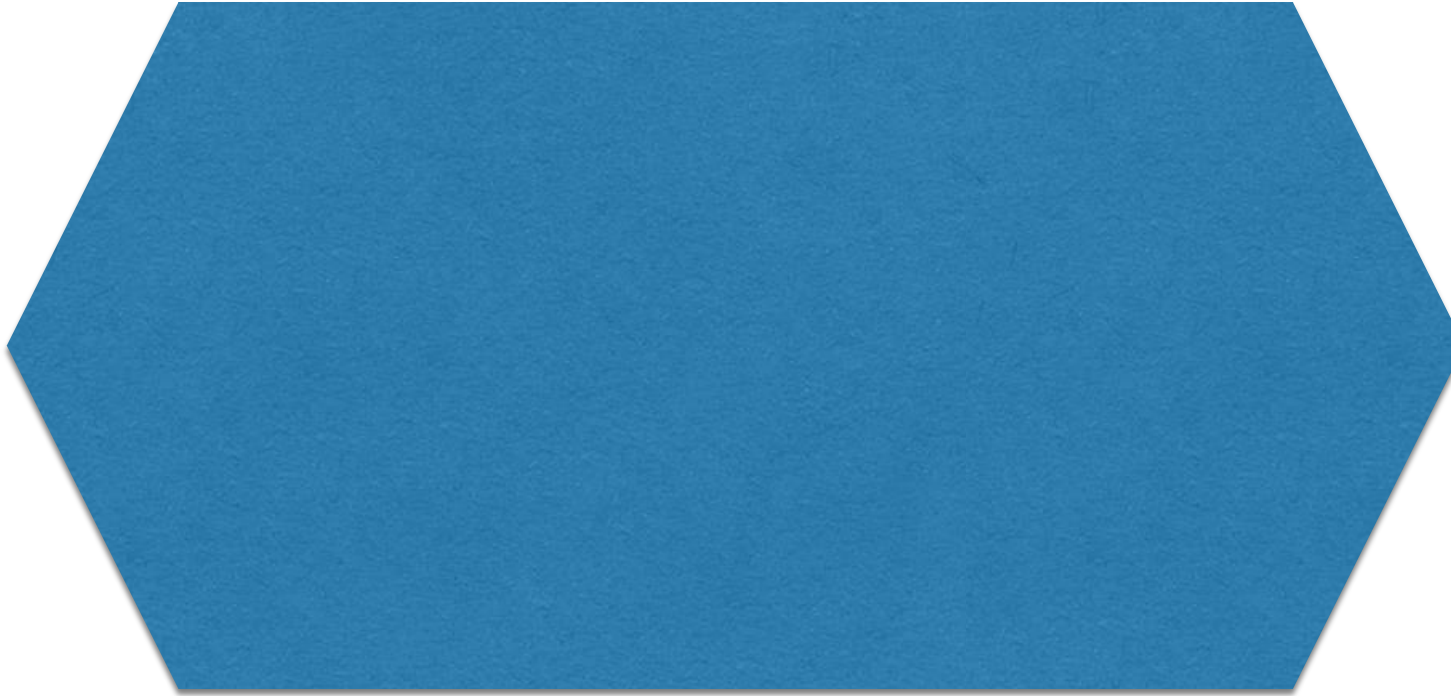


Individual university as a subject of study



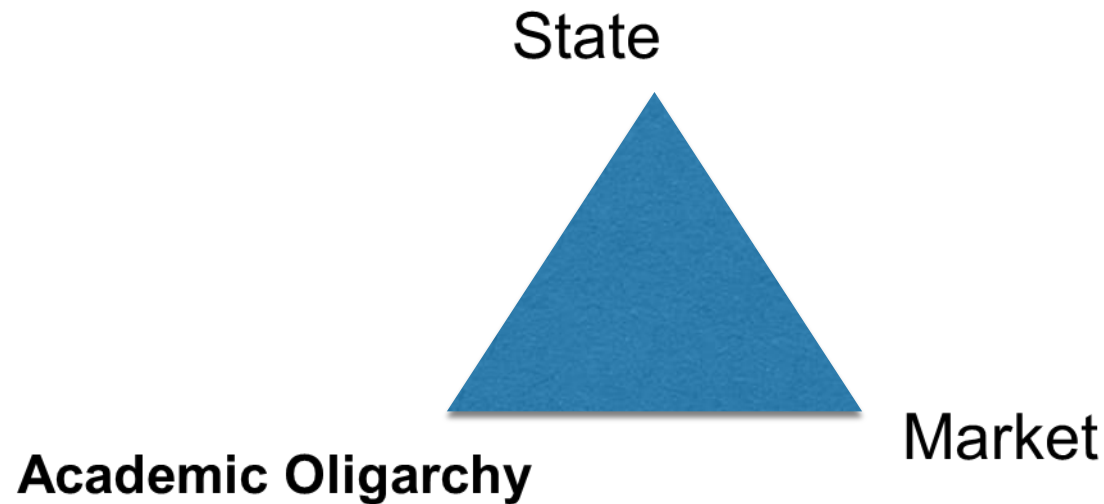


System of higher education as subject of study



Parsons, T. and G. M. Platt (1973) *The American University*,
Systems Theoretical Perspectives on Higher Education Policy and
Governance Thomas Pfeffer and Rudolf Stichweh (2015)

Triangle of influence (coordination)



Three basic elements of the organization of higher education system are identified: the way work tasks are arranged, primary norms and values, and the distribution of legitimate power throughout the system.

The Higher Education System: Academic Organization in Cross-national Perspective. [Burton R Clark](#) 1983.



DIMENSIONS OF COMPLEXITY

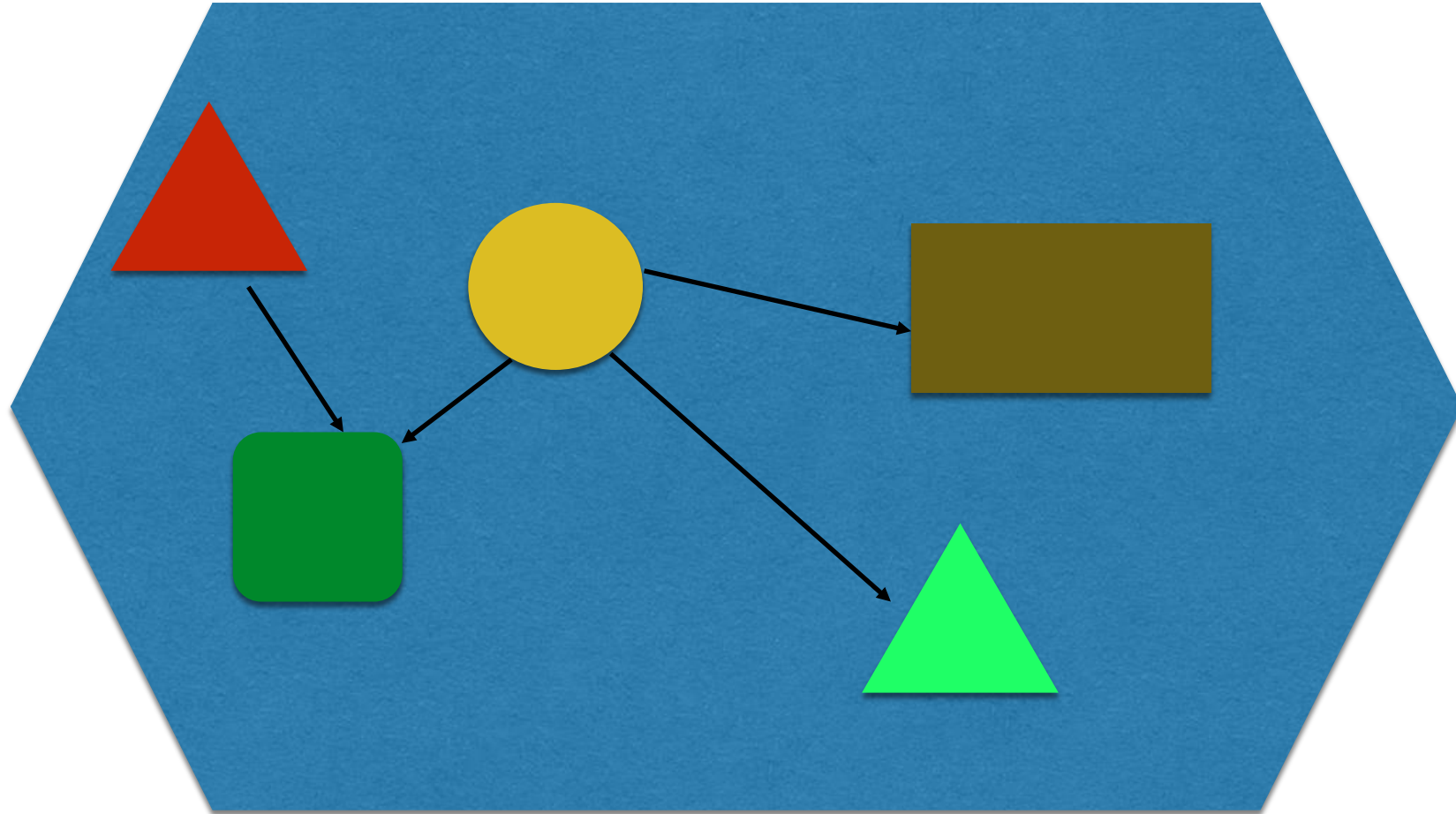
- THE PROBLEM OF COMPLEXITY IN HIGHER EDUCATION.

Clark 1987

- when developing societies seek to modernize their systems of higher education, those systems evolve toward an open-ended, ambiguous complexity.
- Self-amplifying structural differentiation
- Particularly in the large nations, growing complexity tends to call out and/or strengthen regional structures.

The critical element in the structure of university systems is their ability to combine contradictory functions (Castells, 2001)

System and its elements





- **Neo-institutionalism** – sociological approach to the institutions and their interaction (DiMaggio, P. J. and W. W. Powell (1983) ‘The iron cage revisited: institutional isomorphism and collective rationality in organizational fields’) - **institutional isomorphism** (coercive, mimetic and normative) influences the development of the elements
- **Theory of industry markets** – competition and regulation
- **Organizational ecology** – niches, age and size dependence, role of environment (Aldrich and Auster 1986, Baum 1996)
- **Social engineering view** – higher education system as part of “planning economy” (Soviet project, California master plan?)



Soviet invention – “quasi-corporate” higher education

V. Lenin: “USSR economic and social system as an one single unified factory”

HE - part of the enterprise as a manpower supply machine

- Horizontally:
 - Territorial distribution: all regions have nearly similar institutions
 - Industrial distribution: HEIs are located near production facilities
- Vertically:
 - HEIs are usually ruled by particular federal sectoral ministry
 - No local initiatives were tolerated
 - Rigid centralization: curriculum development, students' places allocation, and mandatory job placement

Forced connections with local economy and social development (also through the Communist party)



- What are the features of the internal structure of the system: homogeneity / heterogeneity?
- What are the elements and components of the system (typology of elements and sub-systems)?
- What are the features of education governance?
- How does the interaction within the system determine its features?



Types of systems

“Microsystem - the internal interaction of the individual

- Mesosystem - interaction between microsystems (teacher-student, parents-children)
- An ecosystem is a broad social system in which individuals interact and that influences them.
- Macrosystem - the context in which the system exists (for example, regional or national)
- Chronosystem - time periods that affect individual or systemic interactions (for example, the gap between political and educational cycles)

(Snyder, OECD, 2013)



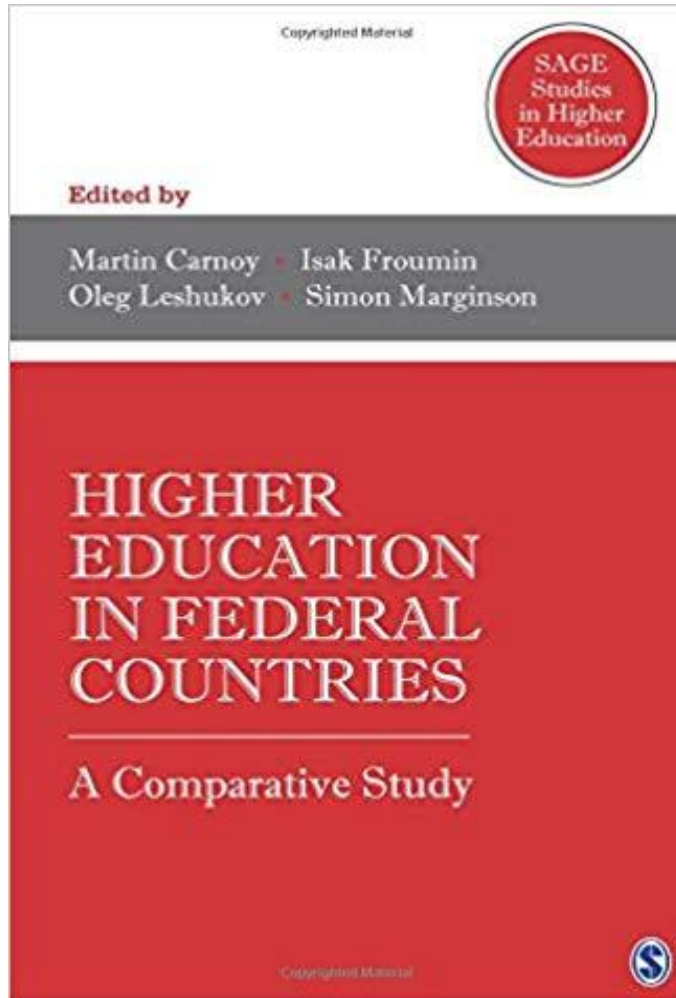
vertical and horizontal differentiation

- Horizontal differentiation refers to making distinctions between types of higher education institutions on the basis of their function within the broader fabric. (Teichler 1988, also Taylor et al 2008). As such, the landscape or configuration could be seen as a reflection of a social pact (Gornitzka 2007).
- Vertical differentiation refers to differences in status and prestige, with further connotations like “elite” and “high quality” (Teichler 1988; Huisman 1998).

Access and structure of systems



Increasing internal
heterogeneity of institutions,
decreasing the heterogeneity
of systems?



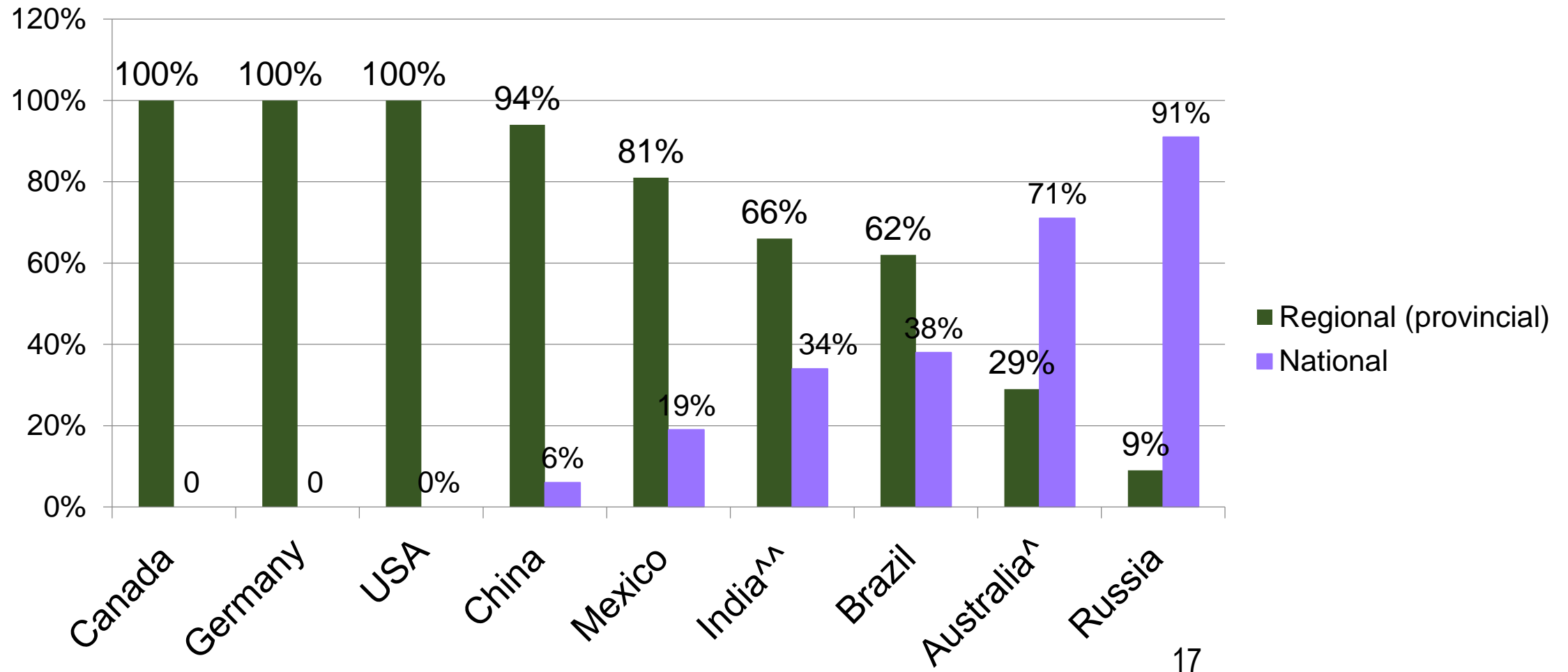
What is the impact of a particular governance model in the higher education system on the quality and access, on the role of higher education in the **regional** social and economic development?



Implications of federalism at higher education sector

- Theory of market-preserving federalism (de Figueiredo, B. Weingast, 2001)
- “Hard” and “soft” federalism (Smith & Wood, 1992).
- Centralization; decentralization; «centralized decentralization» (Mok Ka-Ho, 2013)
- “Pragmatic federalism” (Hollander, Patapan, 2007)

The distribution of number of public higher education institutions by subordination, 2014



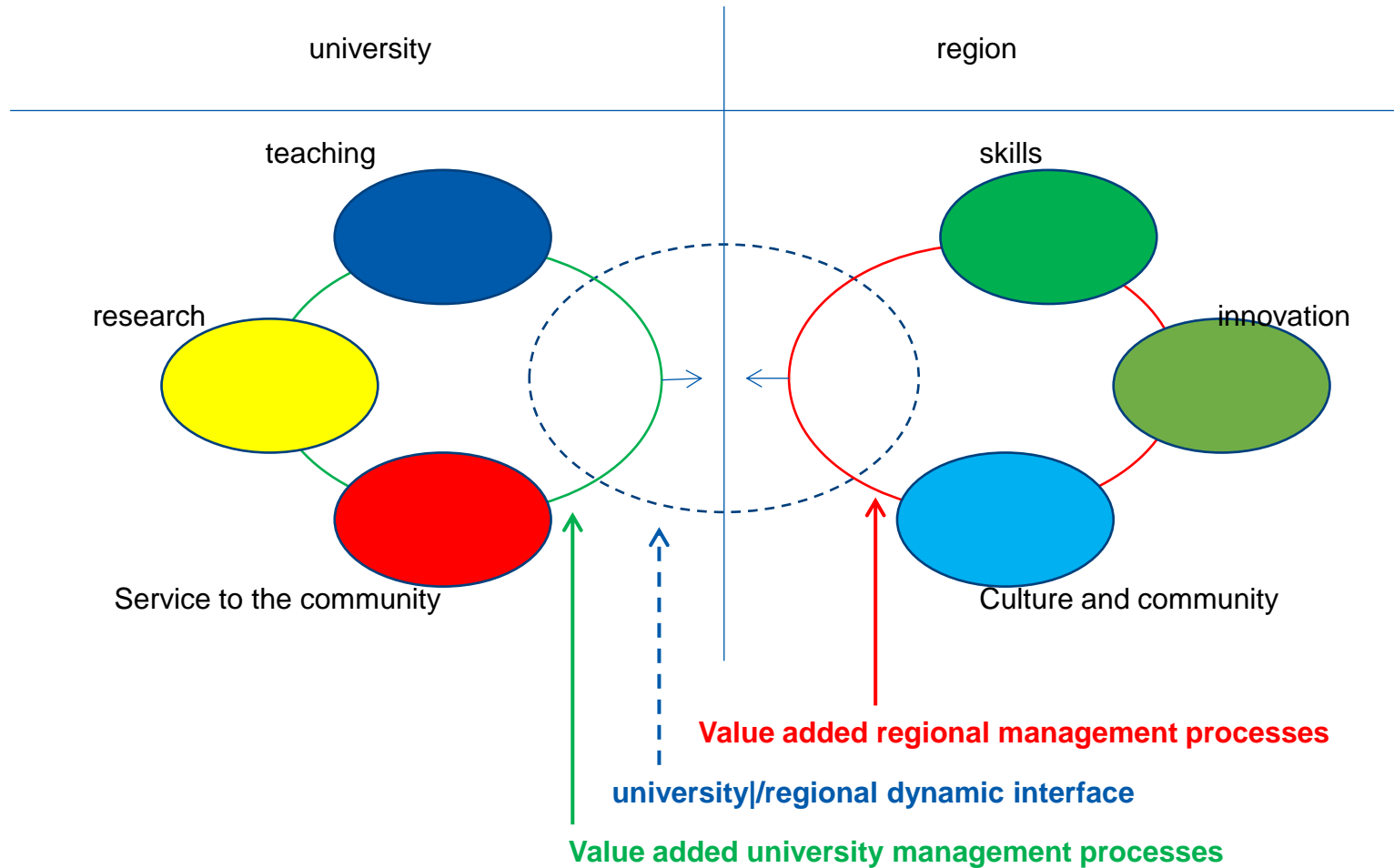
The main trends of development of federalism in higher education

- Strengthening federal control through
 - quality assessment
 - student assistance
 - research funding
 - internationalization support
- Federal support of world-class universities



- Supporting universities engagement in regional development

MODEL OF UNIVERSITY- REGION COOPERATION*



*OECD «HE in regional and city development» 1999

The Civic University model (J. Goddard)

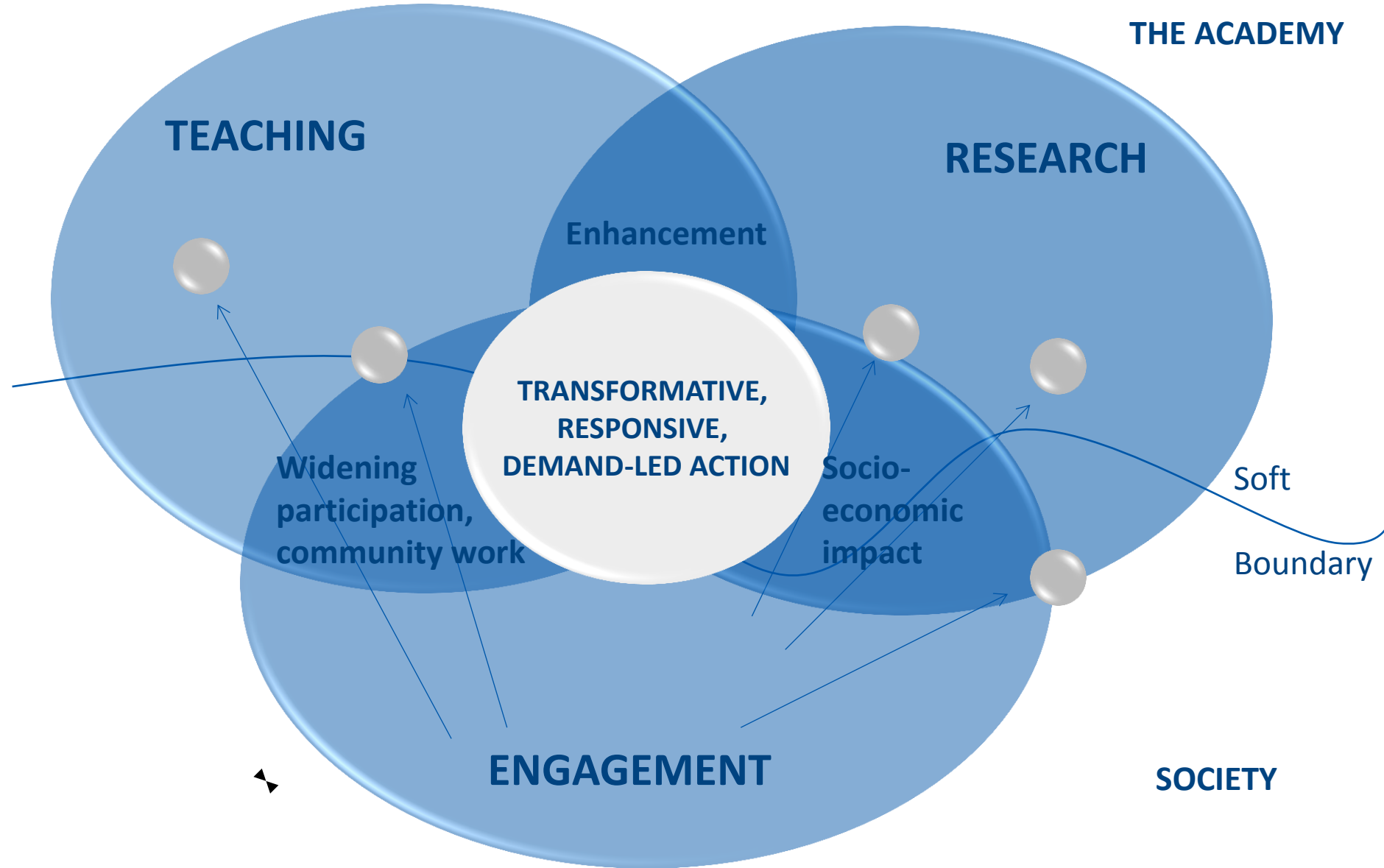
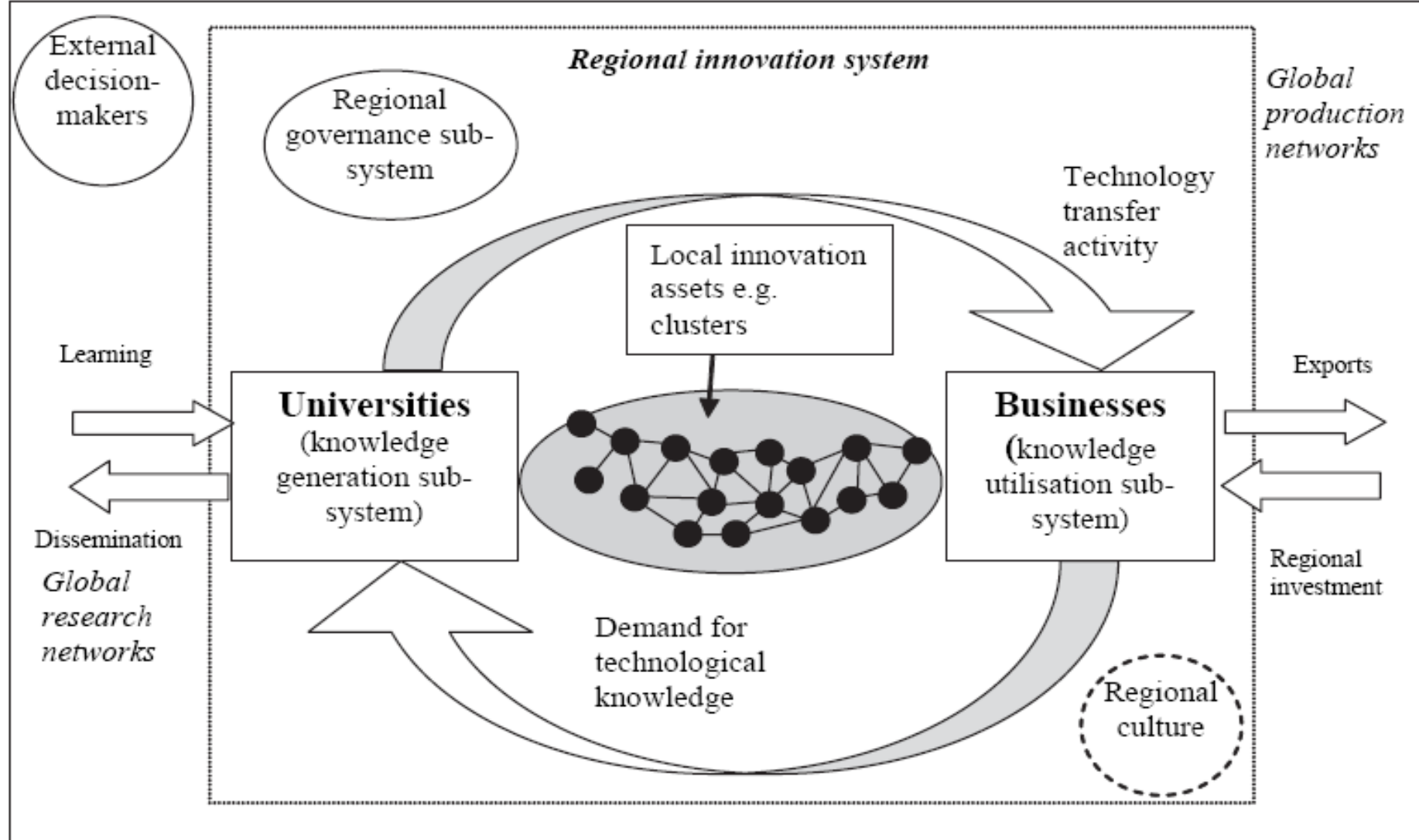
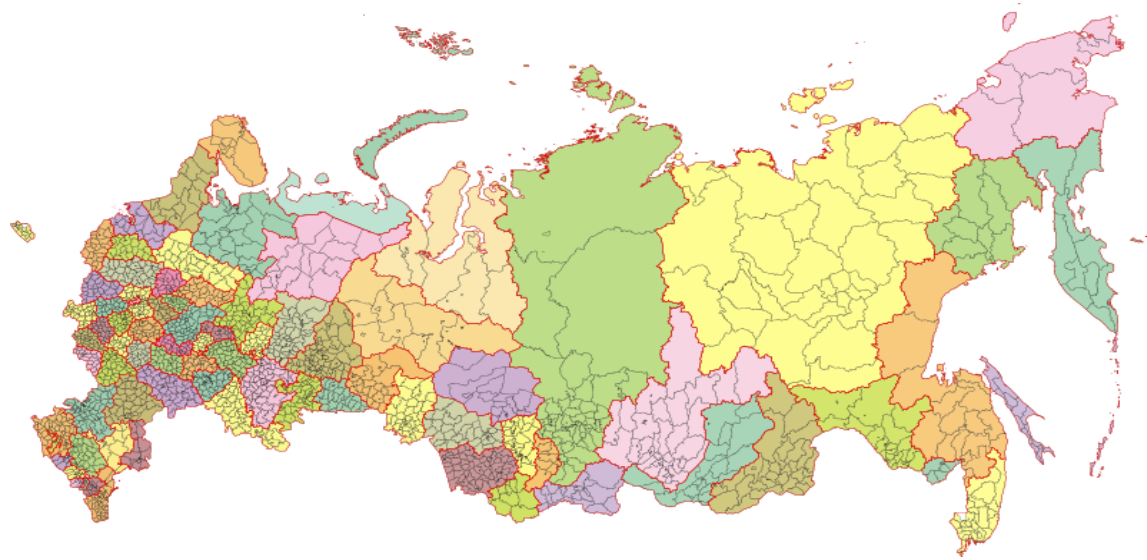


Figure 1

AN IDEAL-TYPE REGIONAL INNOVATION SYSTEM



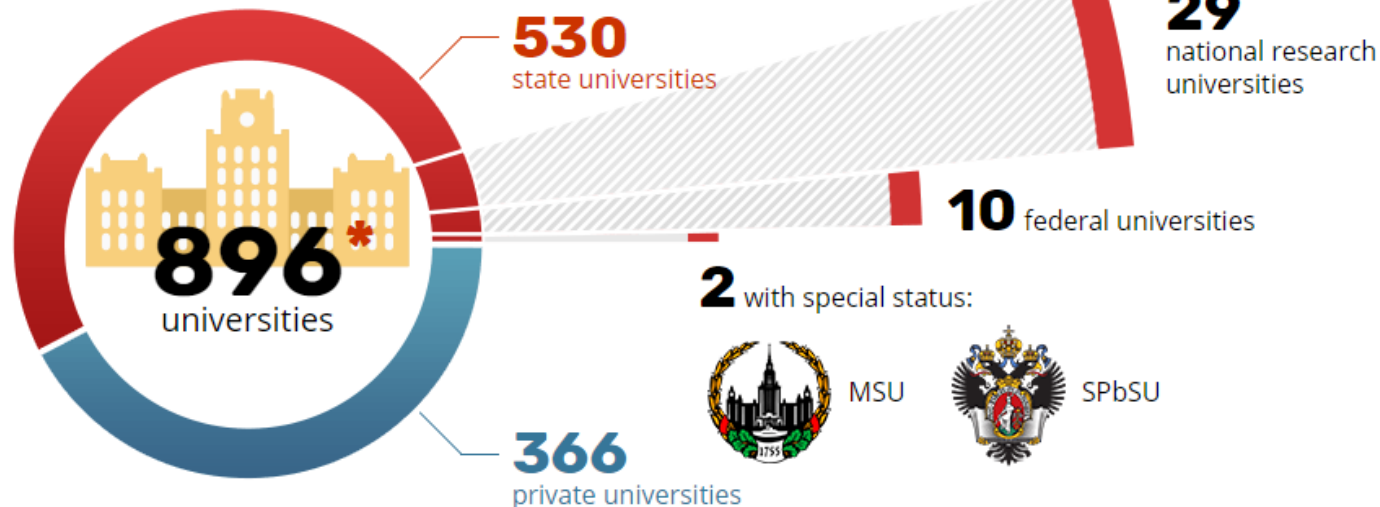
UNIQUE CASE OF RUSSIAN HIGHER EDUCATION



- There are 85 regions in Russia.
- 84 regions have universities within their territories.

33 flagship universities

21 participating universities in Project 5-100



* Information source: <https://studyinrussia.ru/>. Rosstat data on the number of universities in Russia (not counting branches) in the academic year 2015/2016



WHY REGION LEVEL ANALYSES ESPECIALLY MATTERS FOR RUSSIA?

- ✓ **LOW LEVEL OF INTERREGIONAL EDUCATION MIGRATION (EXCEPTED THE MOST TALENTED STUDENTS) (KASHNITSKY, MKRTCHYAN, LESHUKOV, 2016)**
- ✓ **HIGH LEVEL OF ACADEMIC INBREEDING (YUDKEVICH ET. AL, 2015)**
- ✓ **INTERNAL DIVERSIFICATION OF UNIVERSITIES AND THE REDUCTION OF LINKS WITH THE INDUSTRIAL MARKETS (SEMYONOV, PLATONOVA, 2014)**
- ✓ **SPATIAL LOCALIZATION OF EFFECTS FROM THE EXISTENCE OF UNIVERSITIES (ROSENTHAL AND STRANGE, 2001; GOLDSTEIN, DRUCKER, 2006; JOHNES, YU, 2008)**
- ✓ **NEED FOR JUSTIFICATION OF THE EFFECTS FOR THE REGION (FLAGSHIP UNIVERSITIES, PRIORITY FEDERAL PROJECT)**

HOW DO THE UNIVERSITIES DEVELOP CULTURE OF LOCAL ENGAGEMENT?

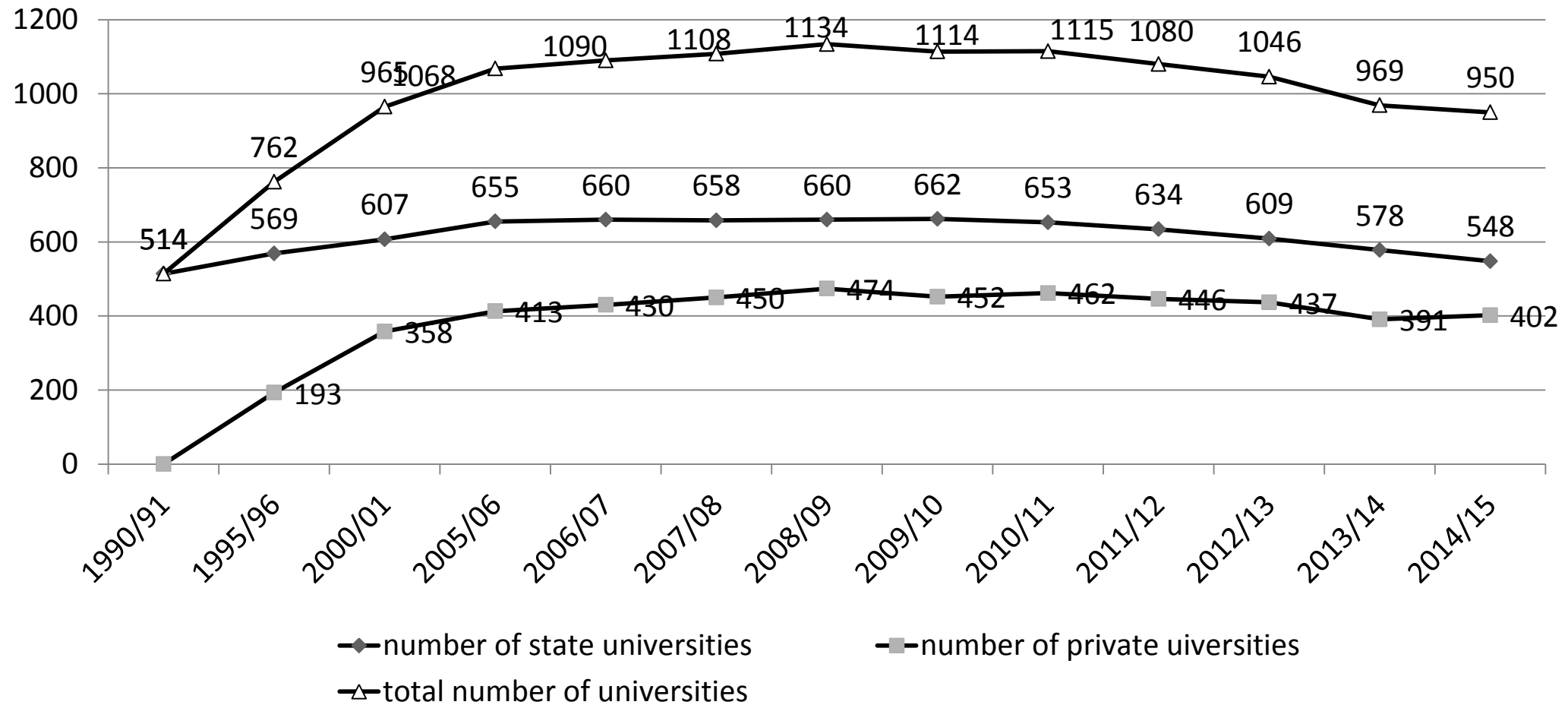


90th - Collapse of the Soviet System and new rules

- Several industries decline and growth of new industries – changes of labor market demand
- Elimination of mandatory placement
- New stakeholders: private business, households
- New rules for higher education institutions:
 - Relative autonomy in opening new education programs
 - Right to enroll fee-paying students into public universities
 - Establishing private universities (rapid growth of private institutions in 90-s)

No push or/and incentives for local involvement

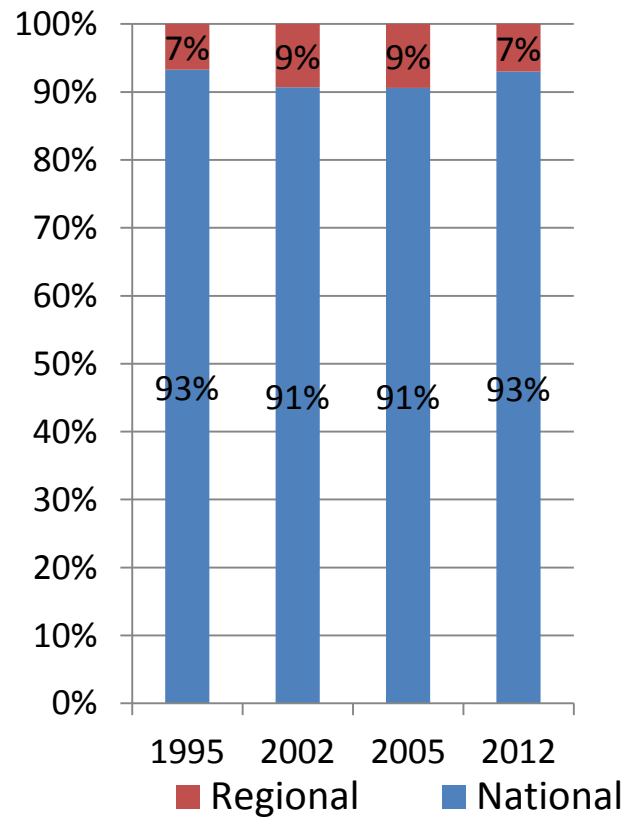
Transformation period: massification and privatization





Centralization of governance of higher education system

The distribution of universities by subordination



DepartmentS	Number of HEI	Percentage of HEI of total	Share of students in total number of students
Regional (and municipal) authorities	59	11%	3%
Ministry of Education and Science	274	51%	69%
Ministry of Agriculture	55	10%	9%
Ministry of Health and Social Development	46	9%	5%
Ministry of Culture	45	8%	2%
Ministry of Sport	14	3%	1%
Ministry of Railway Transport	9	2%	3%
Others	121	6%	8%



Local engagement even of globally-oriented universities

University	Practices of local engagement	Positions in QS by years
HSE University	“University’s Social Mission”: hosting educational and cultural University events for Moscow citizens at open sites, promoting the social involvement of Moscow residents; improvement of the city environment and the development of the city's cultural and historical environment.	2013 – 550 2017 - 382
Tomsk State University	<ul style="list-style-type: none">• Raising the role of the university as the regional think-tank• Development of student entrepreneurship including social entrepreneurship	2013 – 600 2017 – 323
MEPhI	<ul style="list-style-type: none">• Engage in partnership activities with the local schools• Open scientific lecture hall for citizens	2014 – 481 2017 – 373
Tomsk Polytechnic University	<ul style="list-style-type: none">• Research of spatial development of the city• Engage in partnership activities with the local schools	2013 – 600 2017 – 386
MISiS	<ul style="list-style-type: none">• Development of student entrepreneurship• Engage in partnership activities with the local schools	2014 – 701 2017 - 501



- University consolidation processes in many regions
- 15% decrease of the number of the institutions
- Decreasing competition leads to lower effective

([Leshukov O.](#), [Platonova D.](#), [Semyonov D.](#) The Efficiency of Regional Higher Education Systems and Competition in Russia // *Economy of Region*. 2016



Universities between conflicting goals and missions

Federal requirements

- Rigid standards
- Research productivity and international competitiveness

Regional needs

- Unique standards corresponding with the regional economic priorities
- Close R&D cooperation with regional authorities and employers
- Diverse activities of students and staff

Need to change the culture

- Internal entrepreneurial culture of strategic and operational management
- Social practice as the part of the curriculum
- Openness to local communities