

Institutional Capital & Territorial development

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**Information and Knowledge for All:
*Towards an Inclusive Innovation***

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I - Qualifying and defining « Institutional Capital »

1-How can we characterise institutions and local development?

- Institutions are a set of formal and informal rules, norms and values (Martin, 2000)
- Institutions « with associated activities and ressources, provide stability and meaning to social life » (Scott, 1995)
- A territory can be conceptualised as an organisational field which « constitutes a recognized area of institutional life » (Di Maggio & Powell, 1983)



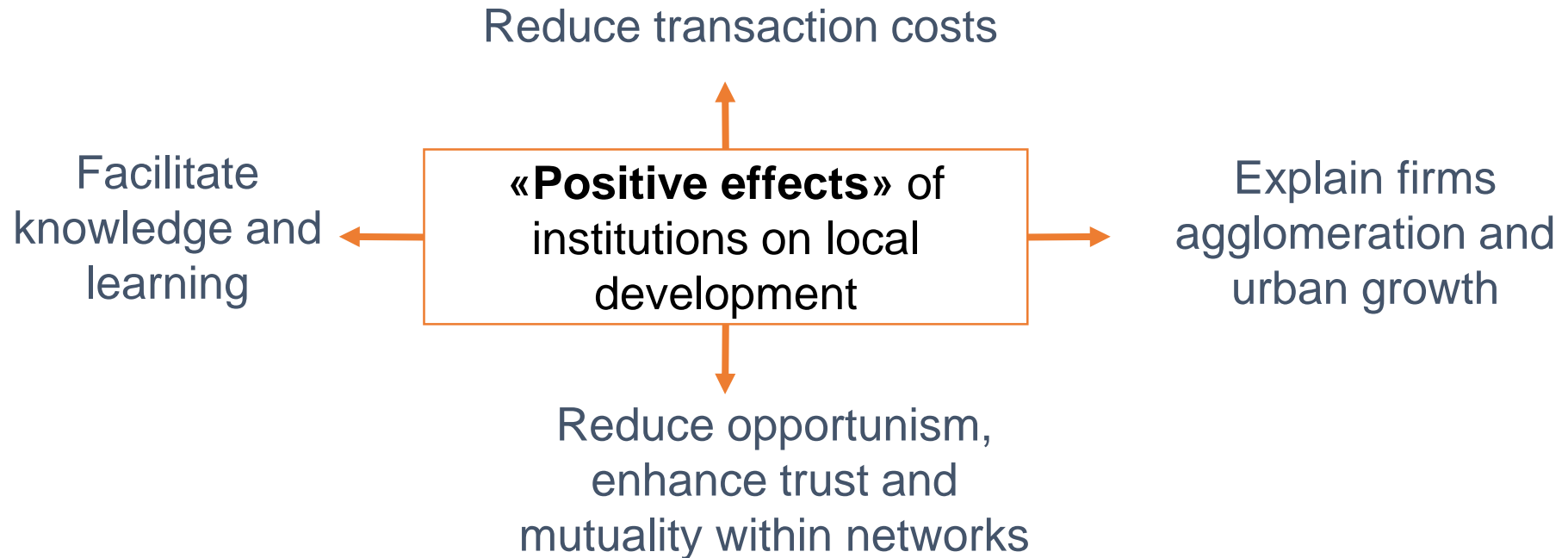
Institutions enable
local development

&

Institutions constrain
local development

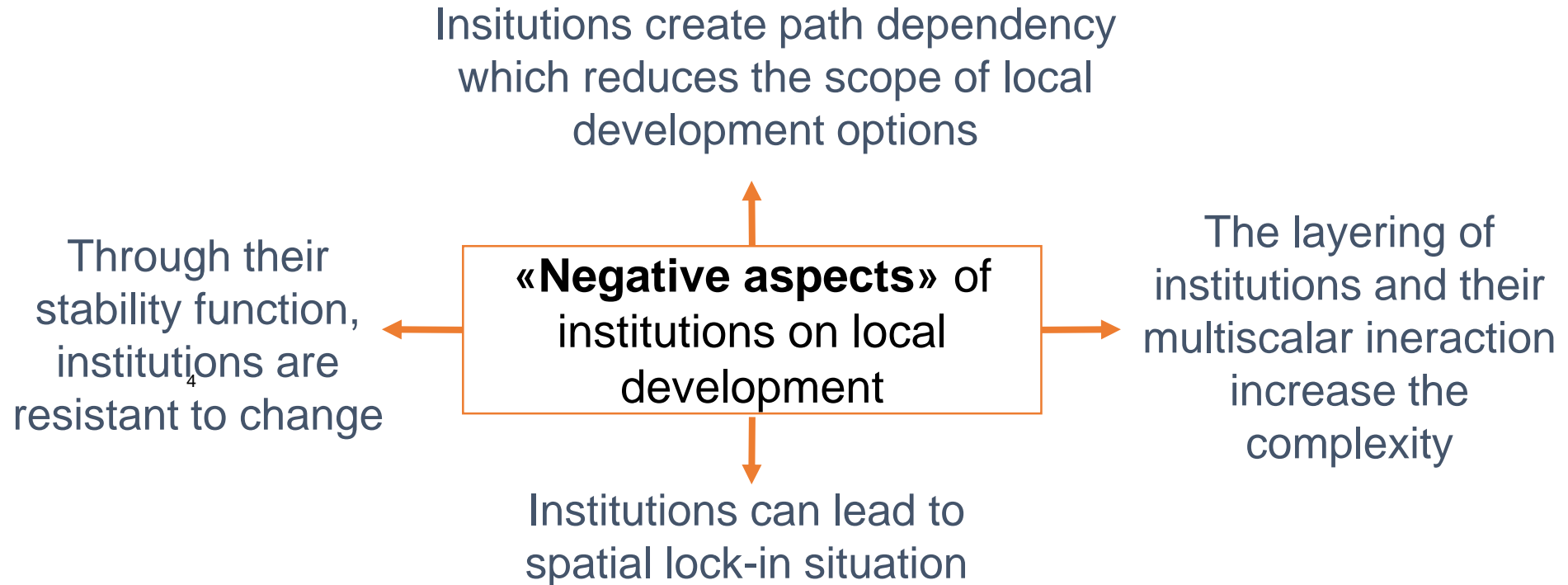
Institutions can play a critical role in securing local development

1-How can we characterise institutions and local development?



North, 1990 ; Storper, 1997 ; Amin, 1998 ; Saxenian, 2006, Percoco, 2013, 2014

1-How can we characterise institutions and local development?



Martin, 2000 ; Gertler, 2010 ; Boschma, 2015

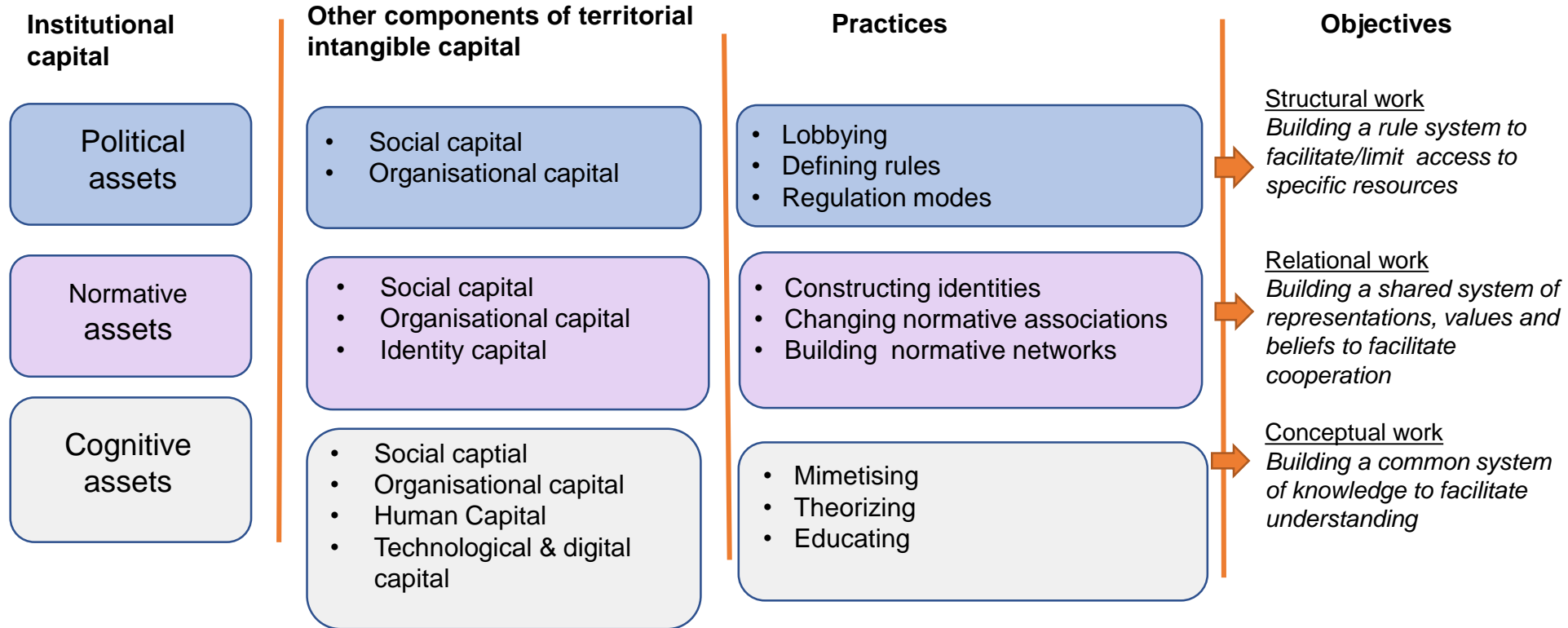
1-How can we characterise institutions and local development?

A lack of knowledge due to:

- As an intangible construct, institutions are difficult to measure
- The idiosyncratic nature of territories
- The time consideration

The need to move from an *outcome* focus to a *process* focus

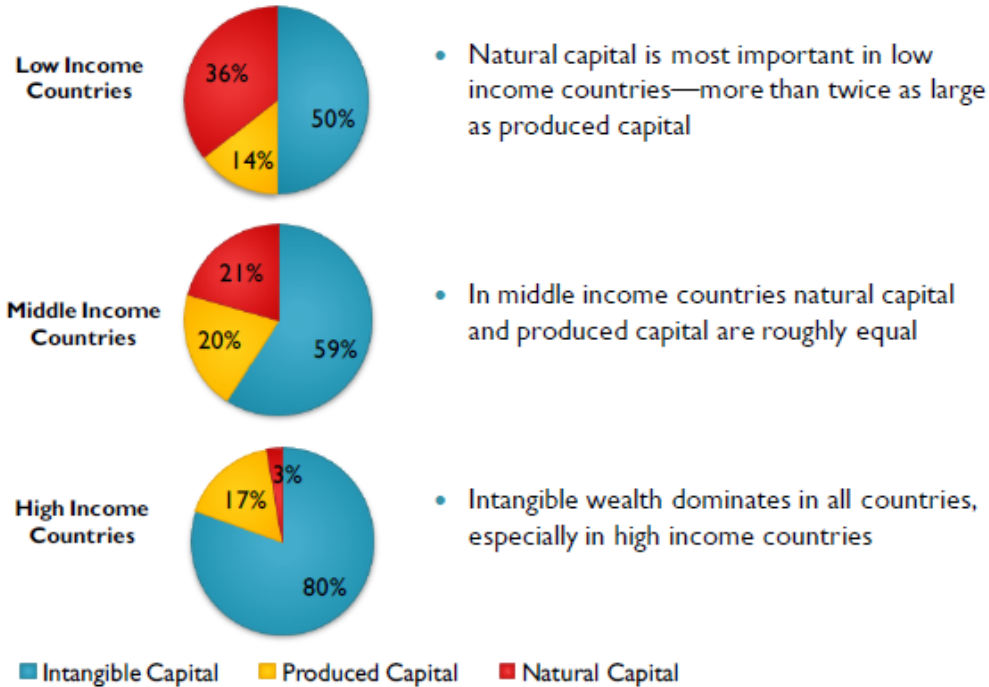
2. Our typology of territorial institutional assets



II - Measuring «Institutional Capital » and its impact

Composition of total wealth

Shares of comprehensive wealth, by income class, 2005



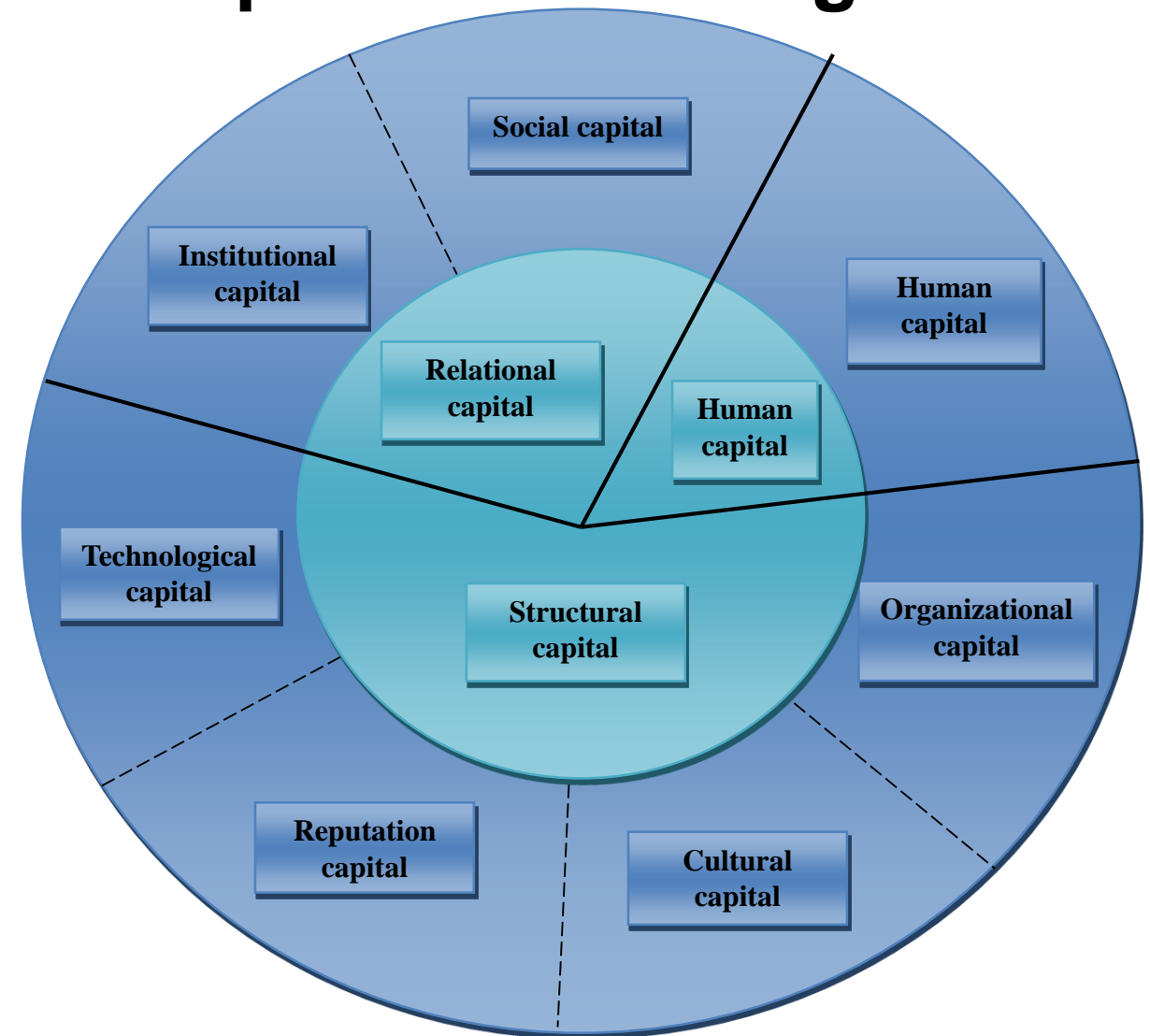
Intangible Capital is key in
growth of nations, even in
Low Income
countries

Intangible Capital:
Human Capital
& Institutional Capital

Source: Kirk Hamilton,
The World Bank Research Group
@ic7, www.chairedelimmateriel.u-psud.fr

Institutional capital as a component of intangible territorial capital

Intangible territorial capital is both the combination of intangible resources, endogenous, dynamic and intrinsic to a territory AND the capacity to make better use of them to improve local opportunities.



Methodology

- Based on the international scientific literature to list indicators measuring intangible territorial capital
- Lack of direct indicators to measure IC assets at regional level
- Two data sources (publicly available) were combined :
 - Regional databases for indicators (Eurostat, European Commission) and
 - Survey data for scales of measurement (ESS, European Social Survey, 2012)
- And the same geographical coverage : NUTS 2 (276 European regions), classification provided by Eurostat to harmonize European regional statistics and for the application of regional policies.
- As social capital and institutional capital are **multifaceted phenomena that cannot be captured by one single measure, two scales of measurement were created based on literature.**
- Statistical method : Principal Components Analysis PCA (Factor analysis on SPSS), essential to create assets scales of measurement and useful to calculate the score of the asset.
- Euro Office Map Chart (Map generator software) to visualize the geographical disparities between regions.

Creation of a scale of measurement (ESS, 2012), 7 items and 3 factors :

General level of trust (interpersonal trust)

- Most people can be trusted or you can't be too careful
- Most people try to take advantage of you, or try to be fair
- Most of the time people helpful or mostly looking out for themselves

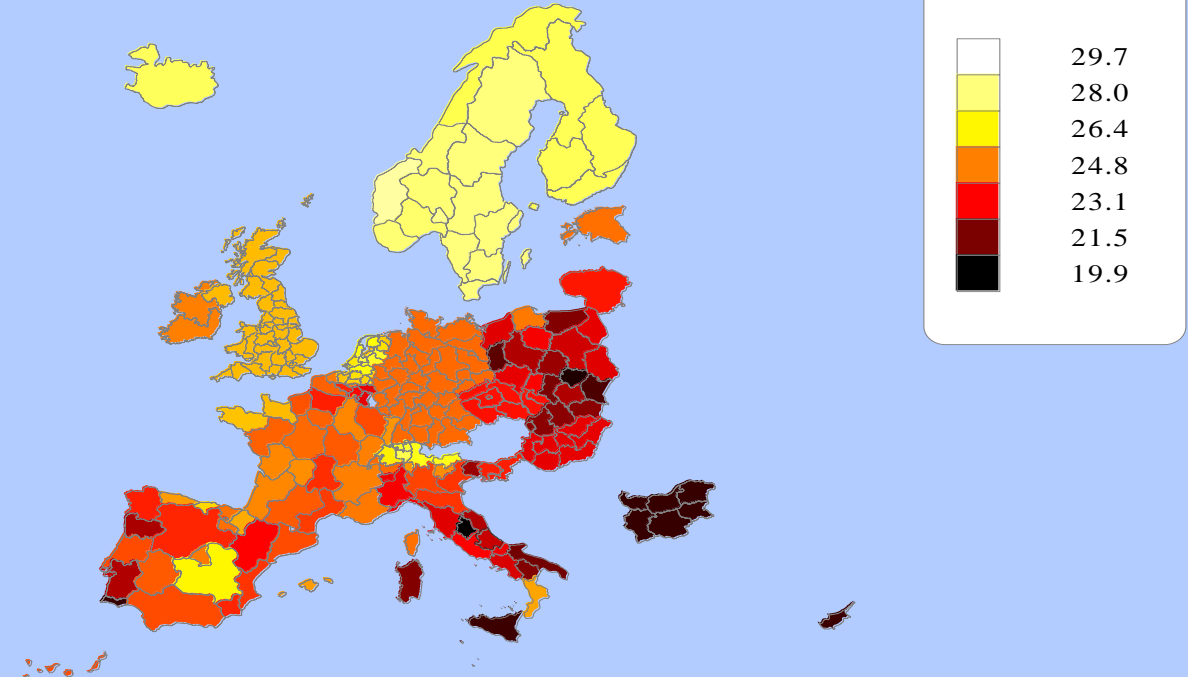
Social commitment level (formal social capital)

- Worked in another organisation or association last 12 months
- Involved in work for voluntary or charitable organisations, how often past 12 months

Level of connectivity and socializing (informal social capital)

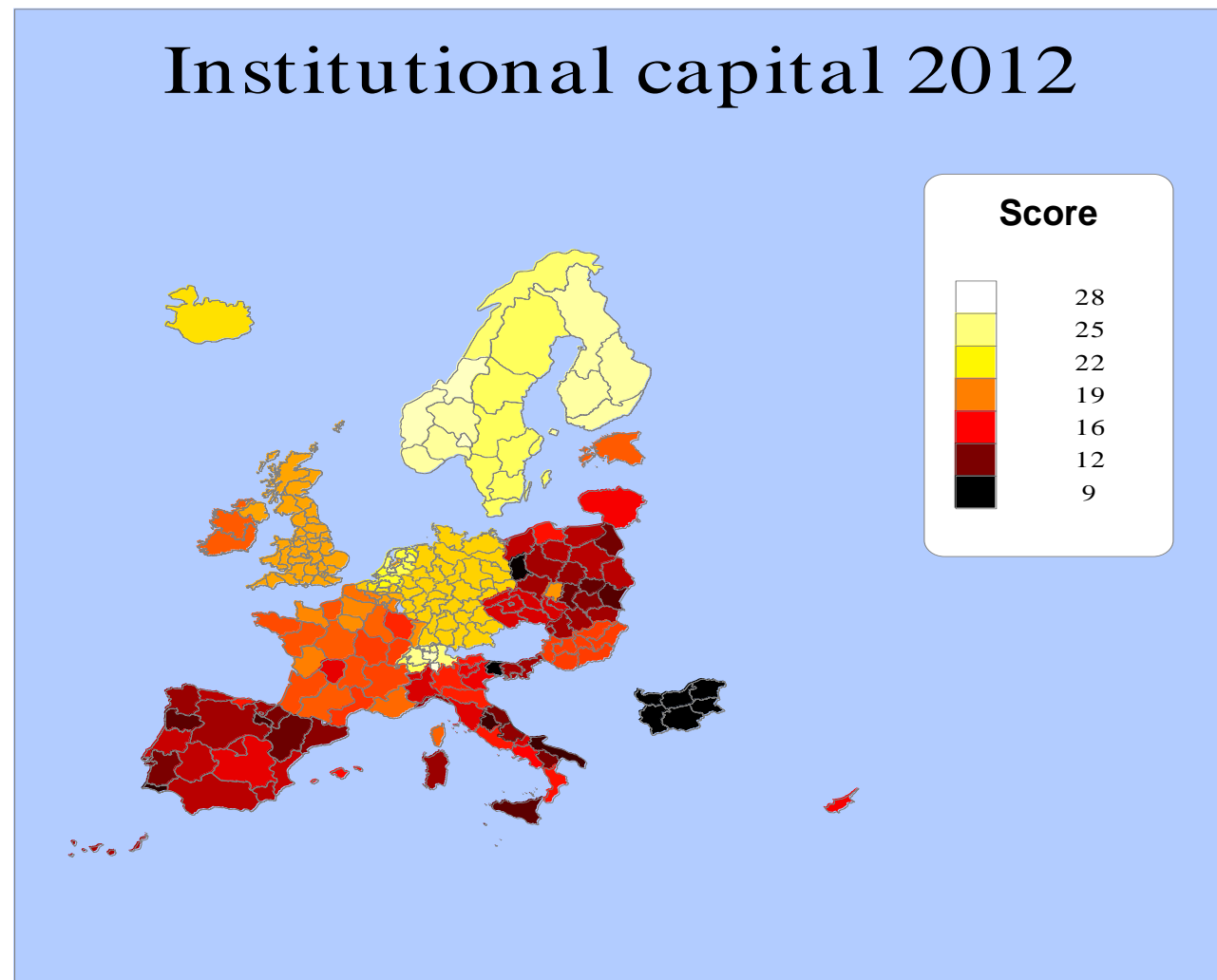
- How often socially meet with friends, relatives or colleagues
- How many people with whom you can discuss intimate and personal matters

Social capital 2012



Creation of a scale of measurement (ESS, 2012), 5 items and 1 factor :

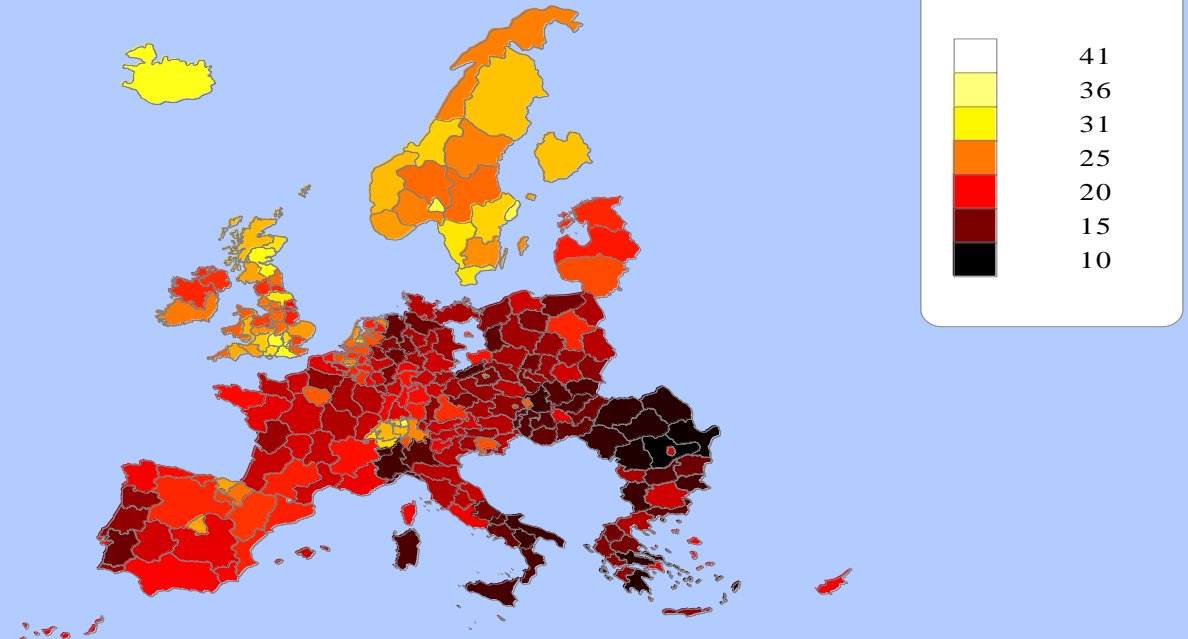
Trust in country's parliament
Trust in the legal system
Trust in the police
Trust in politicians
Trust in political parties



3 indicators selected from Eurostat regional Database (European Commission)

- Education indicator (Pupils and Students in all levels of education as % of total population at regional level)
- Participation rate in training (%)
- Population aged 25-64 with tertiary education attainment (%)

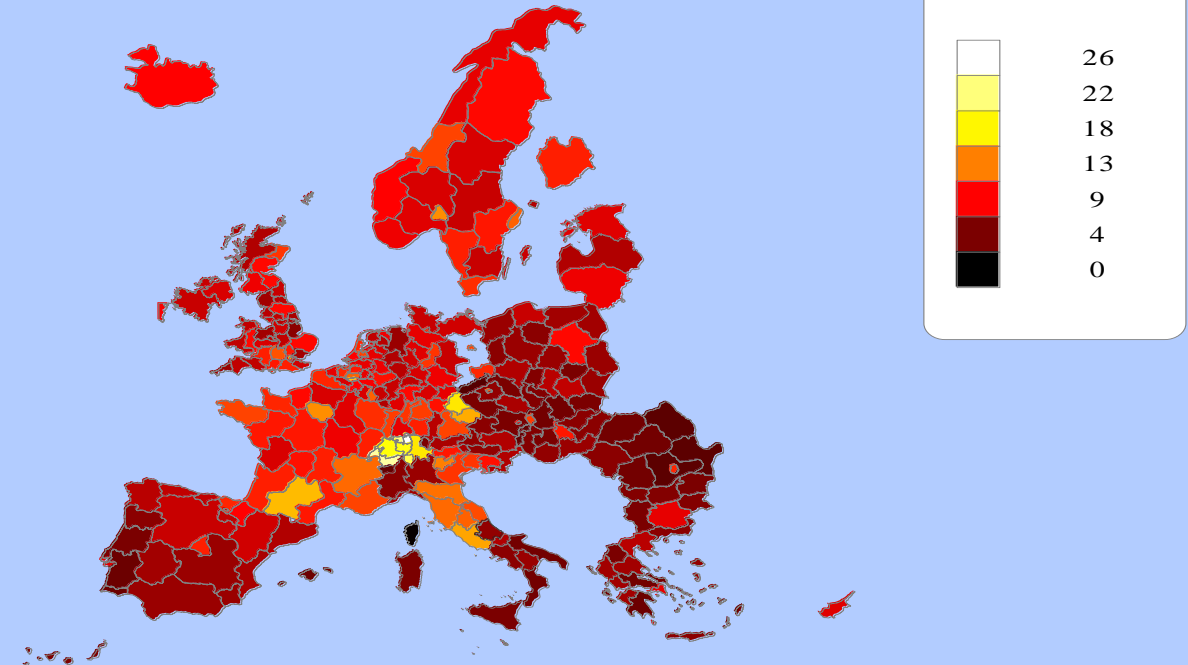
Human capital 2012



5 indicators selected from Eurostat regional Database (European Commission)

- Total intramural R&D expenditure (% of gross domestic product (GDP))
- Total R&D personnel and researchers (% of active population)
- HRST (Human Resources in Science & Technology) (% of active population)
- Patent applications to the EPO (Per million of active population)
- Households with access to the internet at home (% of households)

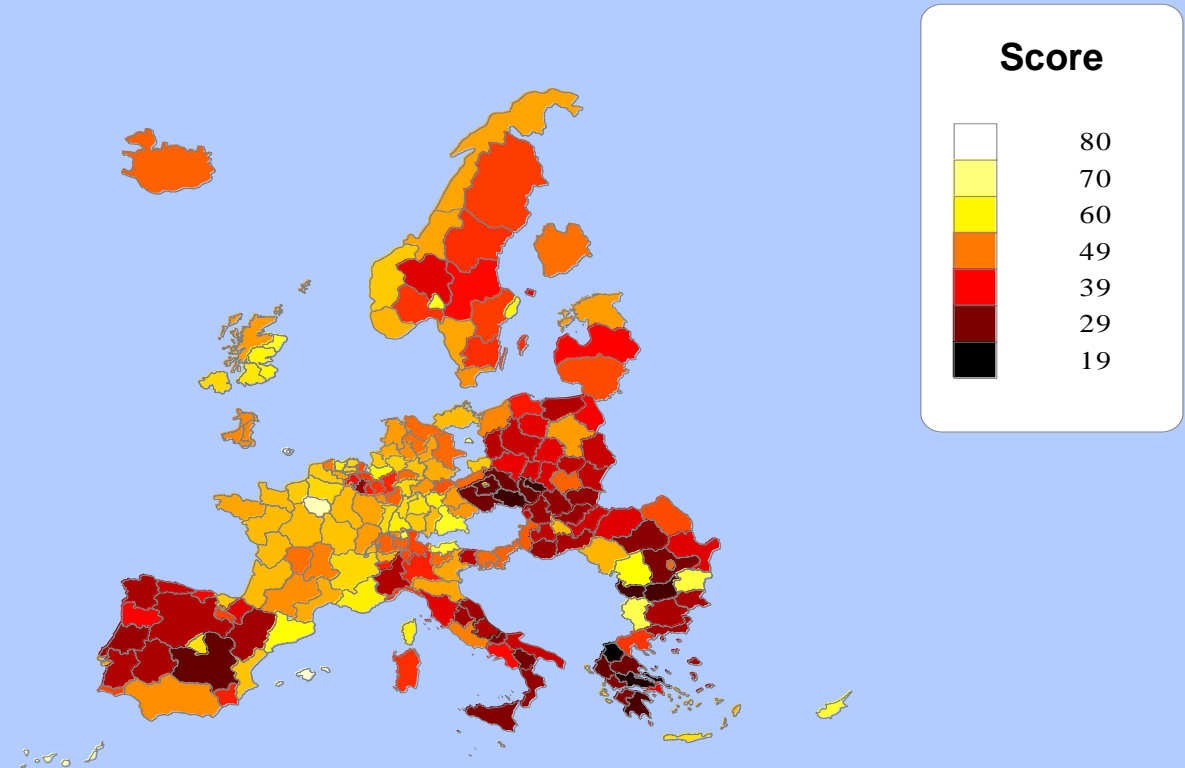
Technological capital 2011



3 indicators selected from Eurostat regional Database (European Commission)

- Net occupancy rate of bed-places and bedrooms in hotels and similar accommodation (%)
- Arrivals at tourist accommodation establishments
- Inward FDI (foreign direct investments) at regional level

Reputation capital 2012

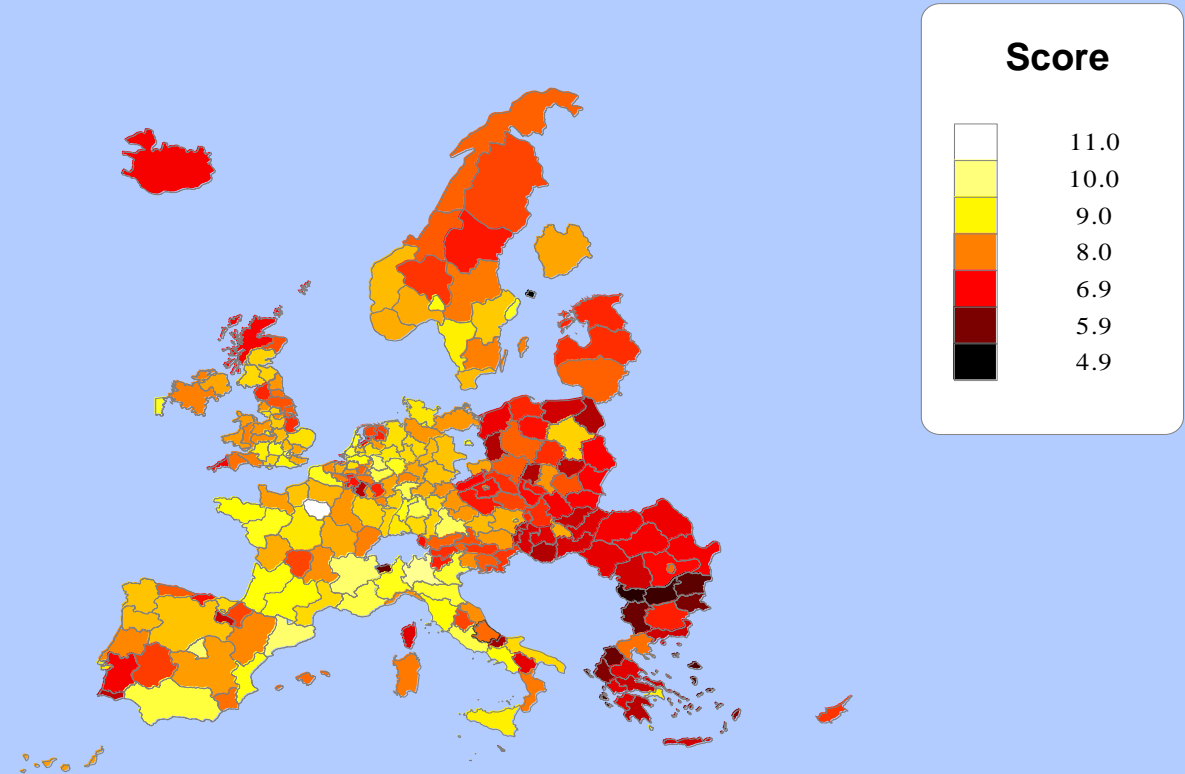


**1 indicator calculated from Eurostat regional Database
(European Commission)**

20 % of the compensation of employees

Note: Log transformation in graph.

Organizational capital 2010



What kind of relationships exist between regional intangibles and GDP (per capita)?

A first look - using the following proxies:

Human capital: Share of R&D personnel within the economically active population.

Technological capital: Patent applications.

Organisational capital: 20% of employee salary.

Reputation capital: Amount of tourists arrivals per accommodation establishment.

Social capital: Composite index measuring interpersonal trust, social commitment and people's connectivity and tendency to socialize

Institutional capital: Composite index measuring trust in several public institutions

Estimating GDP per capita under a cross-section model.

Data: 2013 or latest.

(Fixed capital and labour participation rate used for controls)

Linear regression

Higher levels of GDP per capita are associated with higher levels of social capital.

Number of obs = 260
F(8, 251) = 69.07
Prob > F = 0.0000
R-squared = 0.7392
Root MSE = .31167

logpib	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
CAPsocial	.0859832	.0285005	3.02	0.003	.0298526	.1421138
CAPinst	.0183354	.0158382	1.16	0.248	-.0128573	.0495281
tour	-3.71e-06	.0000119	-0.31	0.755	-.0000271	.0000196
logCAPorg	.1544542	.0905846	1.71	0.089	-.0239485	.3328569
logrd_per	.2275298	.0523625	4.35	0.000	.1244039	.3306557
logbrevets	.1082582	.0266103	4.07	0.000	.0558503	.1606661
labour_prop	.1952668	.7023945	0.28	0.781	-1.188071	1.578605
logCAPfixe	-.0998289	.0873254	-1.14	0.254	-.2718128	.072155
_cons	6.63059	.6785835	9.77	0.000	5.294147	7.967033

GDP per capita growth (5-year average)

(Fixed capital and labour participation rate used for controls)

Linear regression

There is lower GDP growth where social capital is (already) high.

Number of obs = 285
F(8, 276) = 18.06
Prob > F = 0.0000
R-squared = 0.3641
Root MSE = .03311

pibgrowth	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
CAPsocial	-.011854	.001759	-6.74	0.000	-.0153167	-.0083913
CAPinst	.004224	.001235	3.42	0.001	.0017928	.0066552
tour	9.12e-06	1.41e-06	6.44	0.000	6.33e-06	.0000119
logCAPorg	-.0030582	.0019154	-1.60	0.111	-.0068288	.0007124
logrd_per	.004726	.0053545	0.88	0.378	-.0058149	.0152668
logbrevets	-.0079435	.003644	-2.18	0.030	-.0151169	-.00077
labour_growth	-.2624724	.2117013	-1.24	0.216	-.6792268	.1542821
CAPfixe_growth	.1504536	.050899	2.96	0.003	.050254	.2506532
_cons	.2642269	.0370856	7.12	0.000	.1912204	.3372334

GDP per capita growth (5-year average)

(Fixed capital and labour participation rate used for controls)

Linear regression

There is high GDP growth where institutional capital is high.

Number of obs = 285
F(8, 276) = 18.06
Prob > F = 0.0000
R-squared = 0.3641
Root MSE = .03311

pibgrowth	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
CAPsocial	-.012854	.001759	-6.74	0.000	-.0153167	-.0083913
CAPinst	.004224	.001235	3.42	0.001	.0017928	.0066552
tour	9.12e-06	1.41e-06	6.44	0.000	6.33e-06	.0000119
logCAPorg	-.0030582	.0019154	-1.60	0.111	-.0068288	.0007124
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labour_growth	-.2624724	.2117013	-1.24	0.216	-.6792268	.1542821
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Conclusion

- Institutional capital is a key component of Intangible territorial capital
- Institutional capital is hard to calibrate and to address
- We need to further refine the « concept of institutional capital » into practice
- For decision making in particular **profiling of differentiated roles** is a promising way to address the question of « How »
- Case studies approach can be used as a modality for clarifying, typologizing these differentiated roles

Thank you for your attention