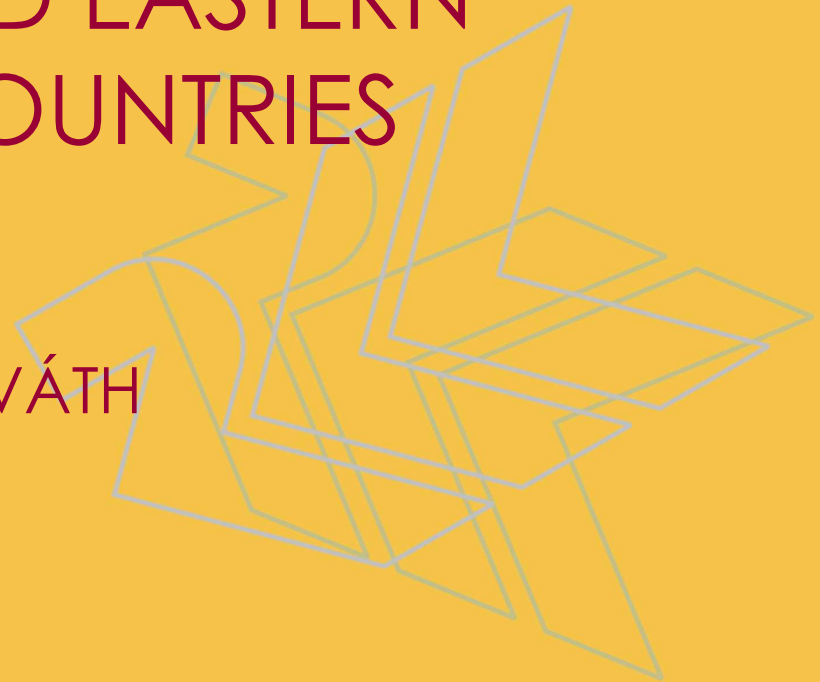




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THE REGIONAL STRUCTURE AND DECENTRALIZATION OF SCIENCE IN CENTRAL AND EASTERN EUROPEAN COUNTRIES

GYULA HORVÁTH





SCIENCE IN THE COMMUNIST PERIOD

- Privileged position
- Significant share in the GDP (2.0–3.0 percent)
- Strong state control and progressive financing
- Dominating technical and natural sciences
- Neglected university researches, leading position of the academies of sciences
- Relatively high level of the business sector
- Low level of the industry–science relationship
- "Ivory tower" syndrome
- Geographical concentration in the core regions (capital cities' dominance)



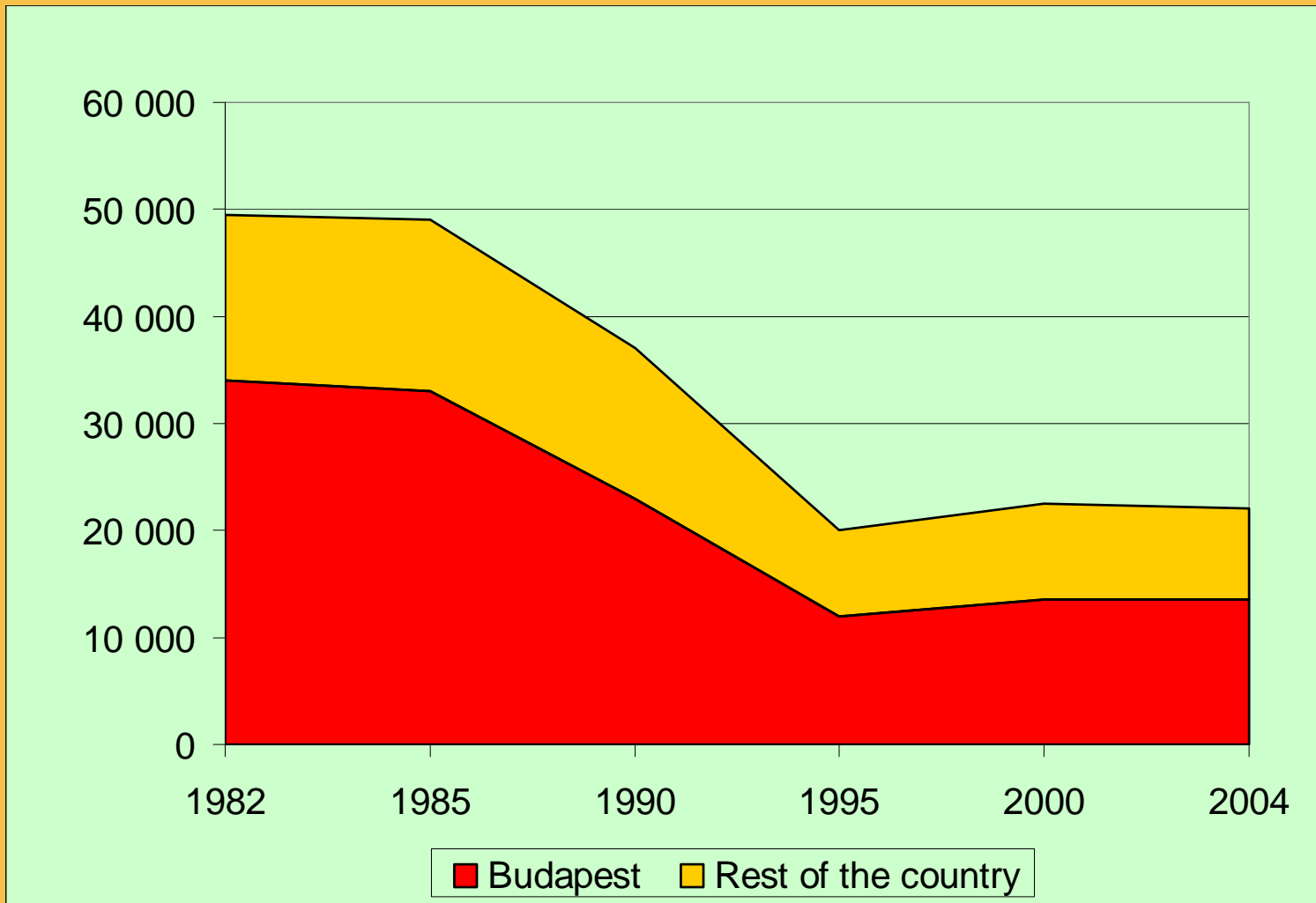
SCIENCE IN THE TRANSITION PERIOD

- The background of the science collapsed
- Diminishing expenditures, low share in the GDP (0.3–1.8 percent)
- Strong decrease of the number of employees (by 50 percent less)
- Unchangeable disciplinary structure
- Offensive enlargement of the higher education sector (moderate development in the R&D, selection process among the universities)
- Collapsing business researches, high percentage of FDI
- New national R&D strategies
- Forming science–industry linkages (influence of the EU)
- Moderate change of the geographical concentration



DECREASING NUMBER OF EMPLOYEES

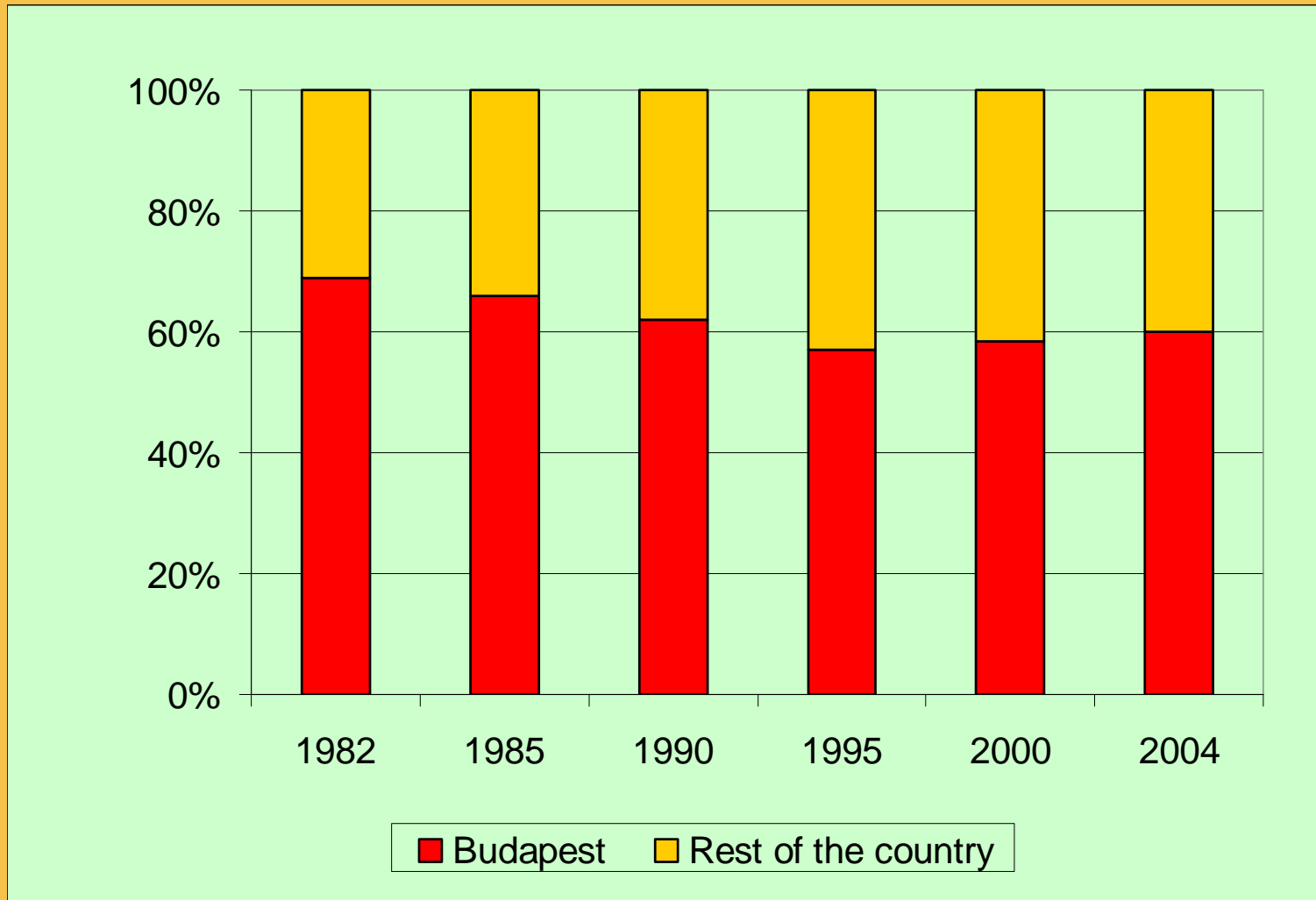
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REGIONAL STRUCTURE OF THE R&D EMPLOYEES

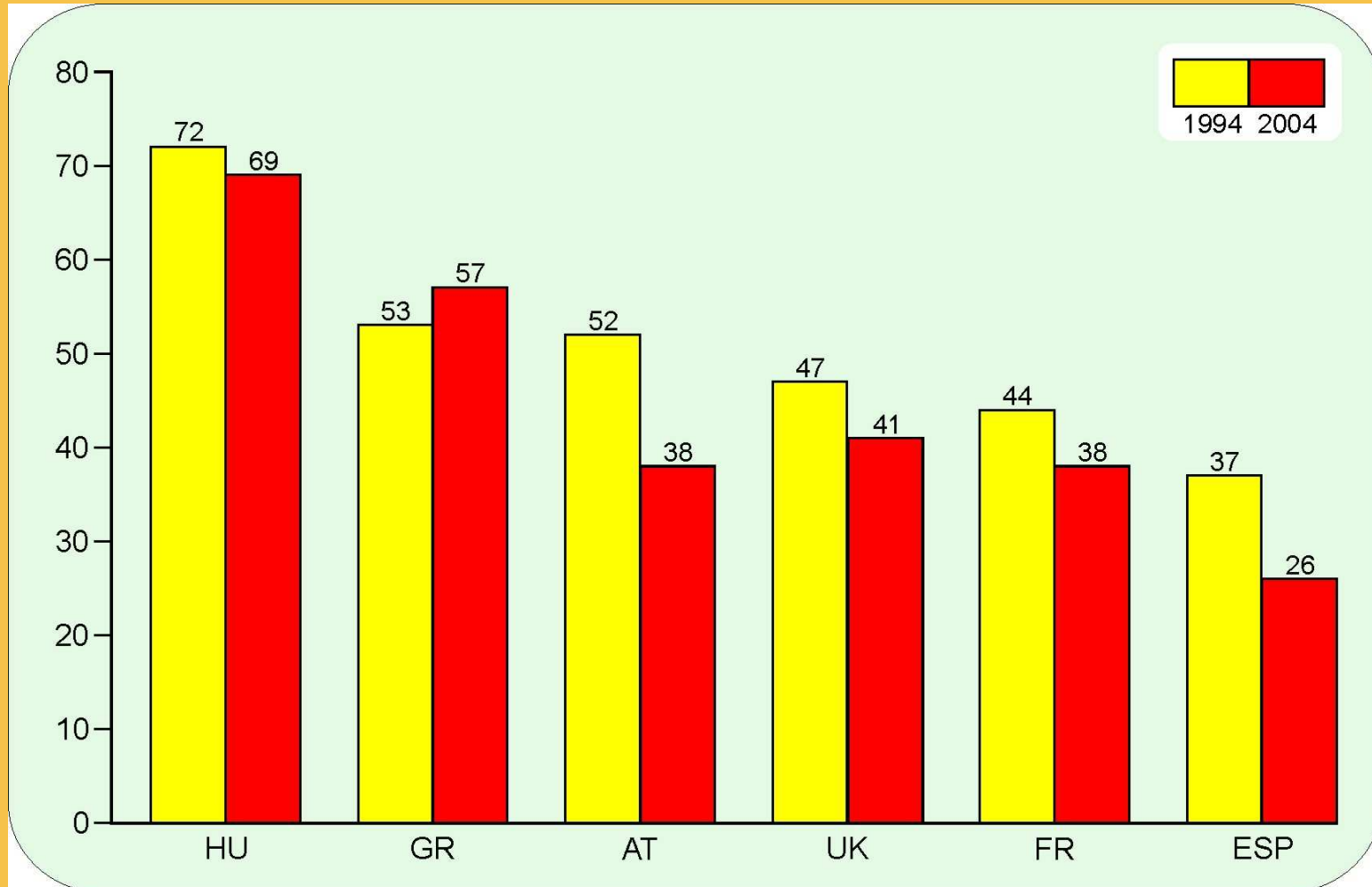
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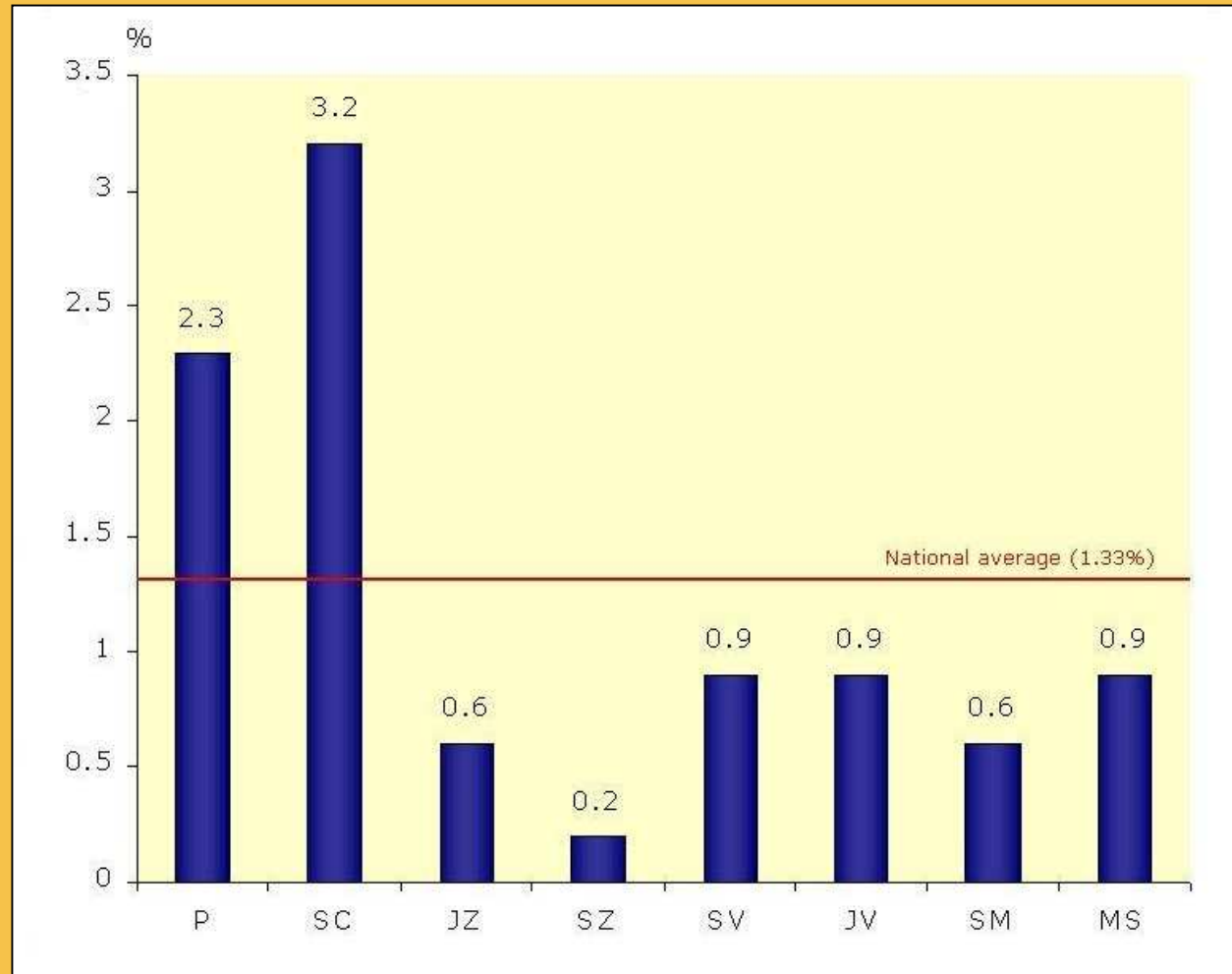
PERCENTAGE SHARE OF CORE REGIONS IN THE R&D EXPENDITURES

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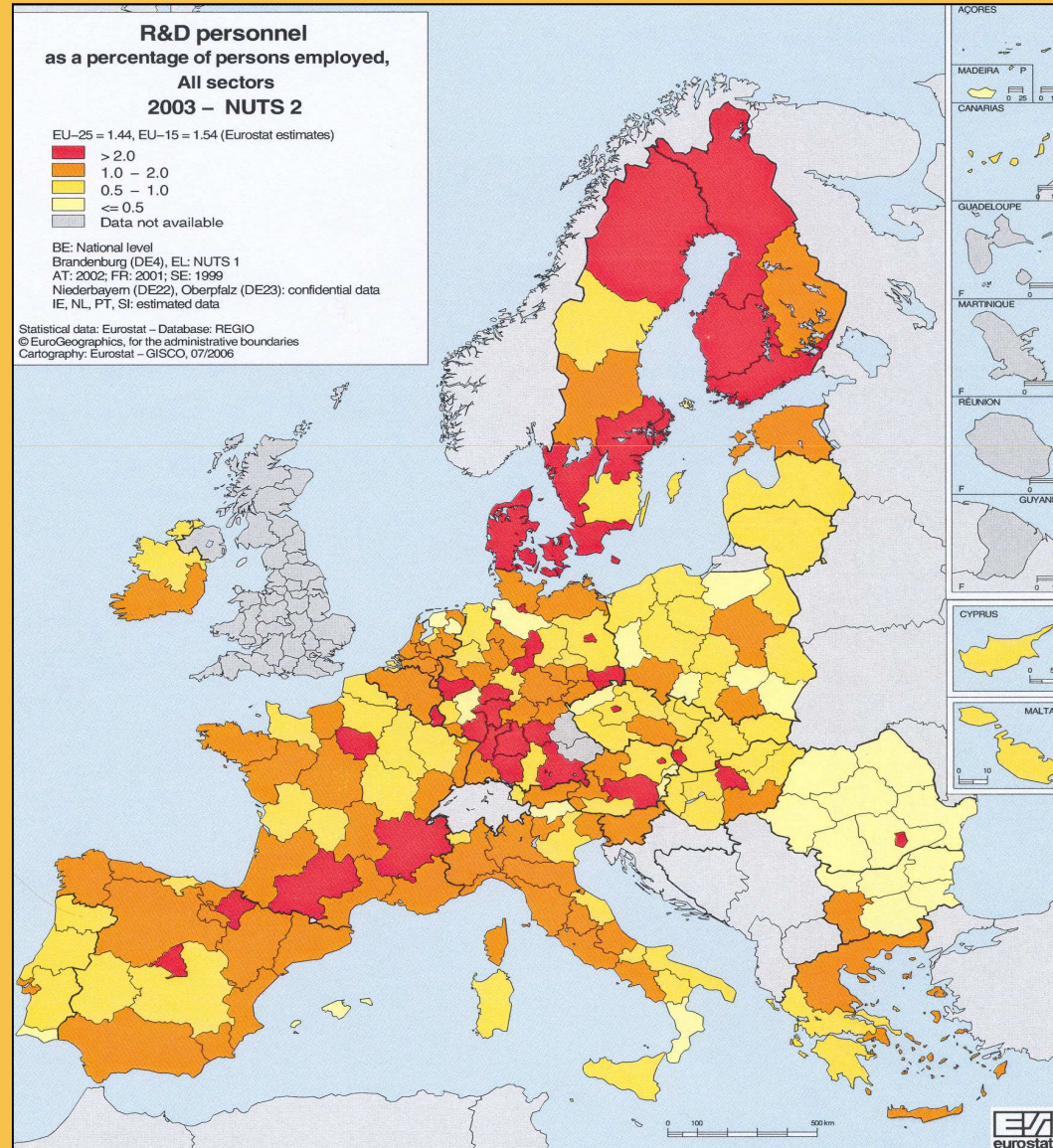
THE SHARE OF R&D IN THE GDP BY REGIONS IN CZECH REPUBLIC





TOTAL R&D EXPENDITURE AS A SHARE OF THE GDP BY REGIONS, 2003

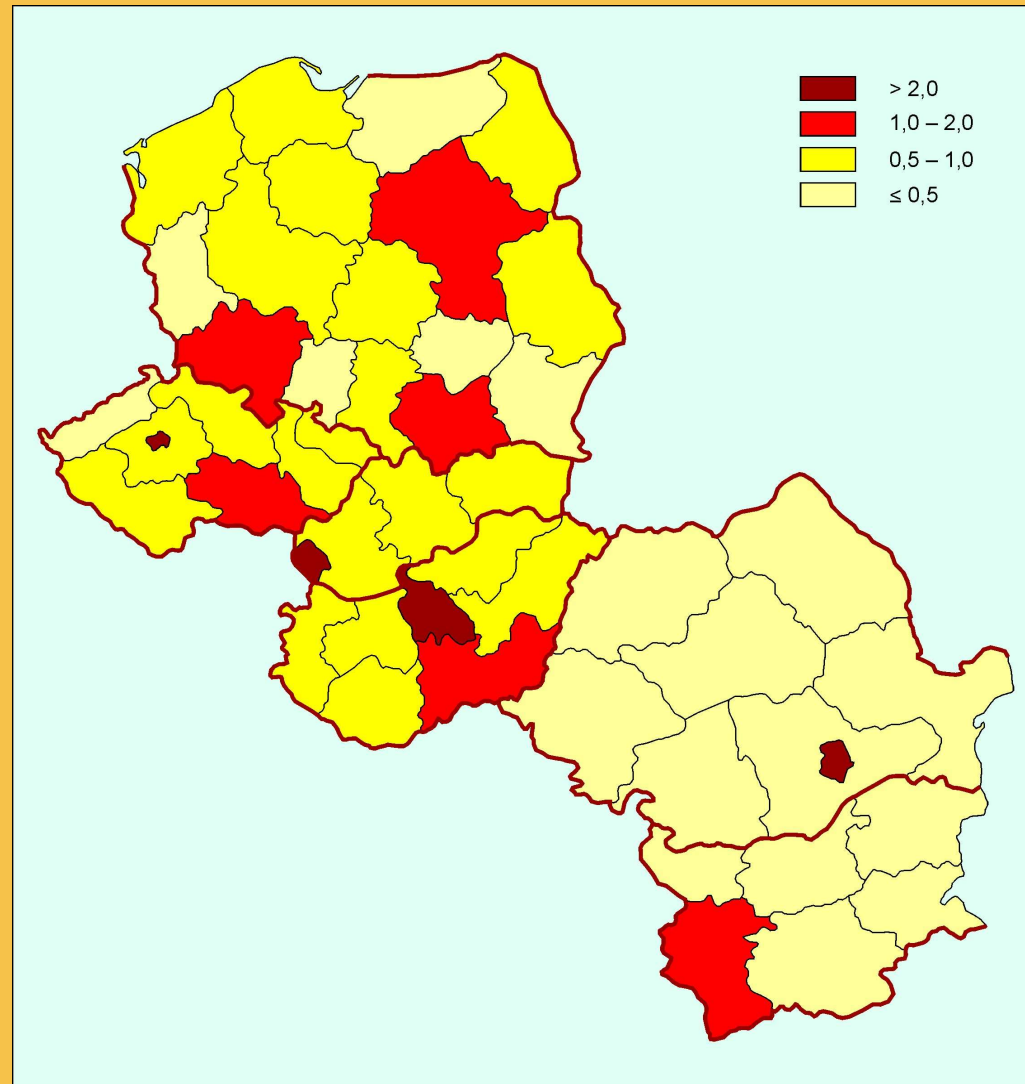
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HUMAN RESOURCES IN SCIENCE AND TECHNOLOGY

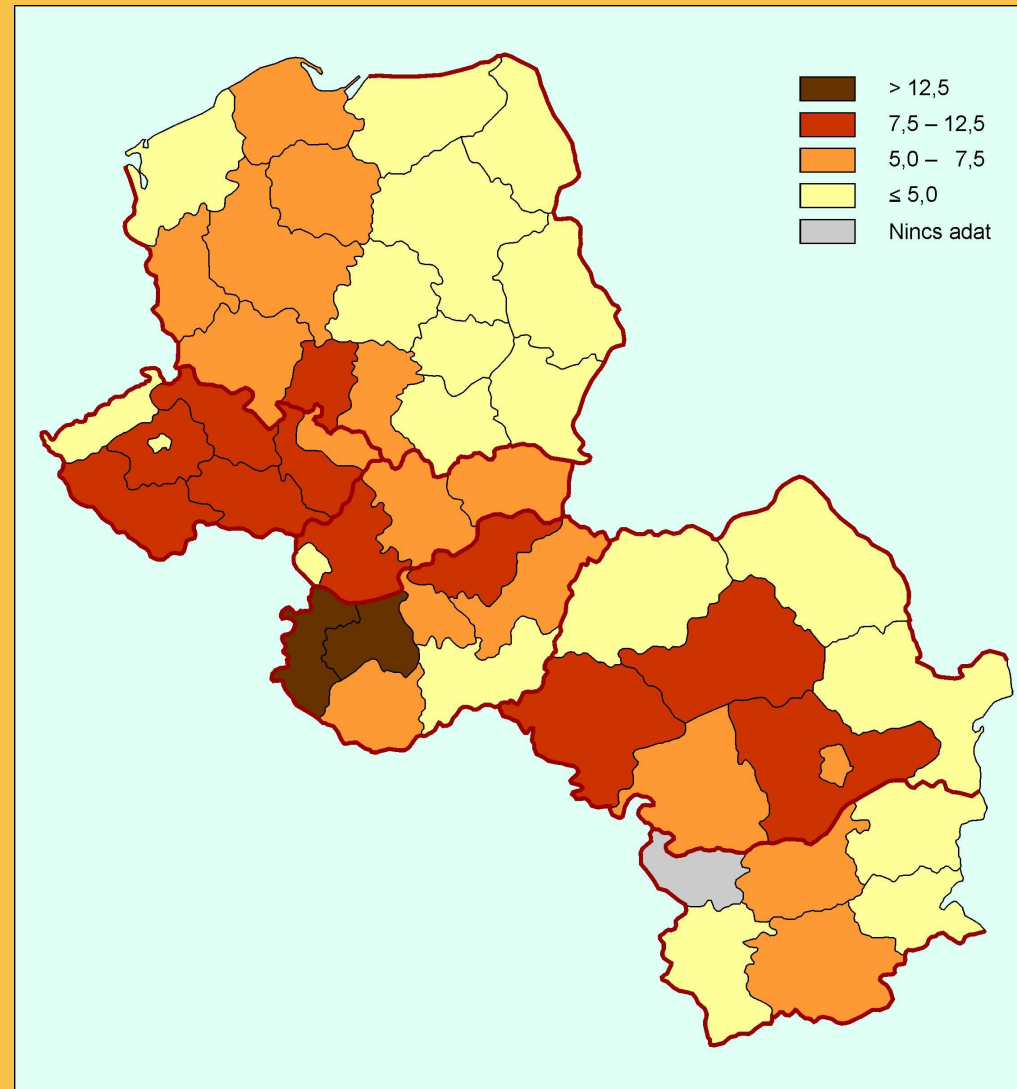
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REGIONAL EMPLOYMENT IN THE KNOWLEDGE INTENSIVE INDUSTRIES, 2005

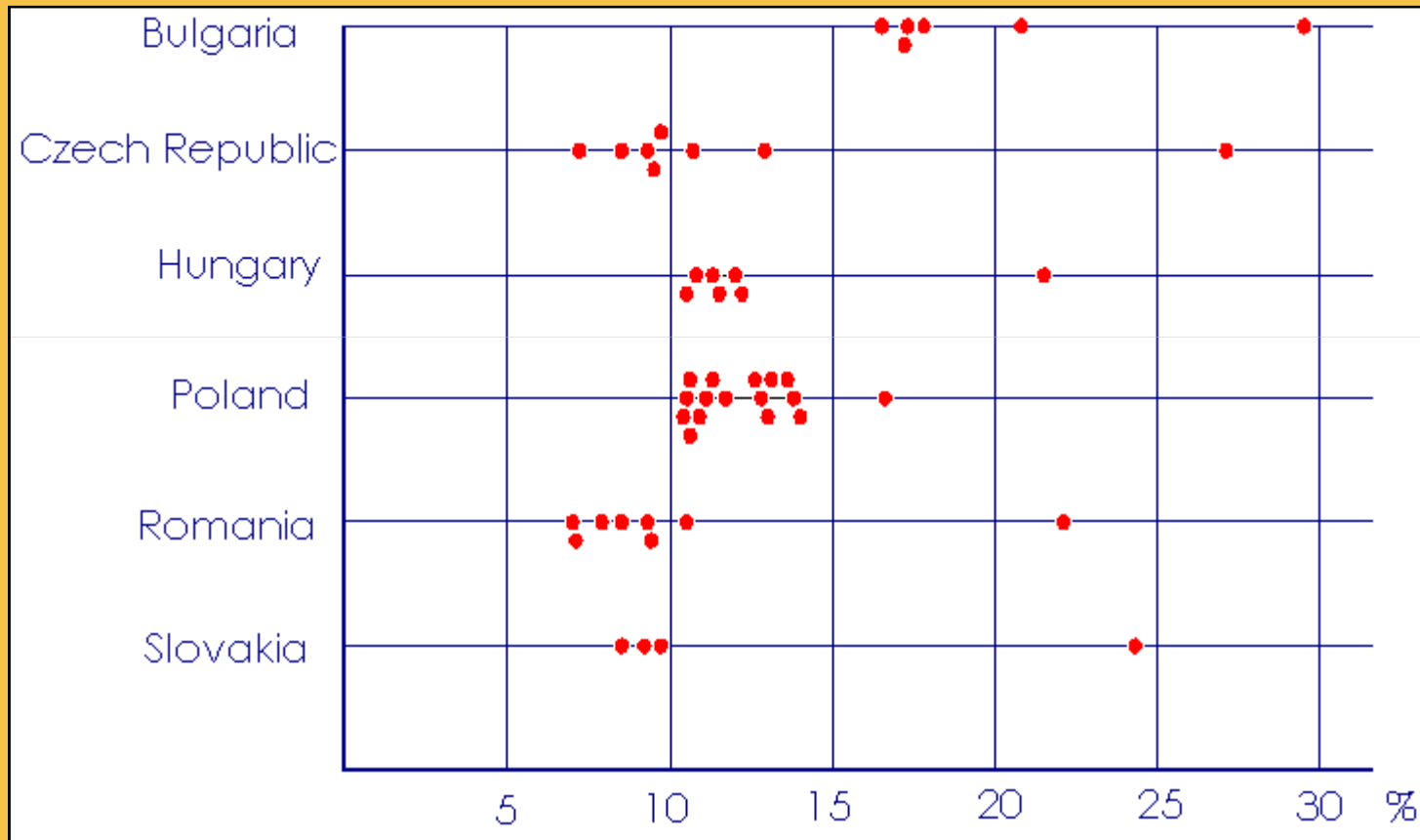
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TERTIARY EDUCATION ATTAINMENT OF THE ACTIVE POPULATION BY REGIONS, 2001

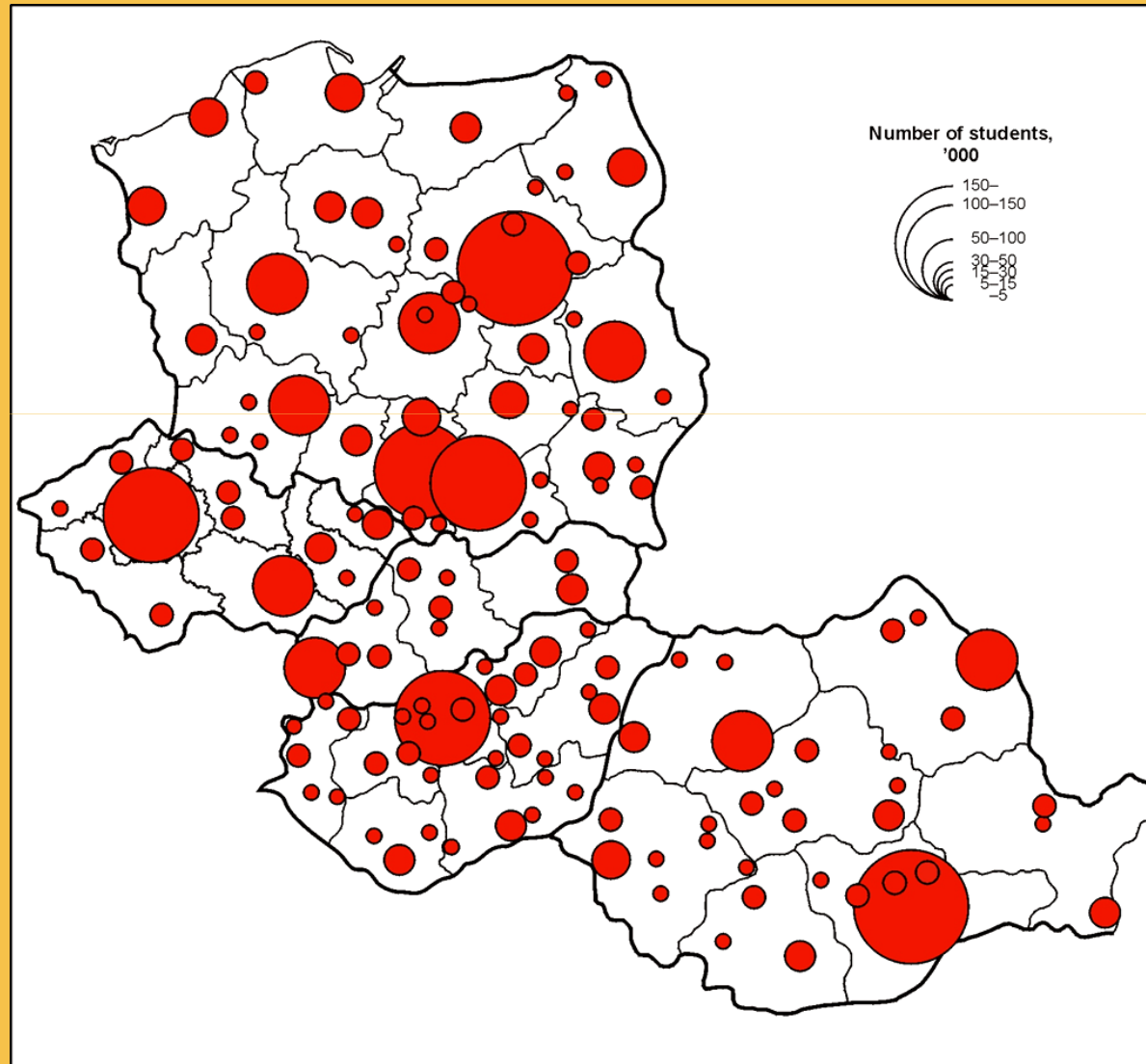
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THE LOCATION OF THE UNIVERSITIES IN CENTRAL AND EASTERN EUROPE

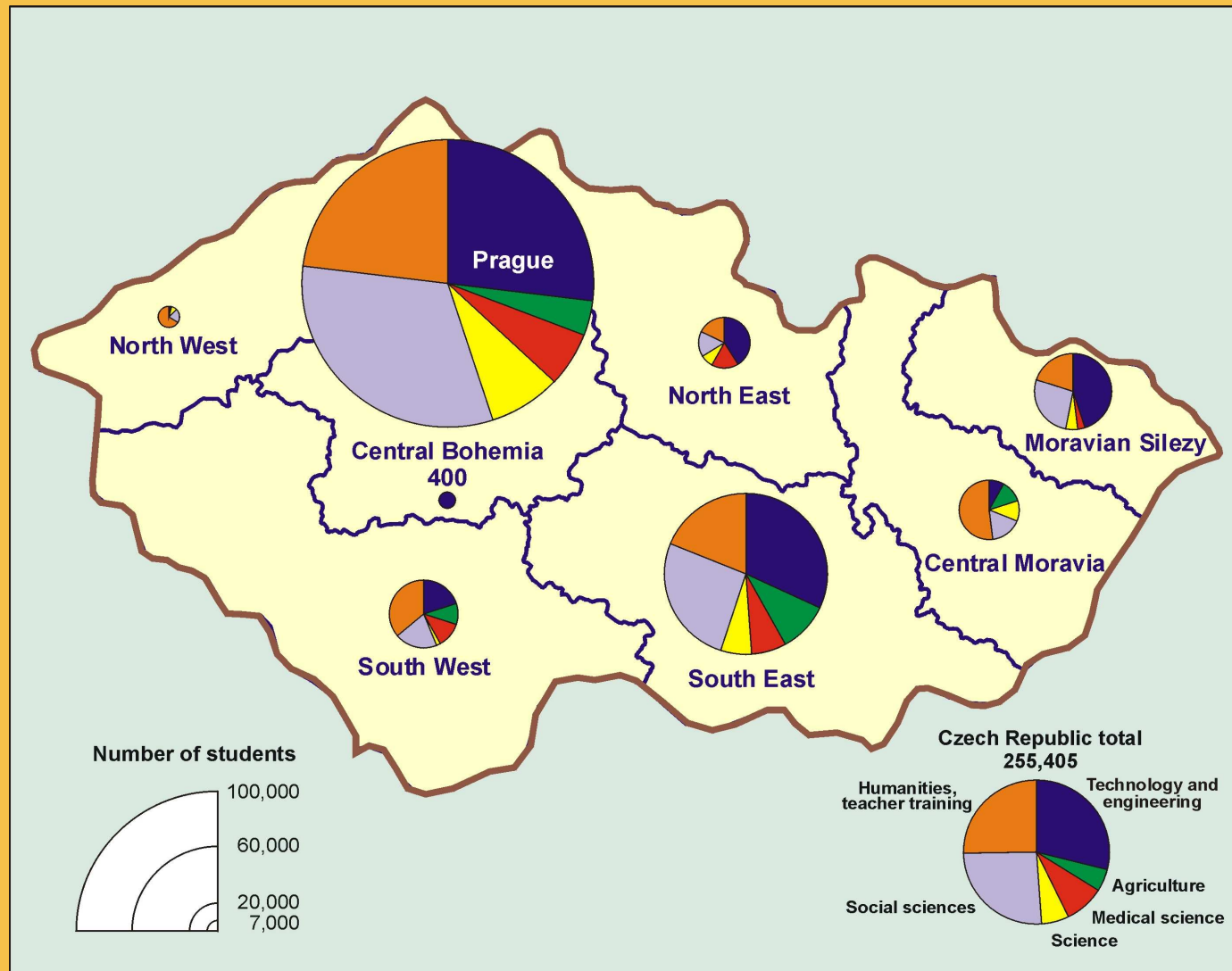
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DISCIPLINARY COMPOSITION OF THE HIGHER EDUCATION IN THE CZECH REPUBLIC, 2003

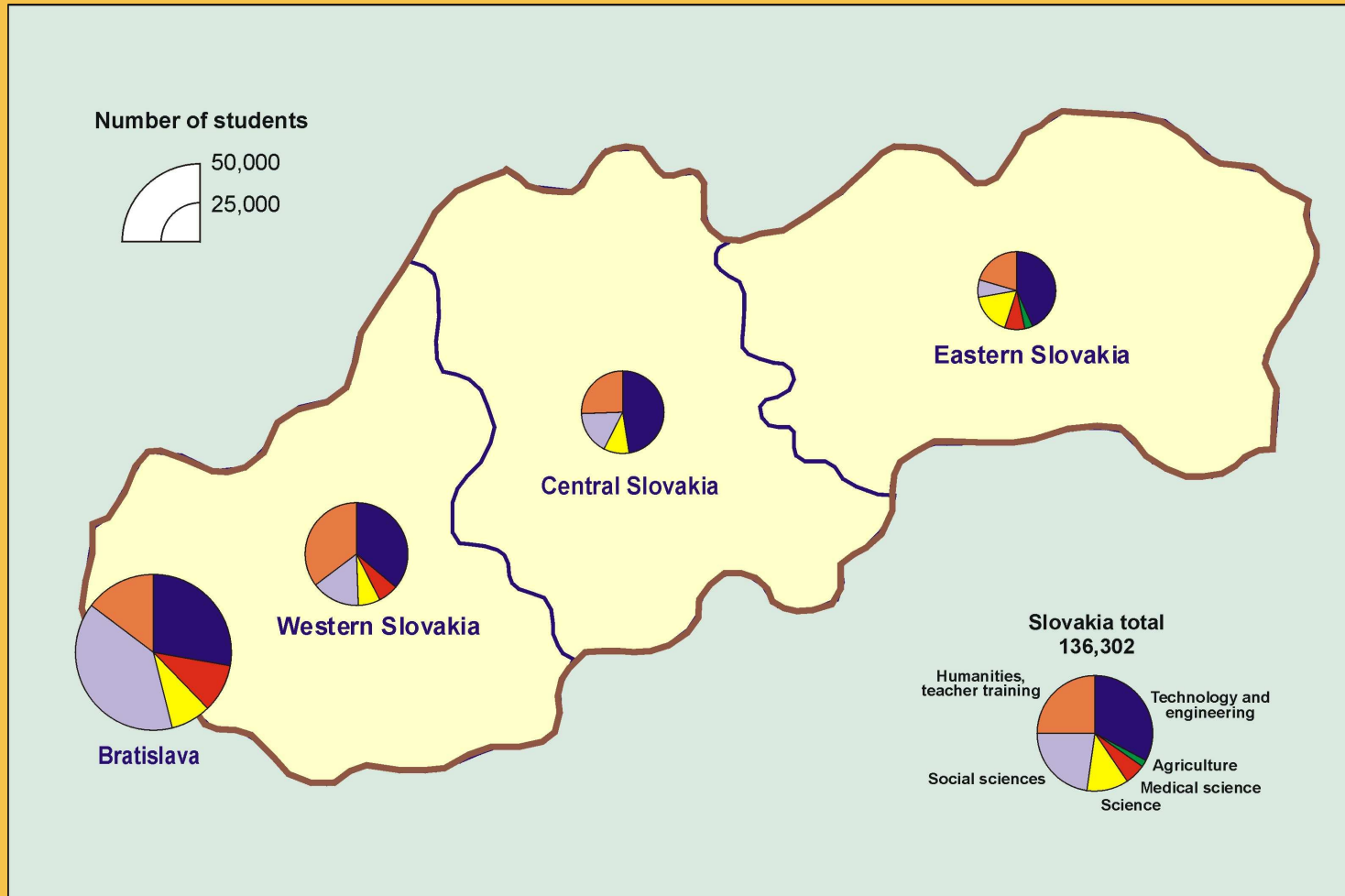
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DISCIPLINARY COMPOSITION OF THE HIGHER EDUCATION IN SLOVAKIA, 2003

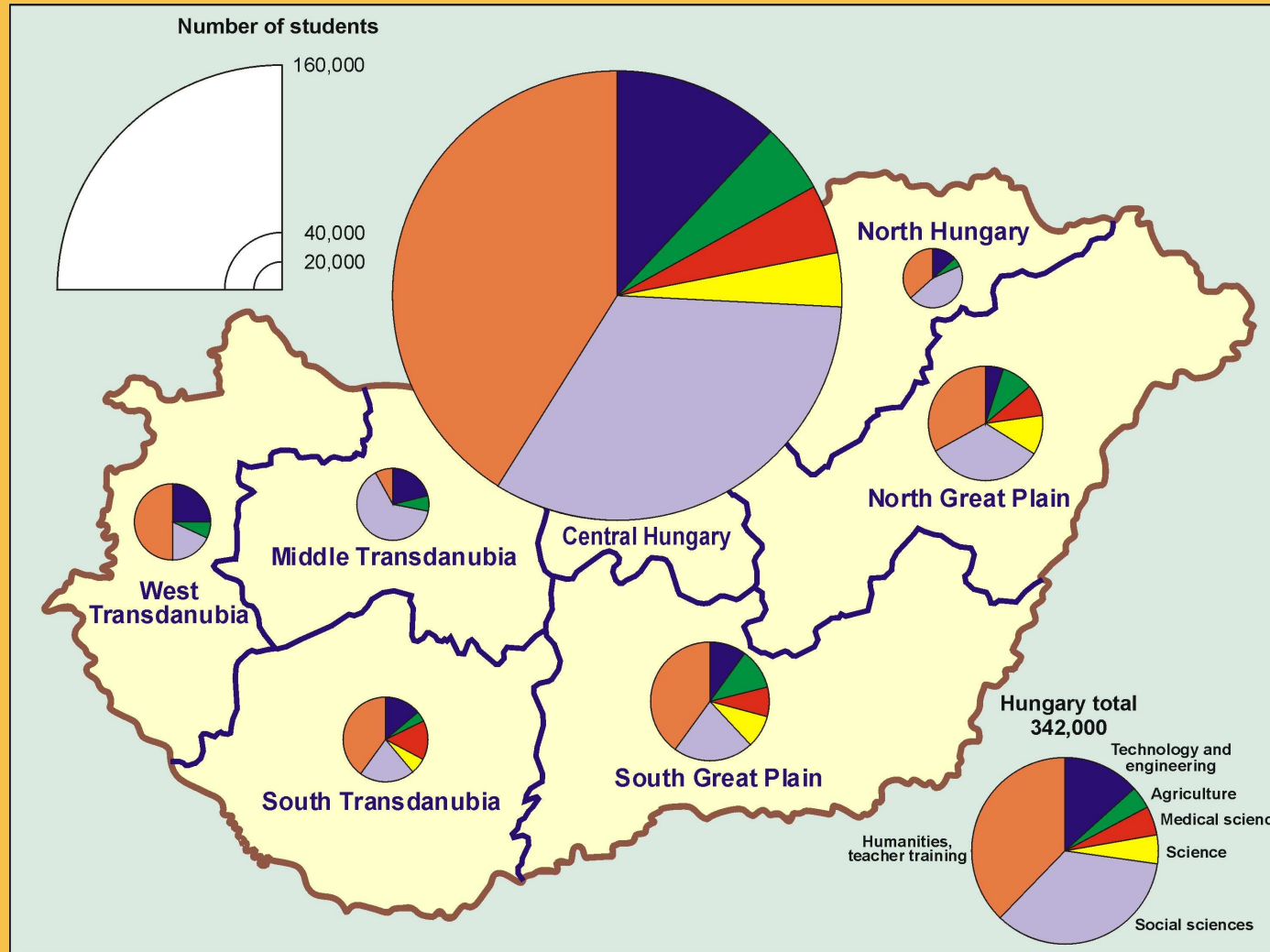
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DISCIPLINARY COMPOSITION OF THE HIGHER EDUCATION IN HUNGARY, 2003

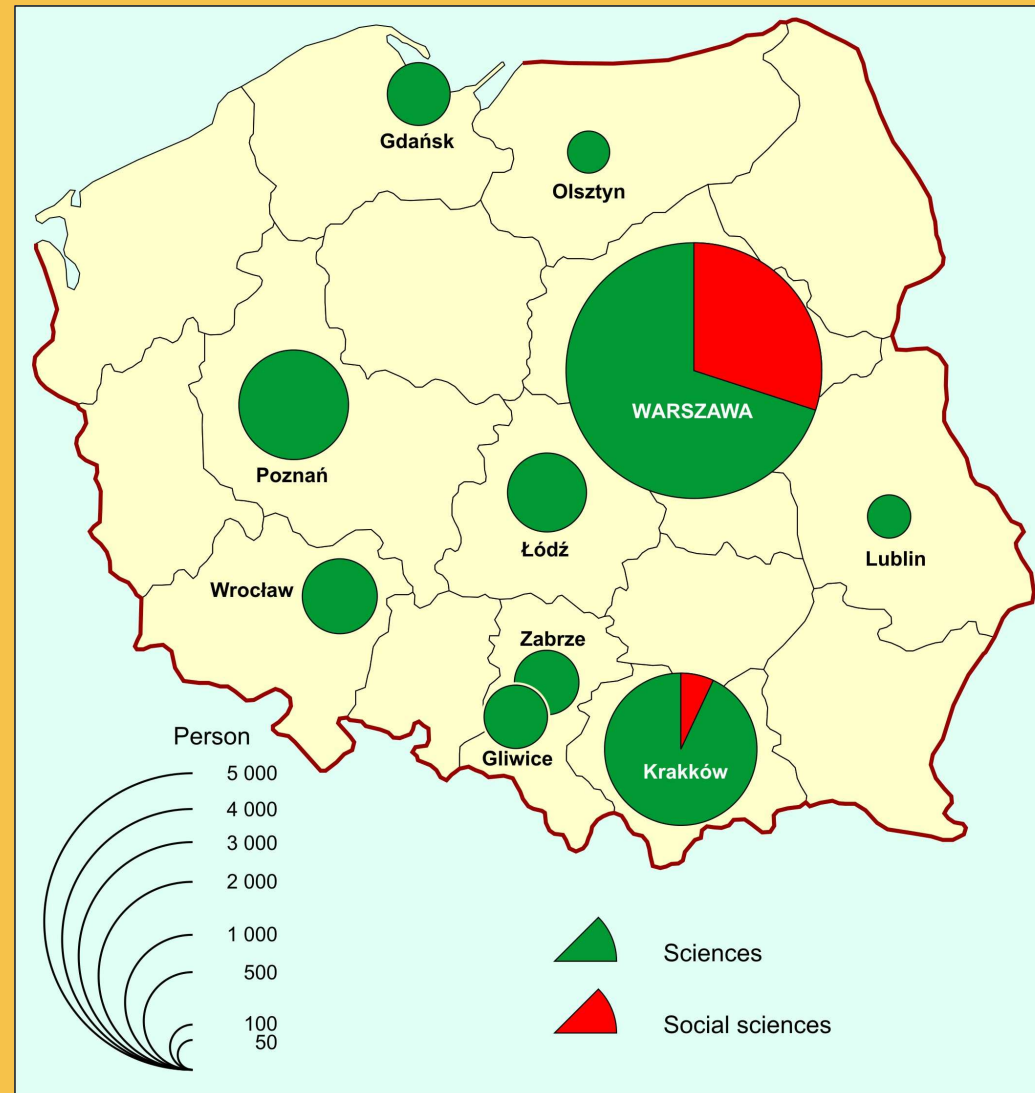
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REGIONAL ALLOCATION OF INSTITUTIONS OF THE POLISH ACADEMY OF SCIENCES

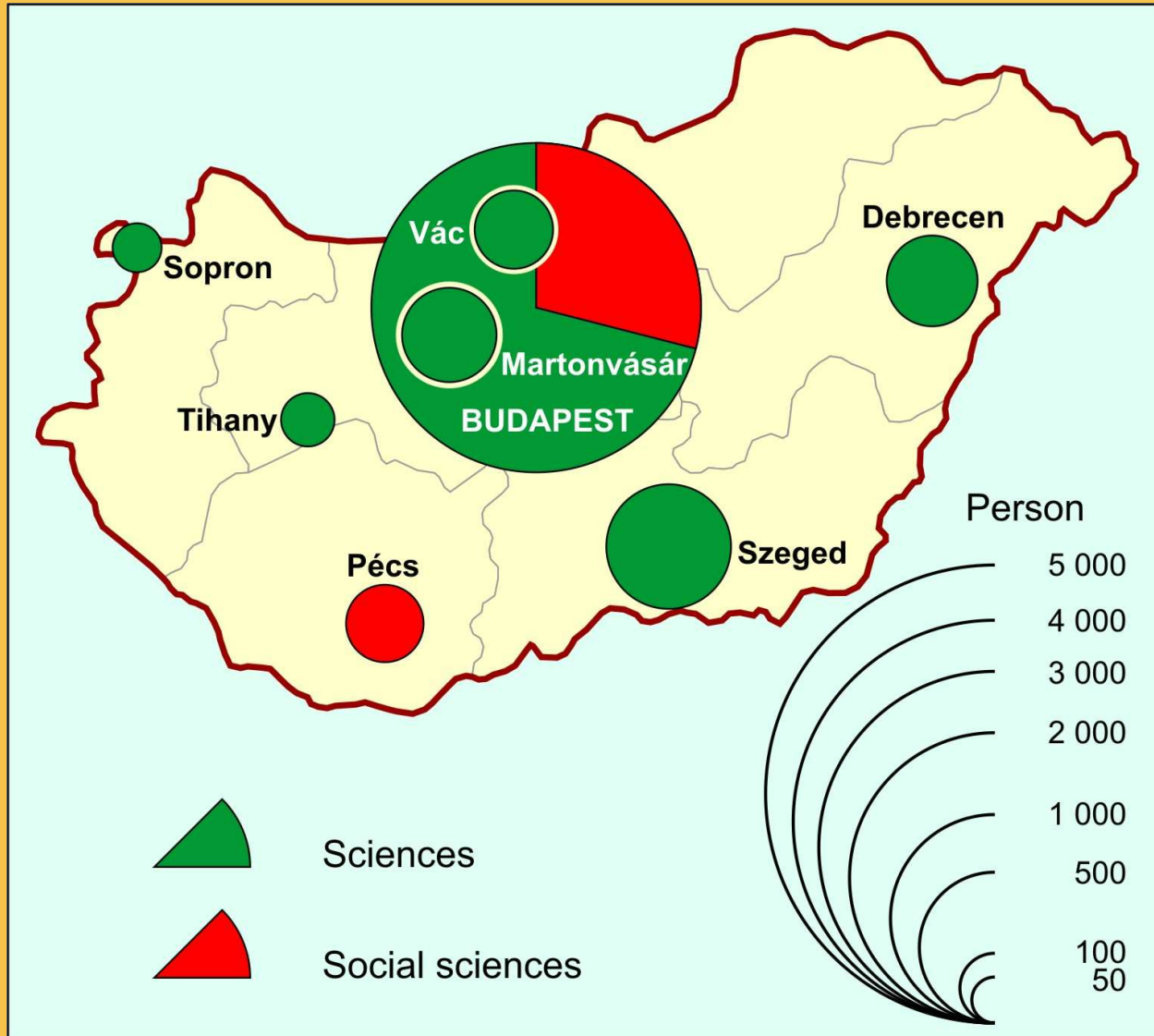
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REGIONAL ALLOCATION OF INSTITUTIONS OF THE HUNGARIAN ACADEMY OF SCIENCES

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EXPECTED RESULTS OF DECENTRALIZATION OF THE SCIENCE

- Growing number of the qualified workplaces
- Enterprise development, more effective cluster building in the regions in order to accelerate restructuring
- Increasing export potencial
- Development of new industrial cultures , support for reindustrialization
- Enlarging demand on the advanced services
- Strengthening income generating capacity of the regions
- Strong cohesion effect



CONCLUSIONS

- Greater co-ordination of public R&D and industry services to the existing industrial structures and knowledge bases seems necessary
- Introduction of a regional agenda within national system is likely to require a stronger regional planning network which bring together a number of regional stakeholders to manage and co-ordinate and regulate the management and funding of research
- Considering that the Structural Funds are most important financial source for regional development in convergence regions of the EU, it is necessary to improve financial tools initiating regional strategies for R&D and innovation geared towards meeting regional needs and regional opportunities for development
- The targets, instruments and institutional systems of decentralization would be joint tasks of regional science in the enlarged Europe in order to establish the multi-level governance, regional dimension of the Single European Research Area, and competitiveness of the regions
- New research agenda for decentralization strategy for decentralization of the science to the regions is needed