| growth
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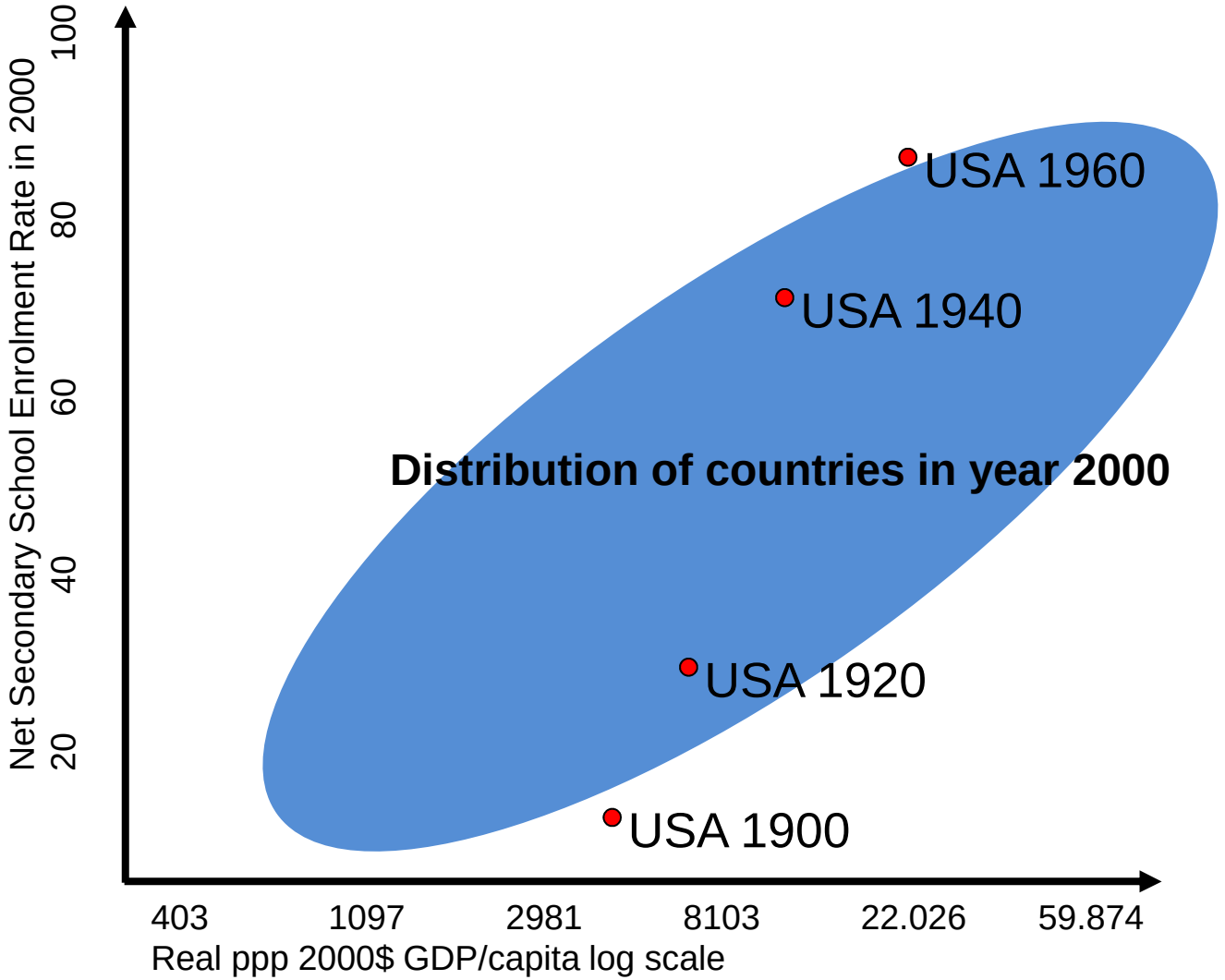
HUGIN Center
for HUman capital, Growth & INnovation

HUMAN CAPITAL
AND ECONOMIC GROWTH

Myanmar, November 1st 2013
Friedrich Naumann Foundation

Prof Dr Peer Ederer

Education determines wealth creation



Source: The Race between education and technology, Goldin and Katz 2008

Human capital makes all the difference

	Russia	**Nigeria**
GDP 1990	90 b$	28 b$
GDP 2004	764 b$	99 b$
Population 2004 (1990)	144 m (148)	137 m (93)
Exports	60% oil+minerals=160 b$	95% oil+minerals=50 b$
Politics	nominal democracy	nominal democracy
Business Climate	entrenched corruption	entrenched corruption
	open market economy	open market economy
Economic Freedom Index	120	131
Literacy 2003 (1990)	99% (99)	68% (48)
Tertiary Edu Enrolment	53%	3%

Education determines wealth creation – but how?

	Average annual percentage change	
	labor productivity	**education expansion**
1915 – 1940	2.45	0.50
1940 – 1960	2.92	0.49
1960 – 1980	2.41	0.59
1980 – 2005	2.18	0.37
1915 – 2005	2.47	0.48

Source: The Race between education and technology, Goldin and Katz 2008

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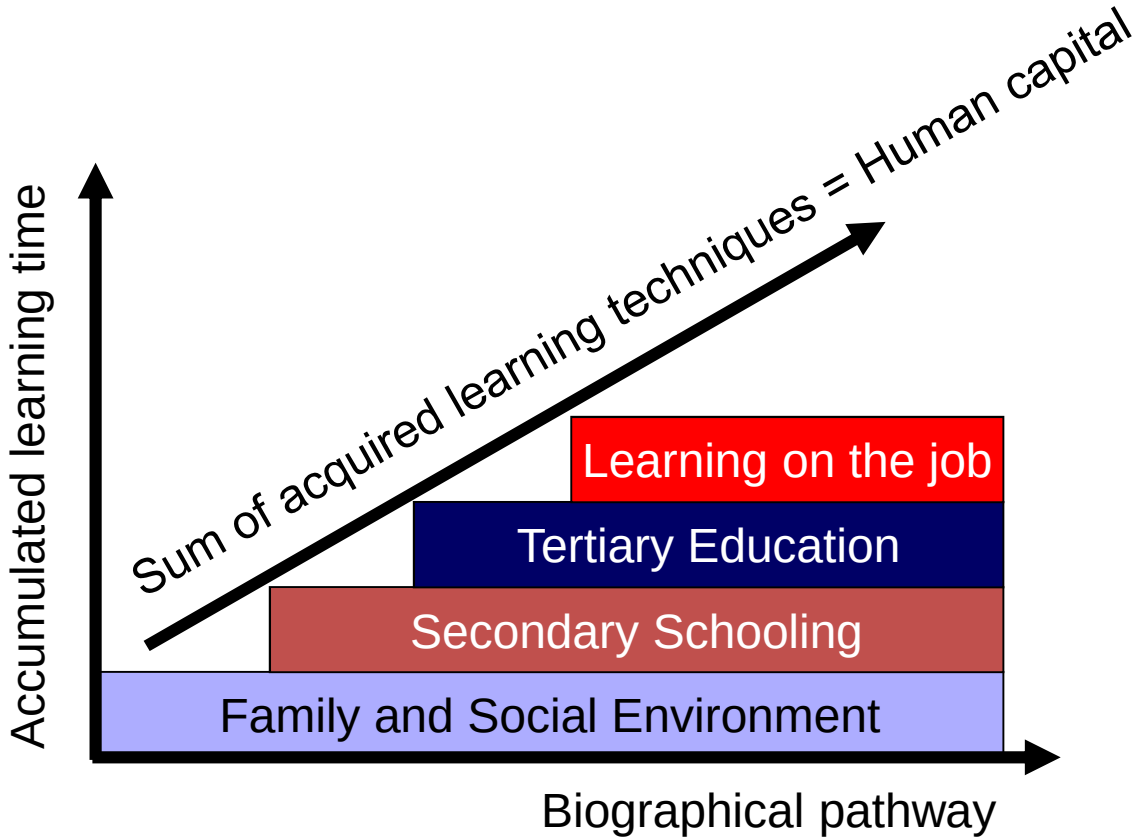
"If you're rich enough to send me to a fancy, private college, why do I have to go?"

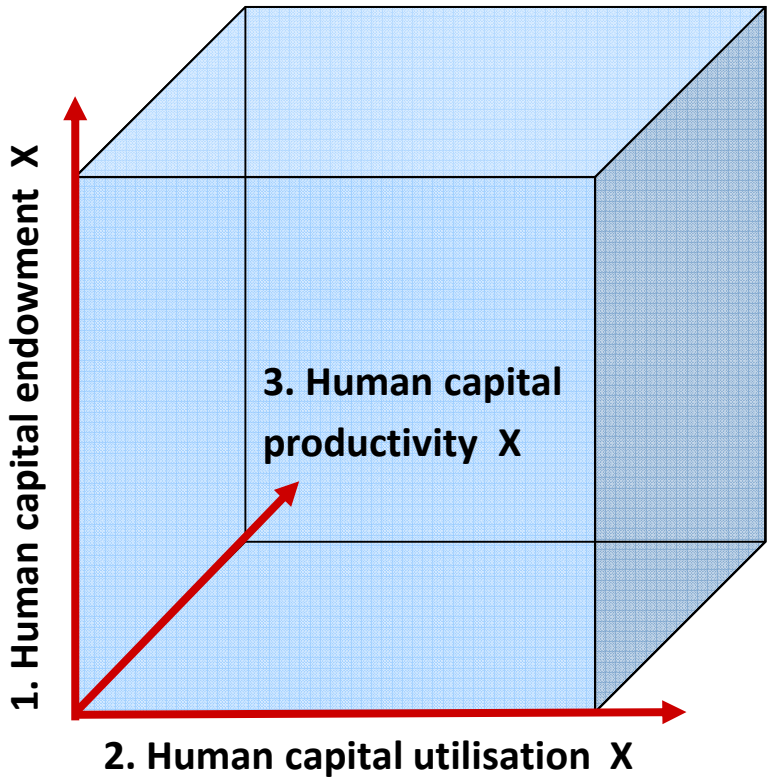
Learning on the Job !



Source: The Human Capital Center Lisbon Council and Deutschland Denken! eV

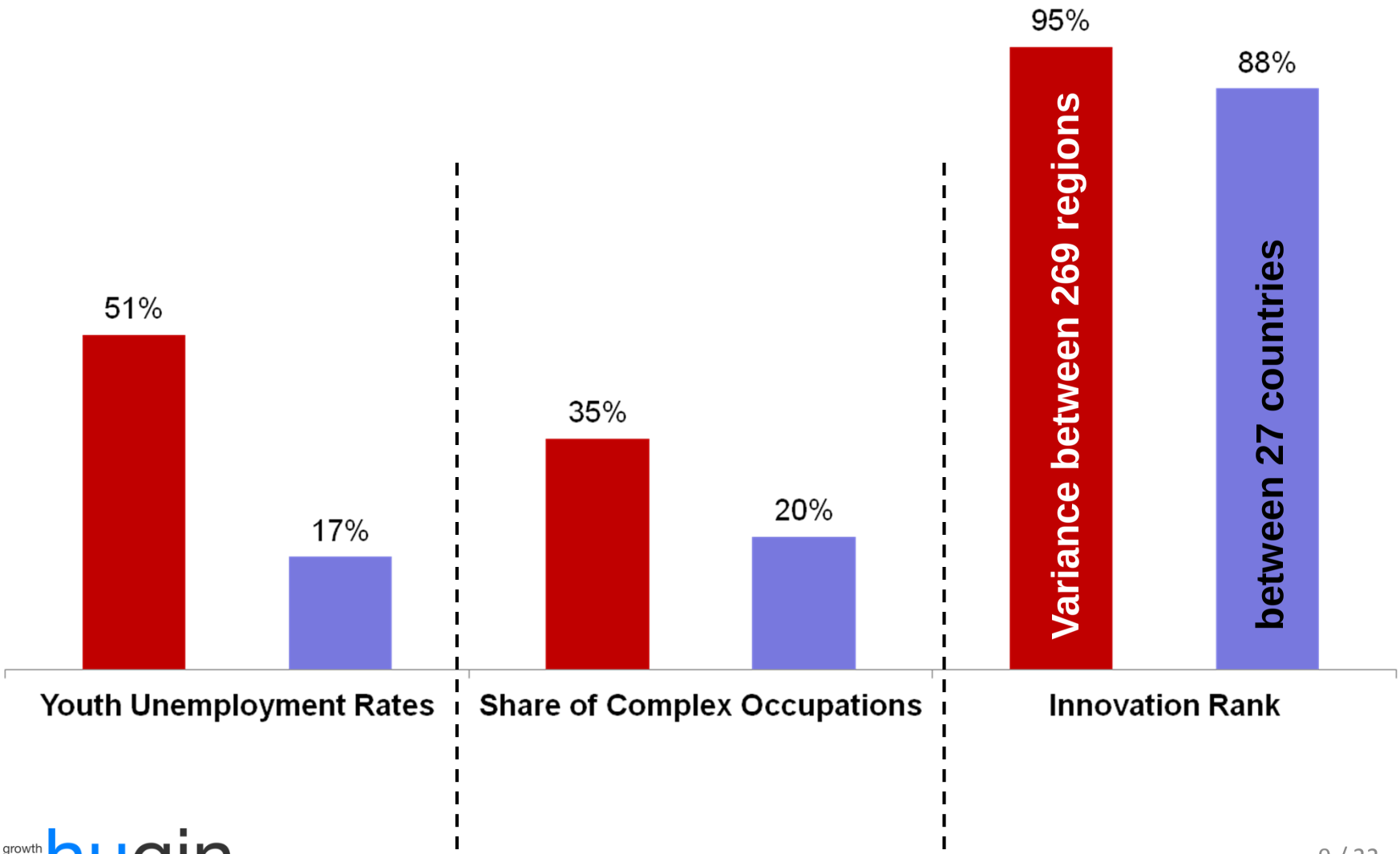
Mankiw, Romer and Weil revised…

return on human capital =

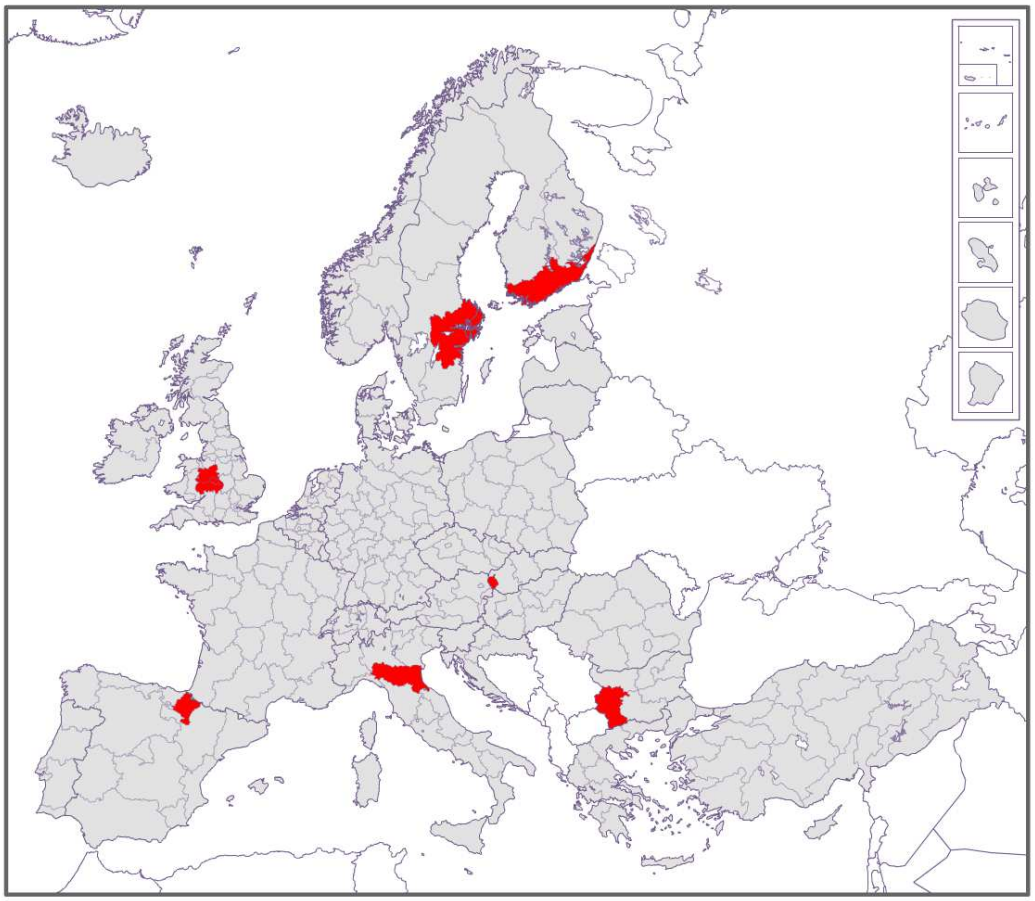


\+ return on financial capital = income

Regions are more important than countries



Research focus regions were spread across Europe



Bratislava, Slovakia

Emilia Romagna, Italy

Helsinki, Finland

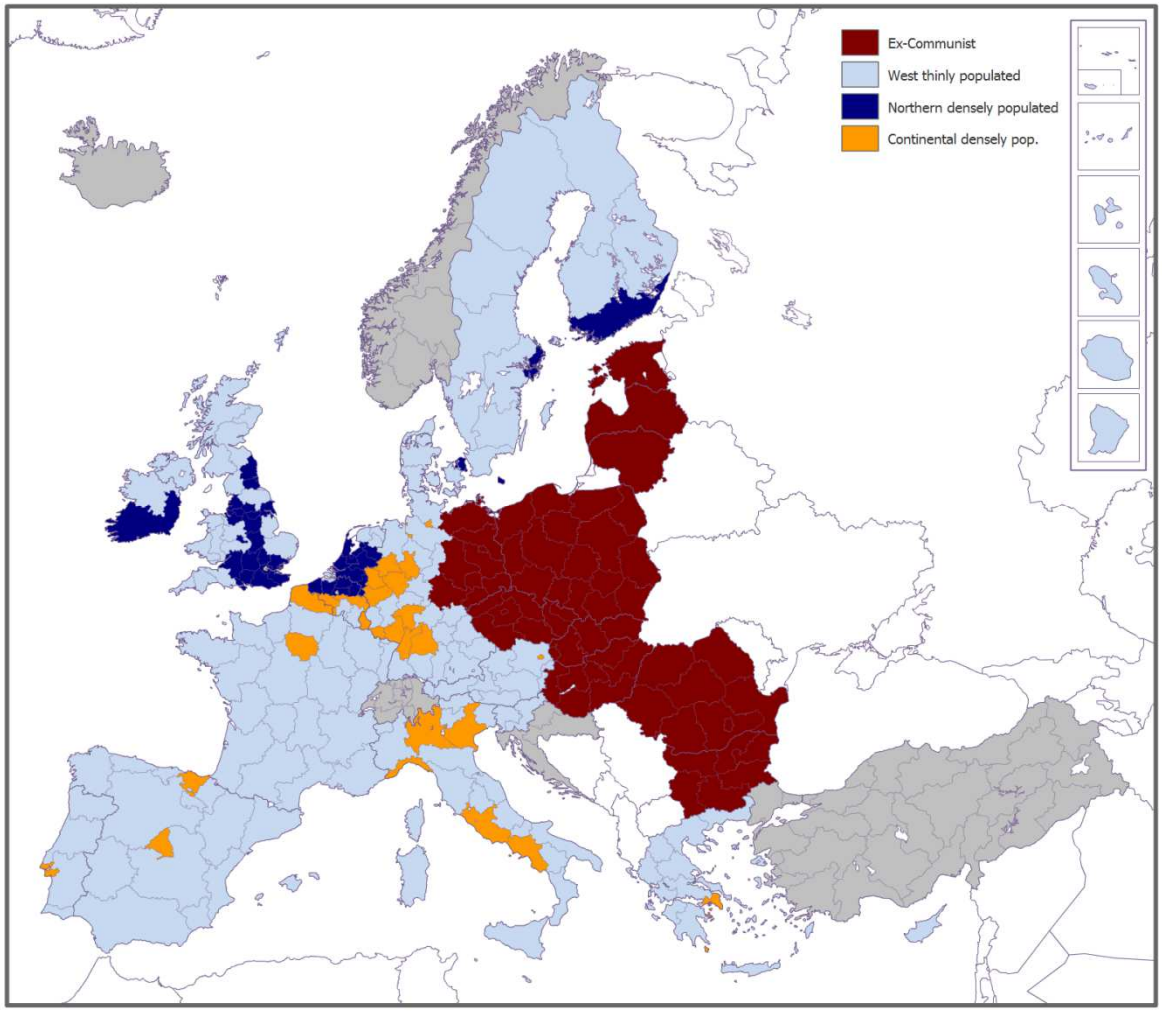
Navarra, Spain

Sofia, Bulgaria

Stockholm, Sweden

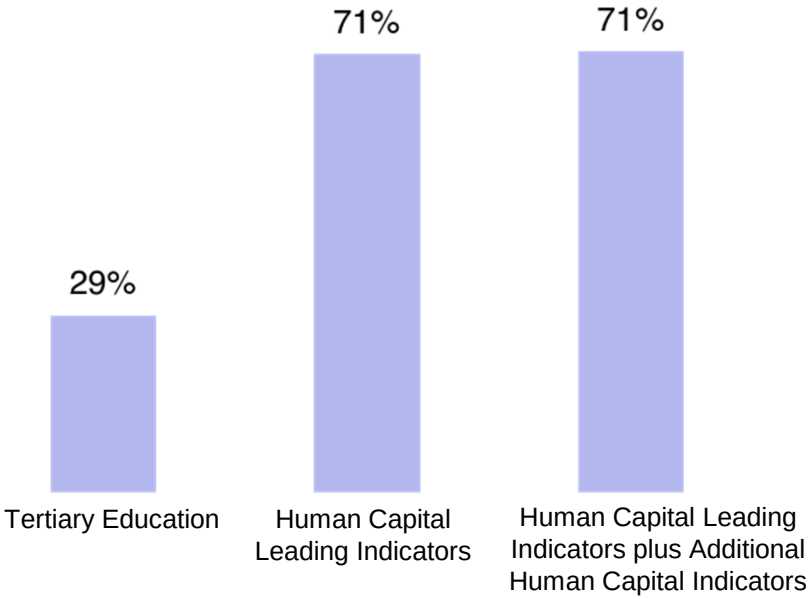
West Midlands, UK

Four groups of regions with different preconditions

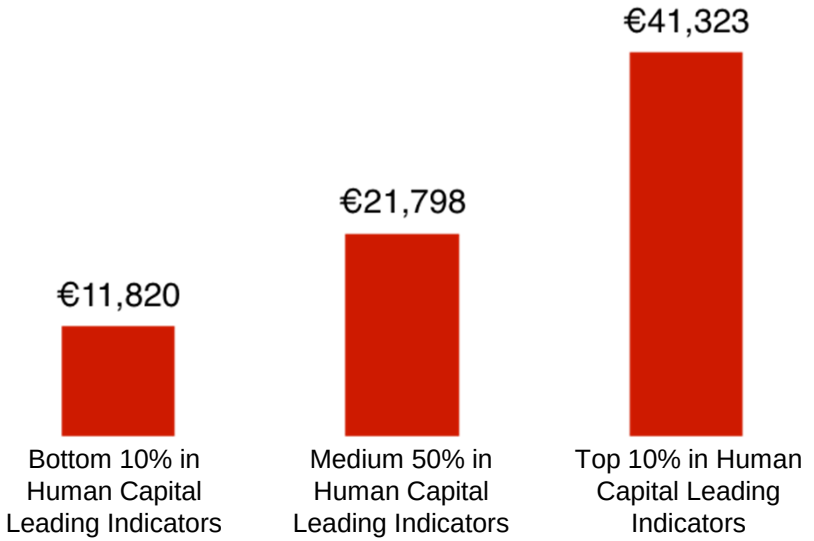


Top Performance in Human Capital Leading Indicators Closely Predicts Regional Income Differences

Correlation of Regional GDP Per Capita with Human Capital Indicators (measured by R^2, the coefficient of determination)

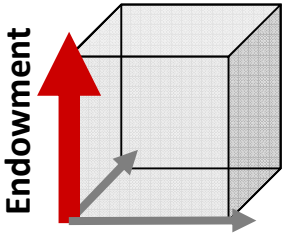


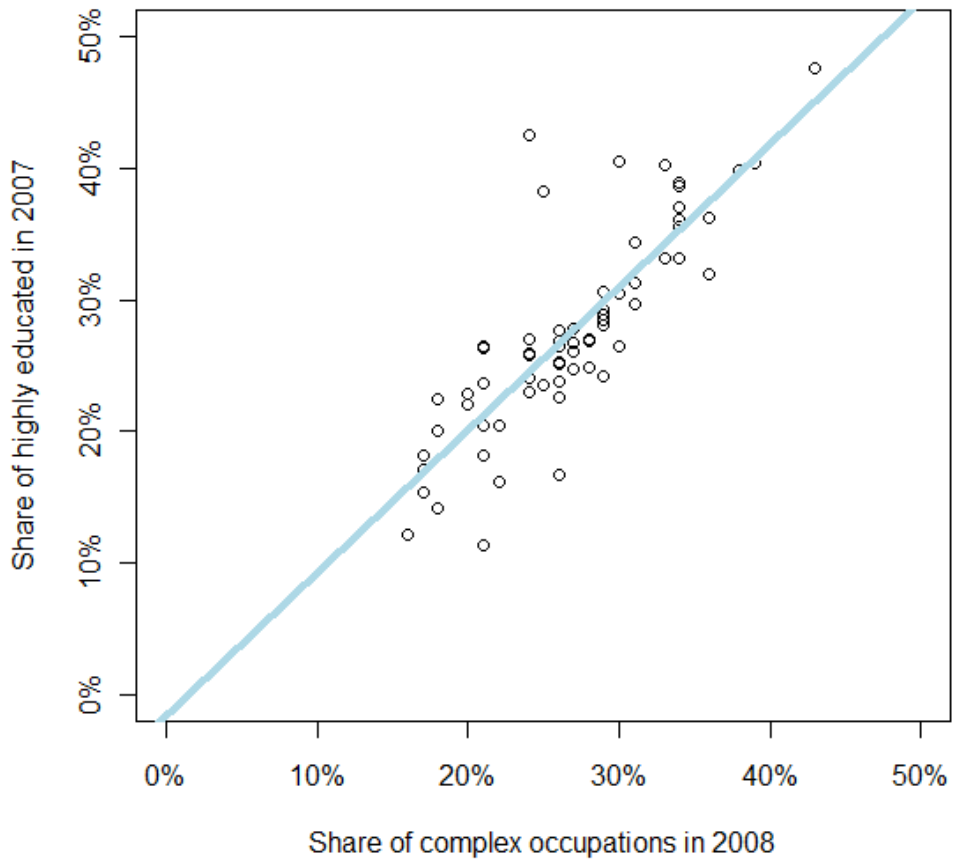
Fit of Regional GDP Per Capita with Performance in Human Capital Leading Indicators



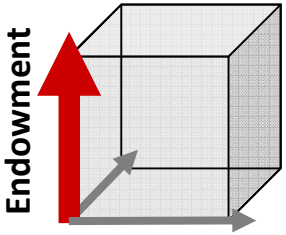
Source: Eurostat - European Regional and Urban Statistics Database

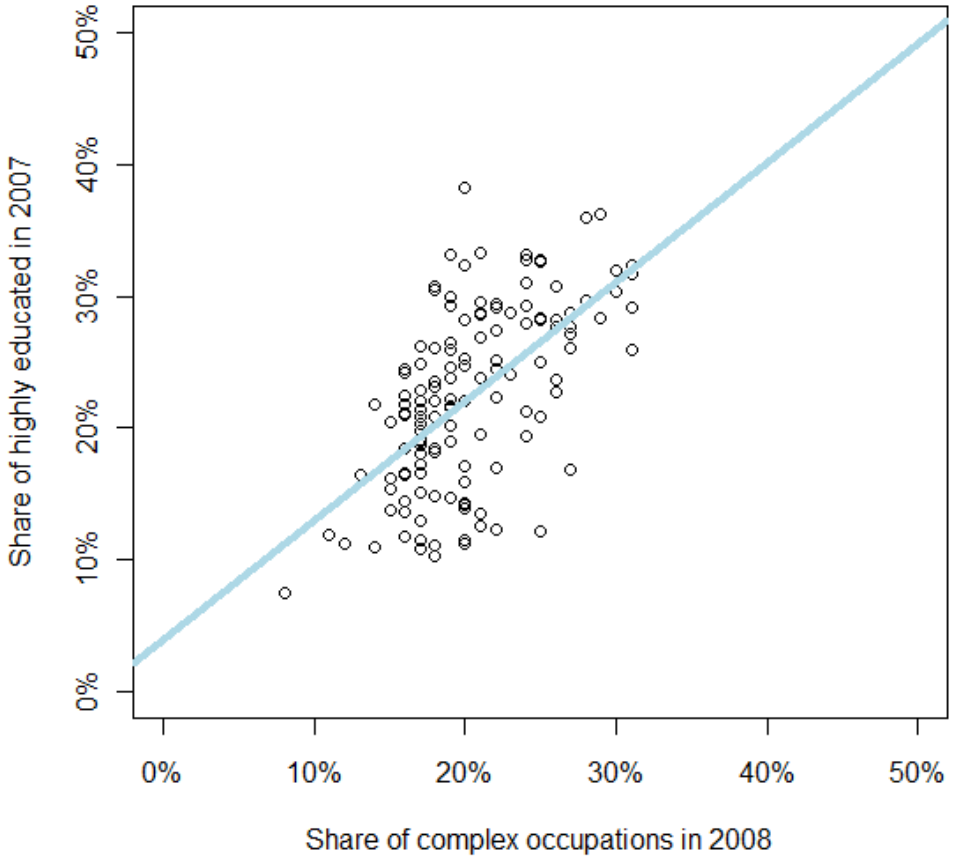
In densely populated regions education leads to better jobs…



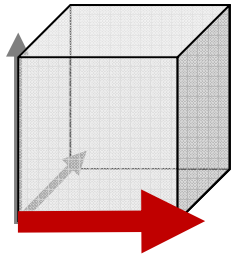


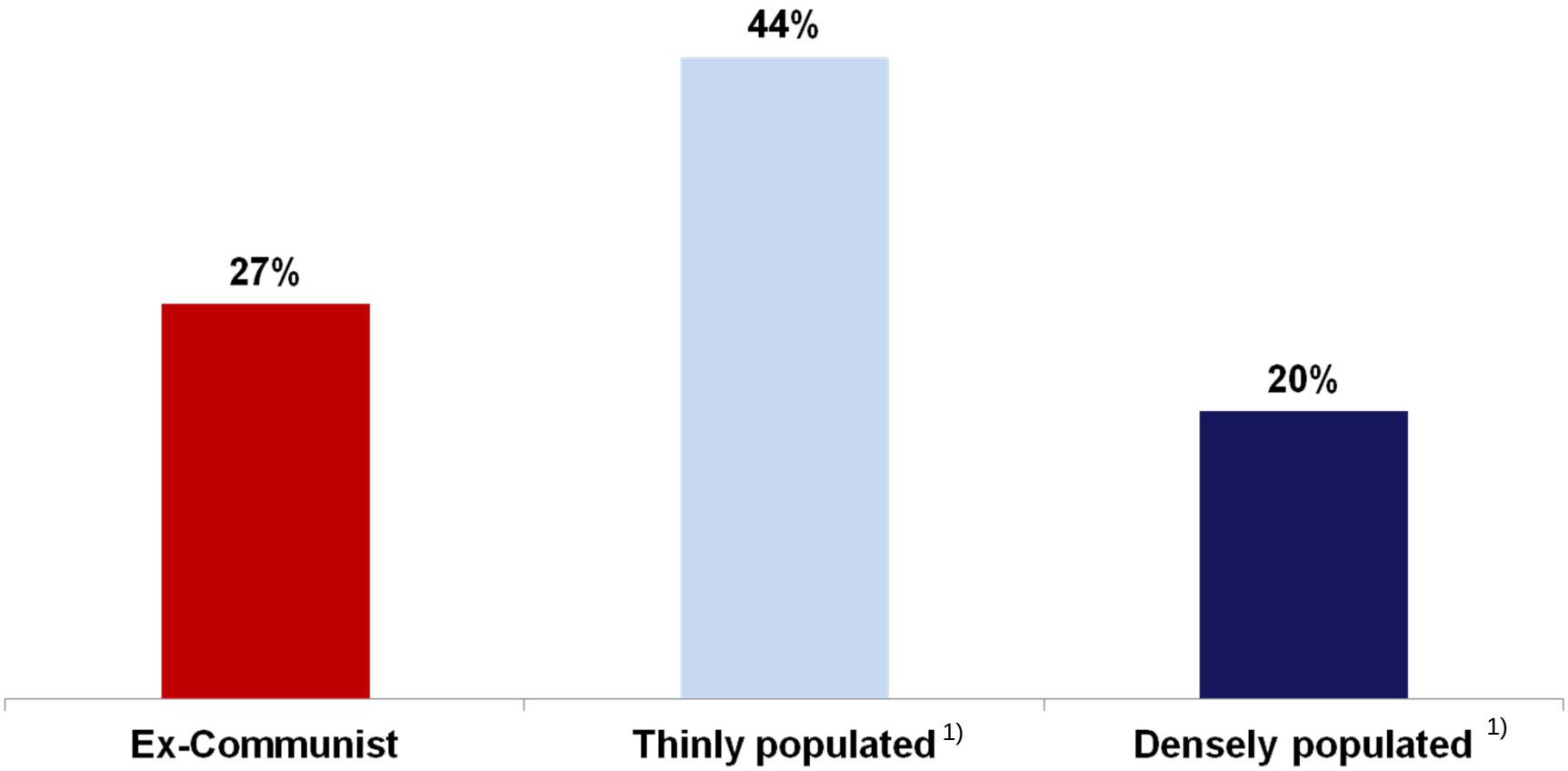
…but less so in thinly populated regions.





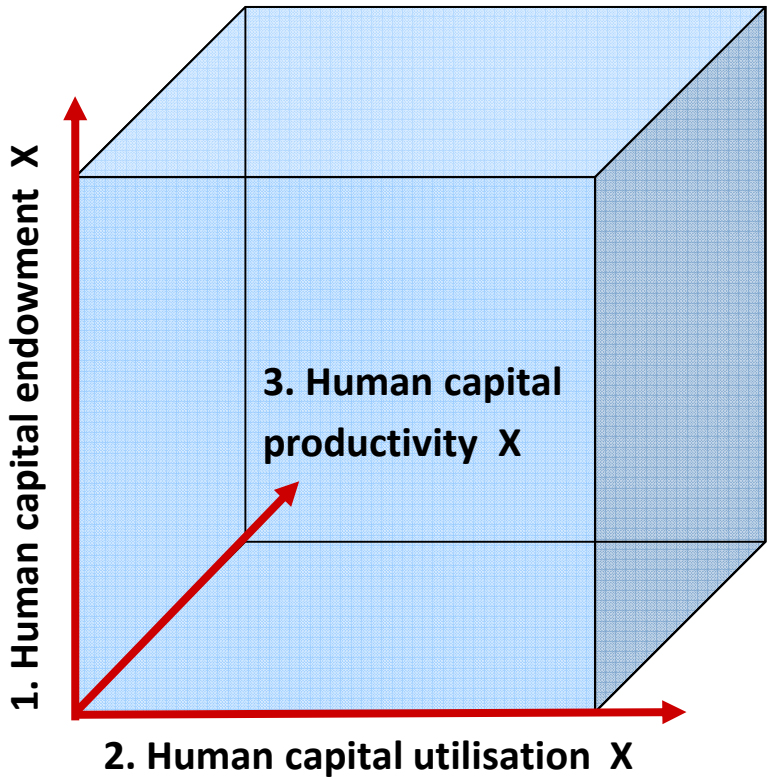
Youth unemployment accounts for income variation – especially in thinly populated regions





1) excluding ex-communist regions
2) including two dummy variables indicating whether a region includes a capital or not and whether the region is in Northern Europe or in Continental Europe.

The four leading human capital indicators for regions



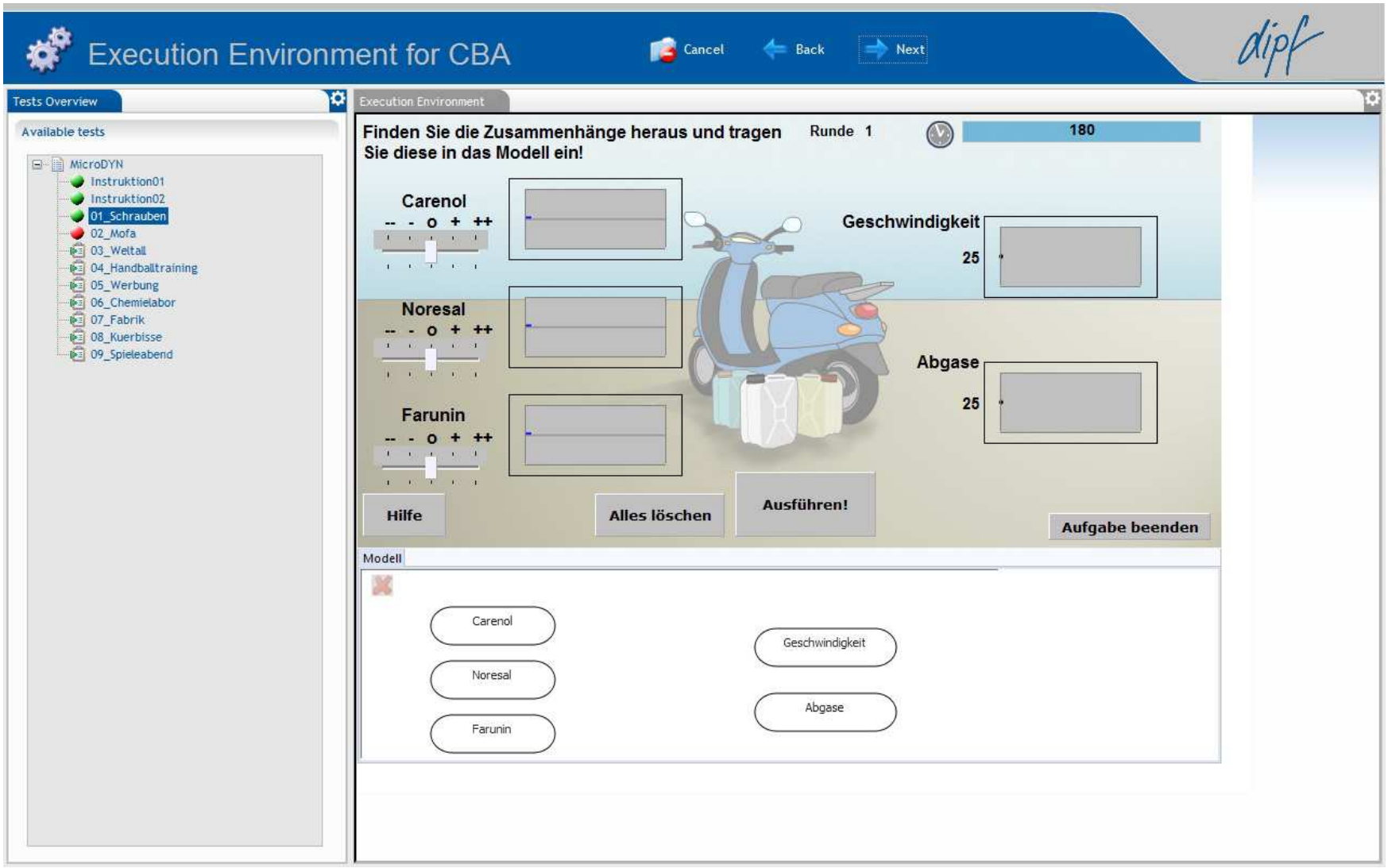
1) the number of complex jobs in a region or city

2a) the number of jobs available for young people and the ease with which young people can find employment

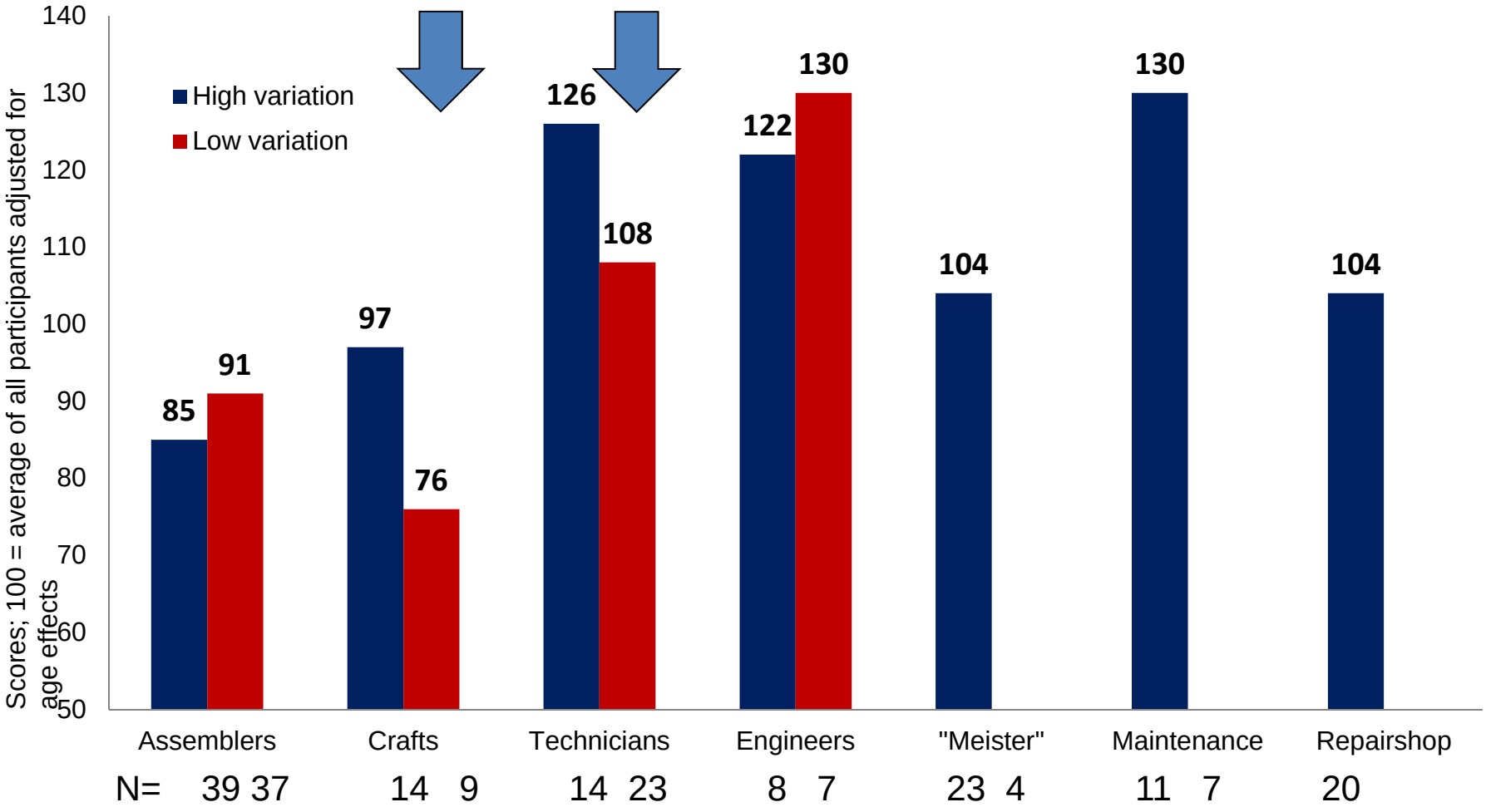
2b) the ability to get the unemployed back to work (thereby avoiding high levels of longterm unemployment)

3) The intensity of investment in research and development and the volume of local patent applications, as a proxy for the "innovativeness" of the region.

Sample screenshot of CPS Test



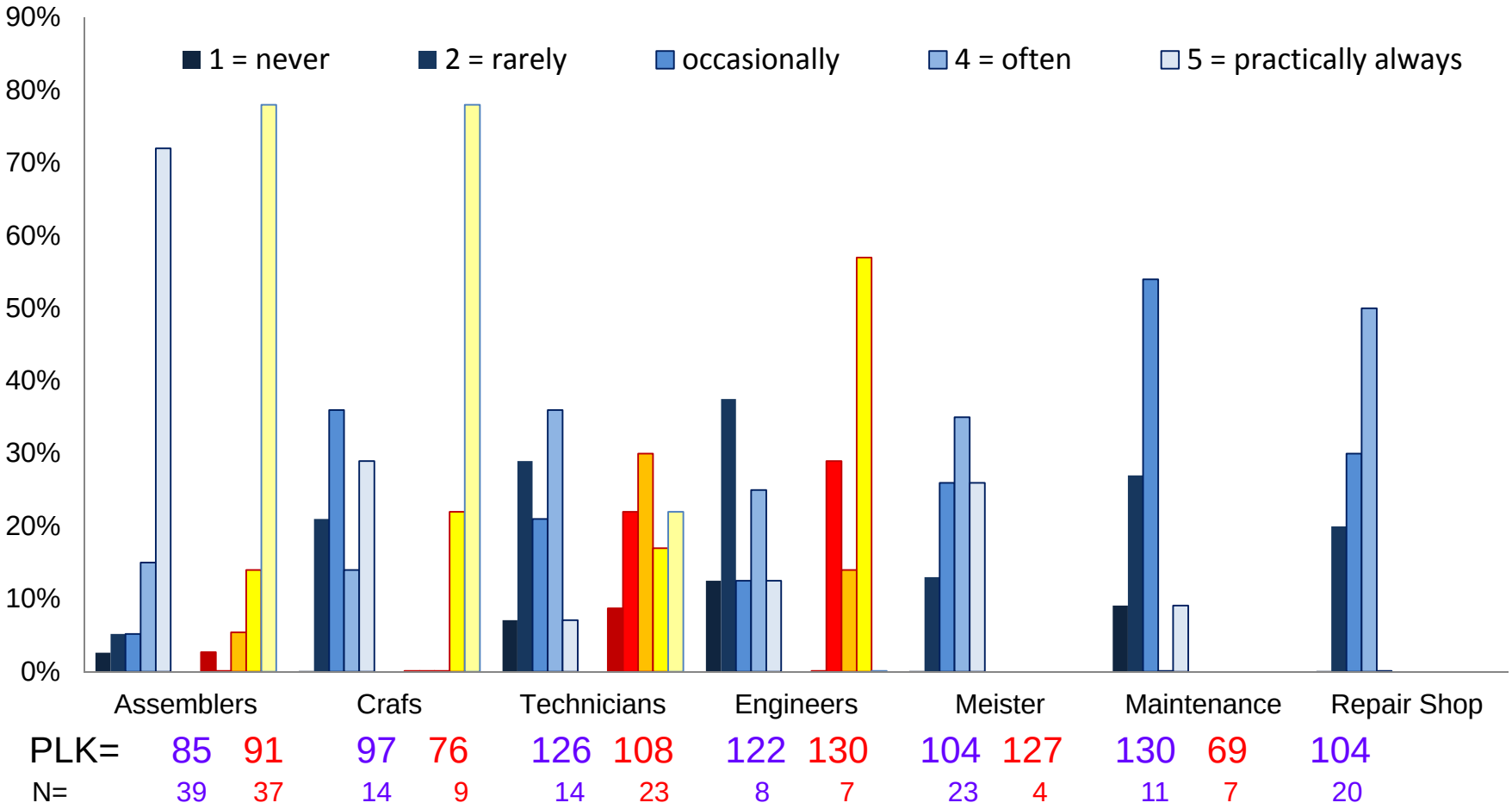
Blue factory with more variation, has higher CPS scores



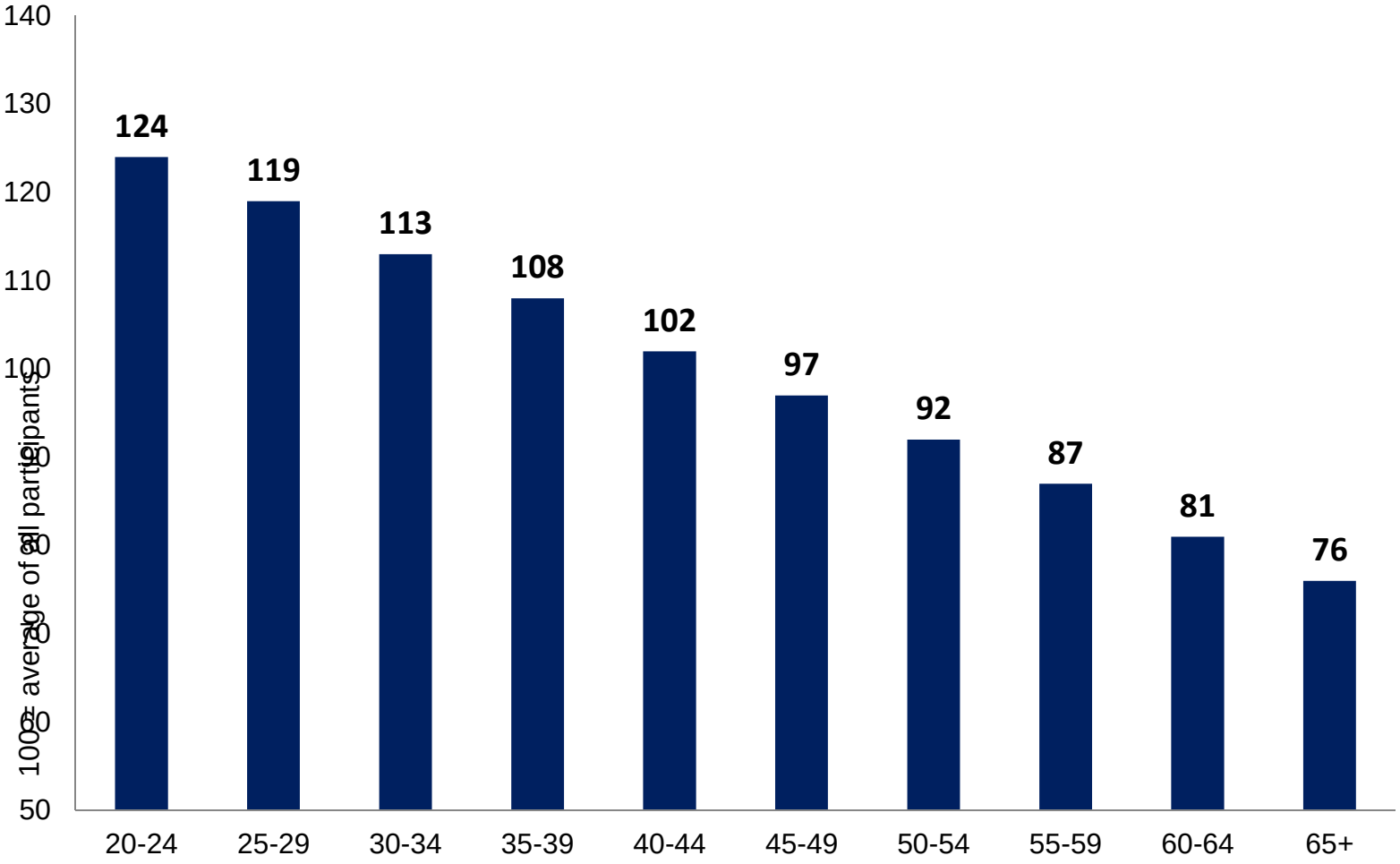
Source: analysis of pre-study data

Managerial style made the key difference

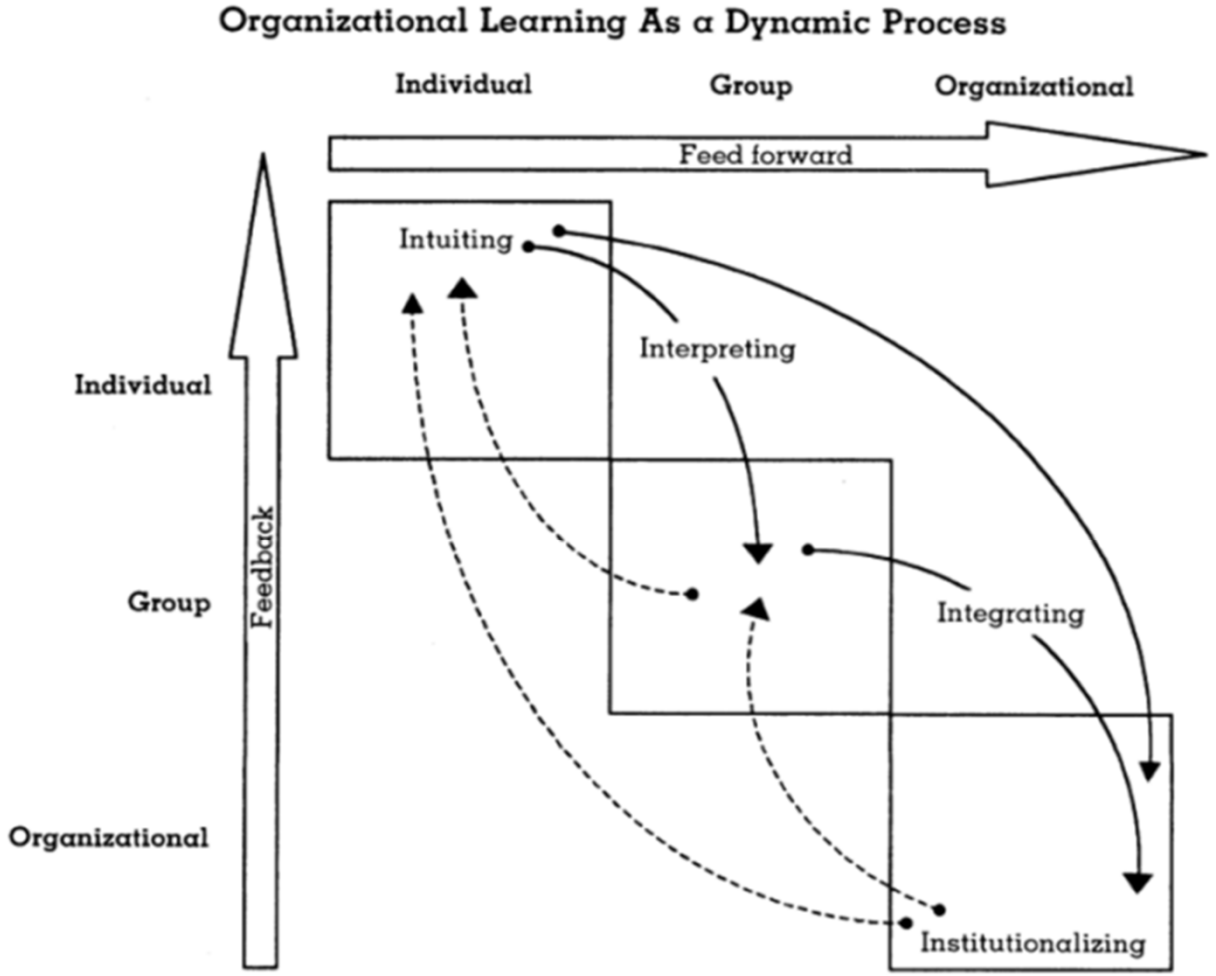
Question: How frequently do you receive precise Instructions?



Age effect in complex problem solving



Source: Statistical evaluation by Zeppelin Universität on data sample


Organizational Learning As a Dynamic Process
Individual
Group
Organizational
Feed forward
Intuiting
Interpreting
Integrating
Institutionalizing
Individual
Group
Organizational
Feedback

Thank you for your attention

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