Unpacking the growth impacts of European Union Cohesion Policy: transmission channels from Cohesion Policy into economic growth

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EVALUATION NETWORK MEETING

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Regional and urban Policy

Introduction

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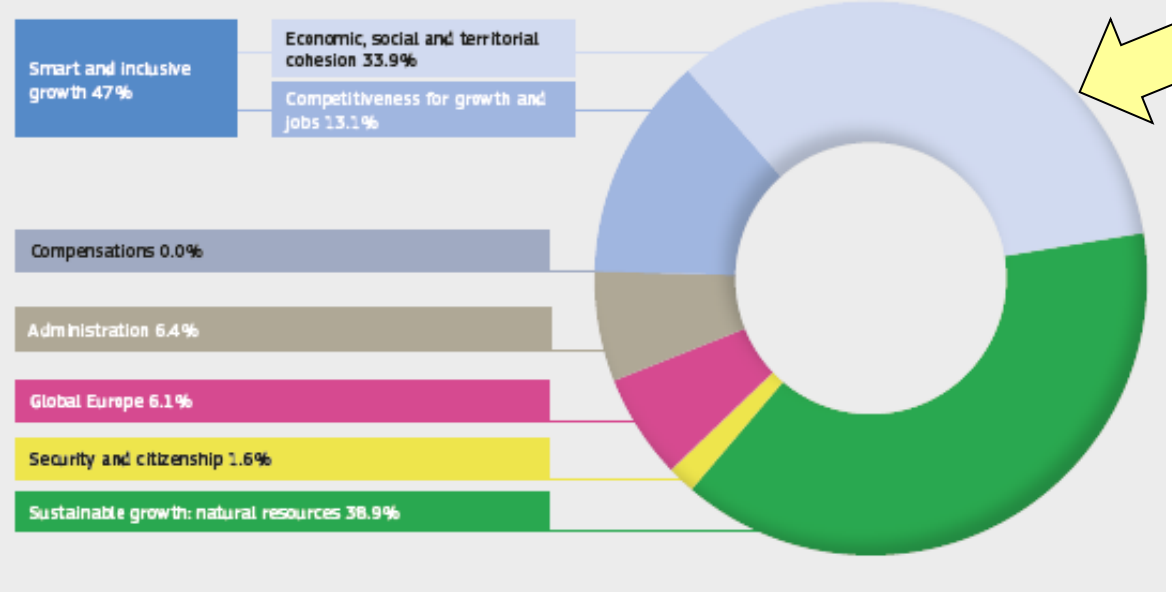
- Cohesion policy is a key EU policy
- Second most important in the community budget
- 2014-2020



€371 bio

0,36% of EU GDP

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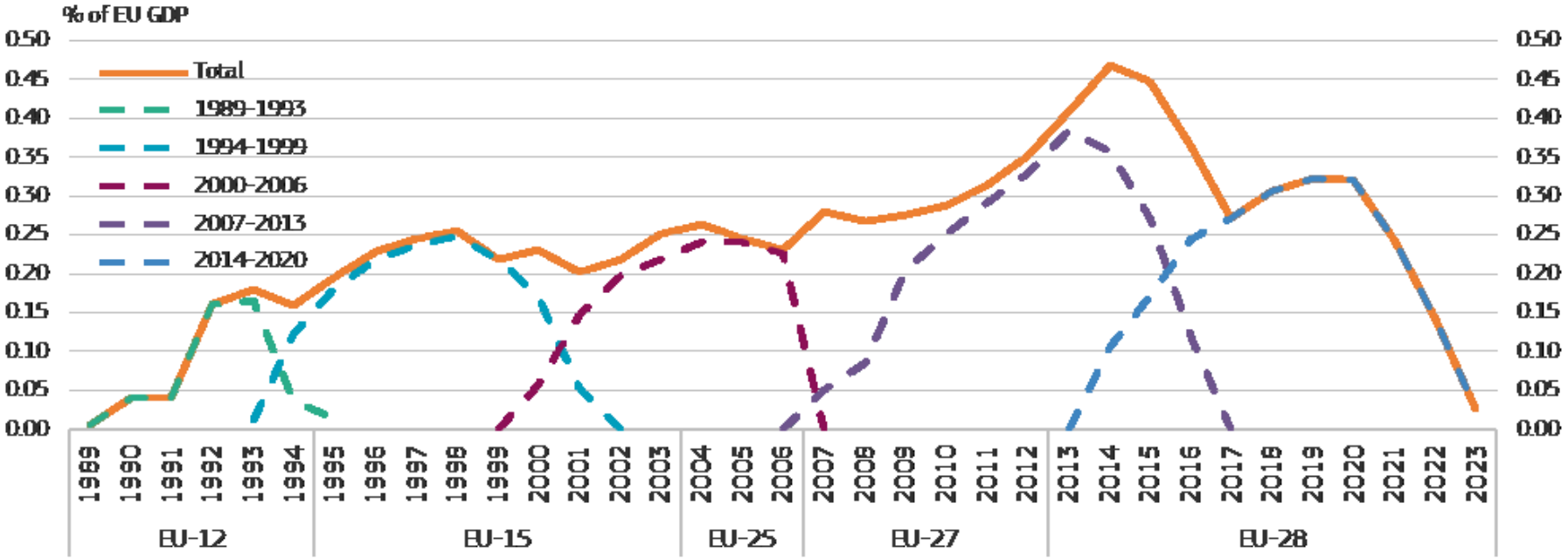
Figure 6.4 Cohesion policy funding, 1986–2023



The time profile of 2014-2023 expenditure has been established on the basis of the 2007-2013 outcome and an assumption of 100% absorption over the period

Source: DG REGIO, historical data.

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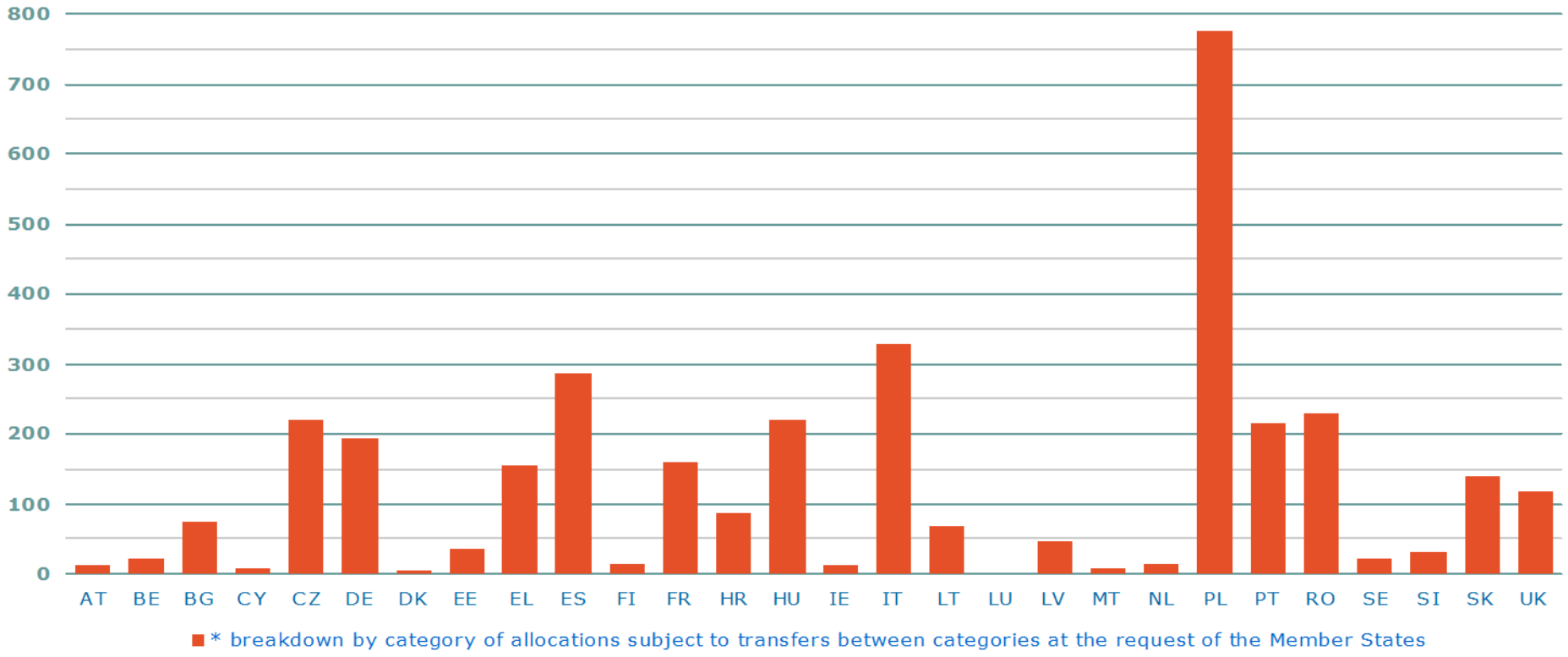
Total EU allocations of cohesion policy 2014-2020* (billion €, current prices)



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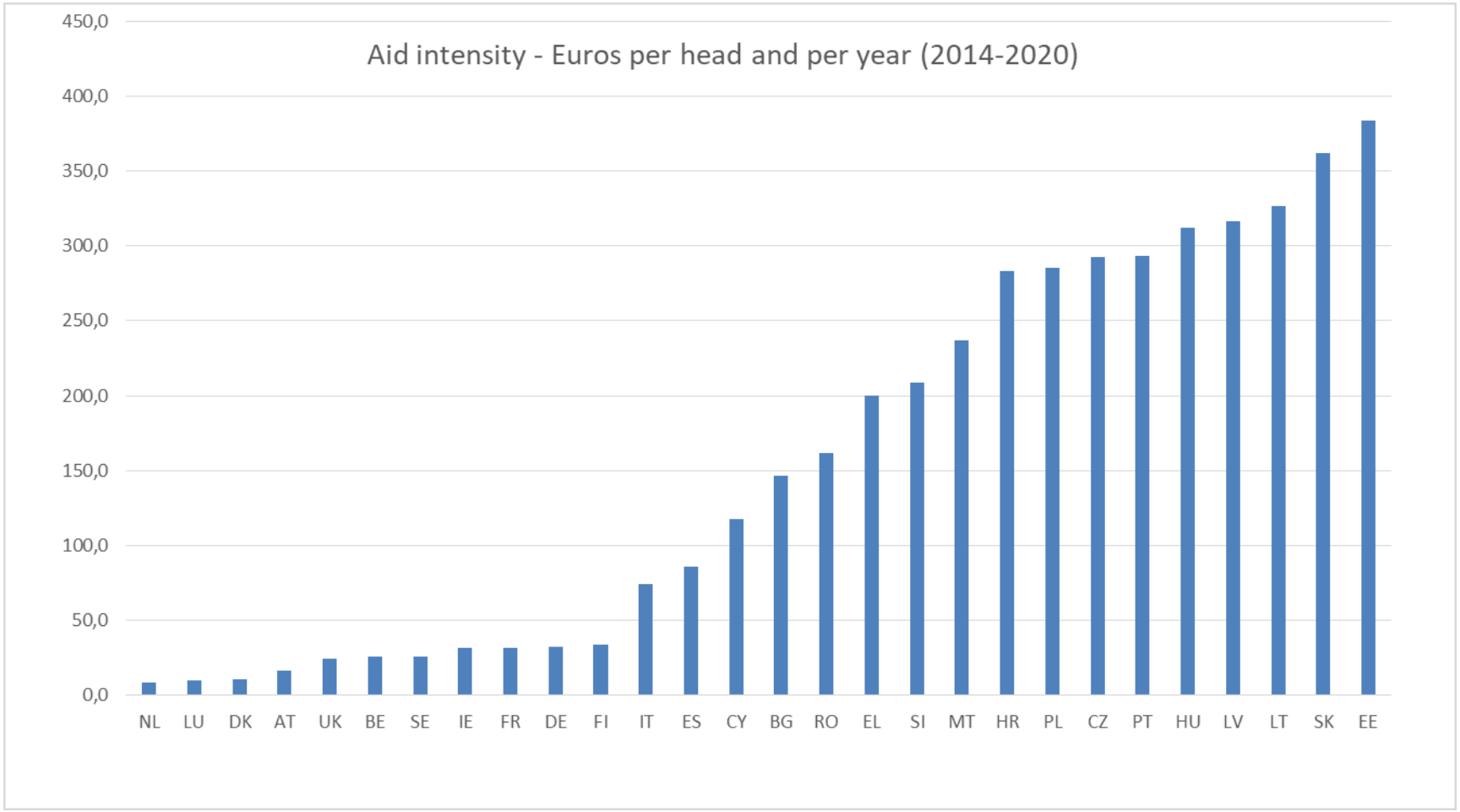

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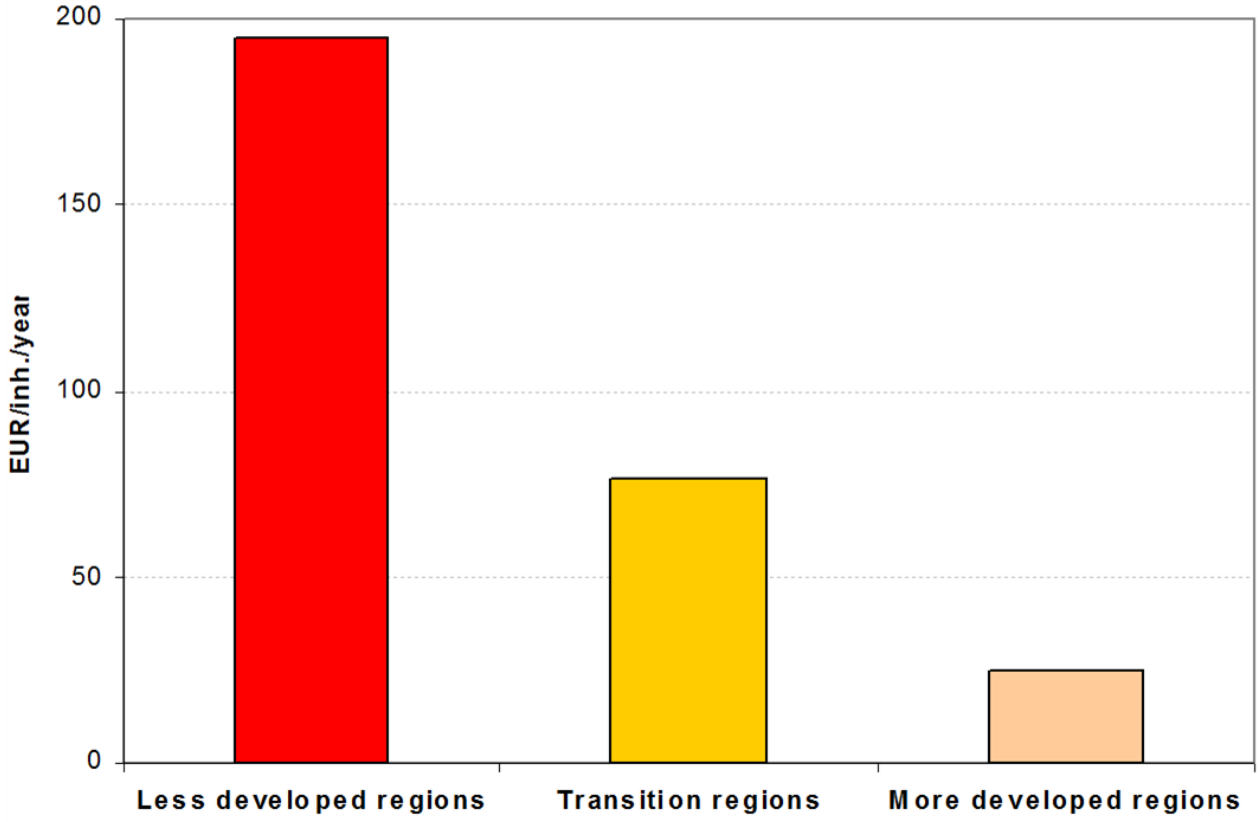
Average annual aid intensity: Fair and balanced support taking into account adaptive capacities



Geographical distribution of expenditure - MS

Concentrated in less developed Member States…

- Cohesion Policy = 0.3% of EU GDP
- Cohesion Policy in HU = **2.5**% of HU GDP

	Euros	% GDP
HU	22,729,631,280.00	2.5%
LT	6,436,718,182.00	2.3%
LV	4,303,925,252.00	2.2%
EE	3,233,286,888.00	2.1%
PL	63,826,271,781.00	1.9%
CZ	21,224,535,095.00	1.5%
BG	5,356,954,079.00	1.5%
SK	8,440,387,946.00	1.3%
PT	20,340,982,486.00	1.3%
MT	782,088,379.00	1.2%
SI	3,800,419,887.00	1.1%
RO	14,811,805,121.00	1.1%
EL	19,199,748,374.00	1.1%
CY	581,813,243.00	0.4%
ES	28,545,542,061.00	0.3%
IT	21,688,253,207.00	0.1%
DE	24,185,144,329.00	0.1%
FI	1,516,167,741.00	0.1%
FR	12,541,533,534.00	0.1%
BE	1,856,181,272.00	0.1%
UK	8,859,881,749.00	0.0%
IE	690,496,642.00	0.0%
SE	1,544,787,294.00	0.0%
AT	1,077,593,584.00	0.0%
NL	1,559,290,857.00	0.0%
DK	484,098,378.00	0.0%
LU	47,962,966.00	0.0%

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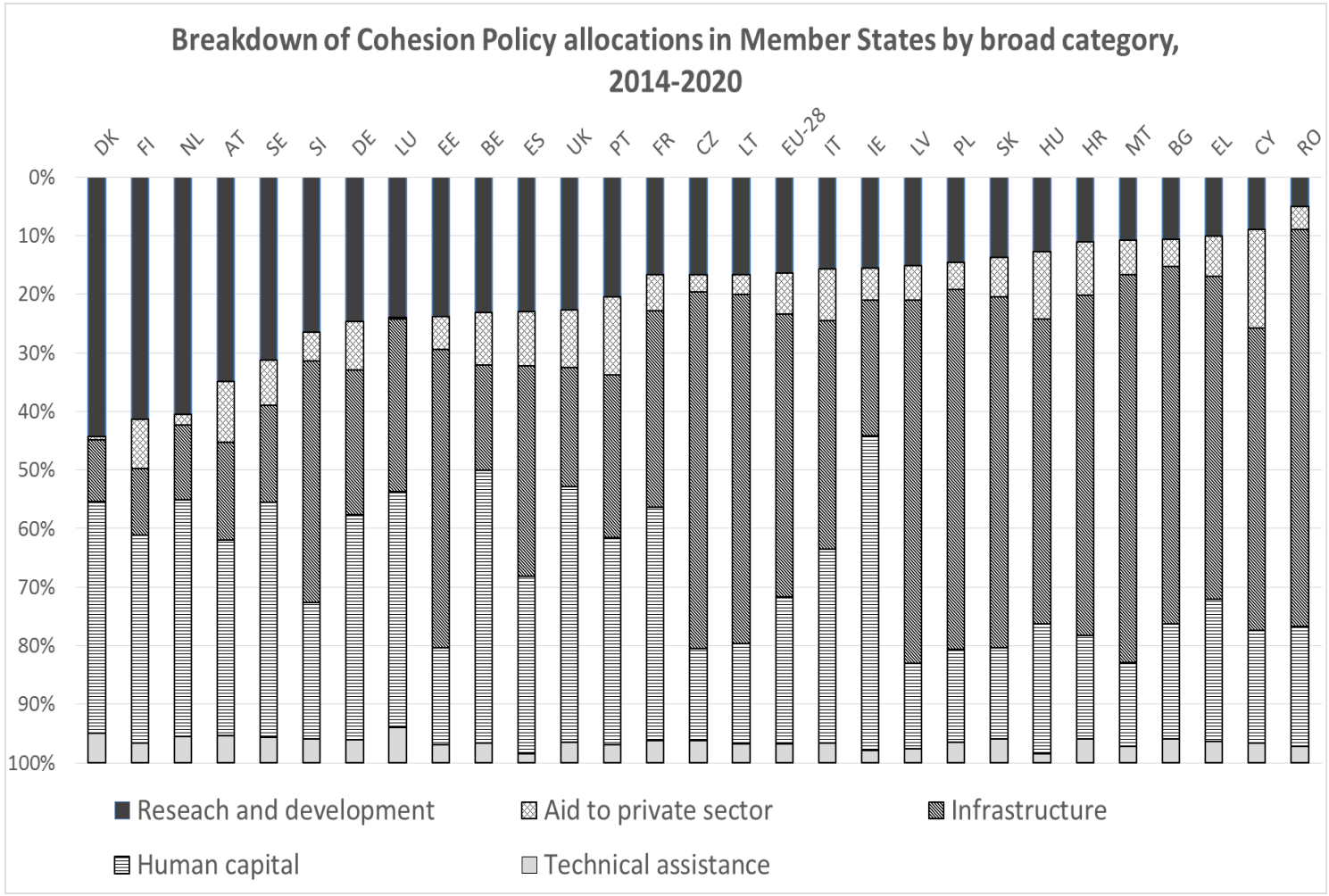

Assessing the impact of the policy

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- Cohesion Policy budget is under pressure (new priorities, BREXIT, …)
- Competition among DGs
- ***Need to evaluate the policy and assess its capacity to deliver***
- Highly critisized for being ineffective…
- … based on a vast litereature looking at its impact at macro level

Assessing the impact of the policy

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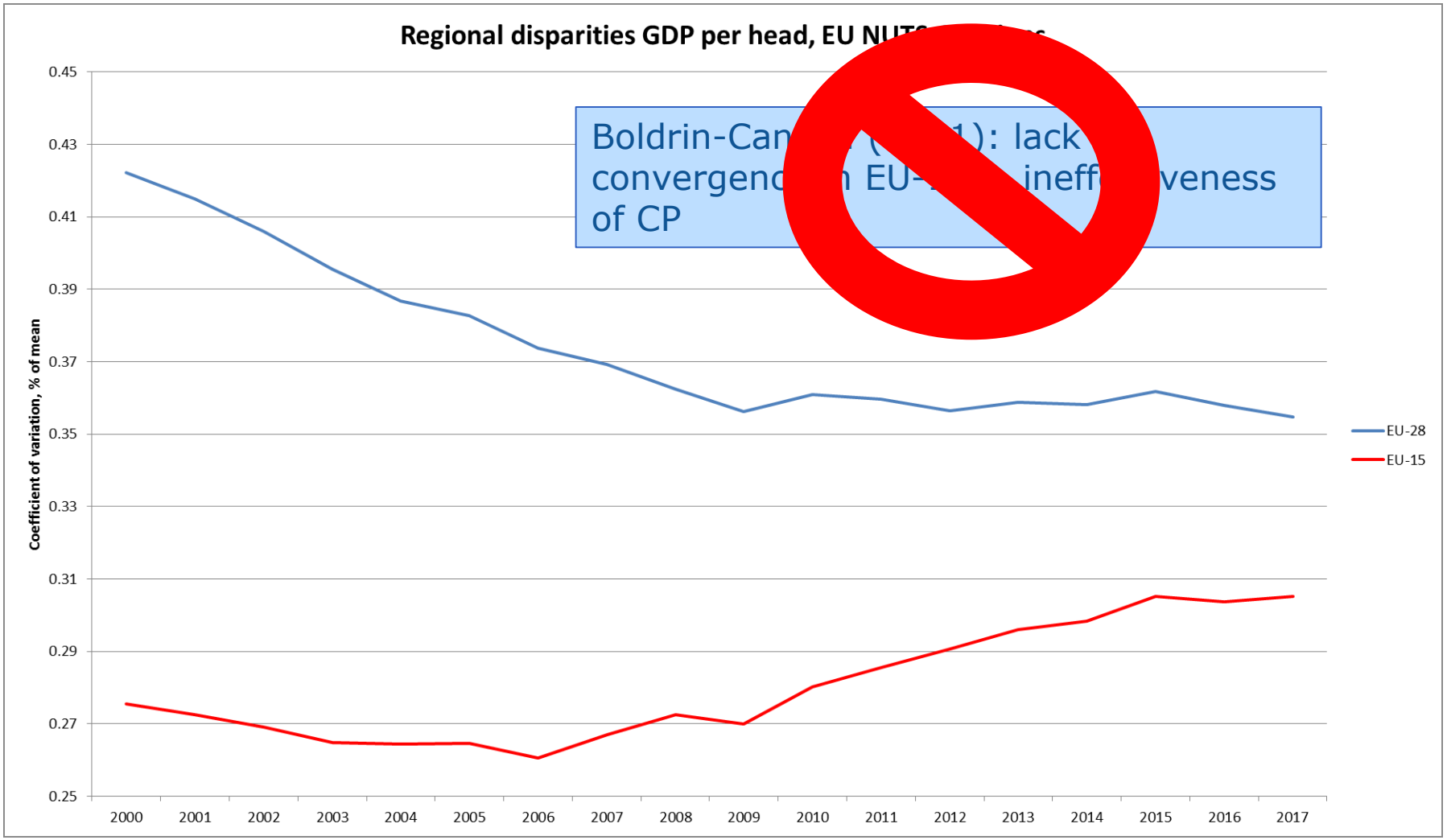

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Growth regressions – Typical Methodology

- **Estimate a Beta convergence equation**

$$\Delta GDP = \alpha + \beta\, GDP\ at\ starting\ date + \gamma Z$$

- **Introduce Cohesion Policy as one of the explanatory variable**

$$\Delta GDP = \alpha + \beta\, GDP\ at\ starting\ date + \gamma Z + \delta CP$$

- **Assess the impact of the policy in terms of economic growth**

Assessing the impact of the policy

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This approach is not very helpful in evaluating Cohesion Policy

- The literature is inconclusive, some contributions pointing to positive impact, others to no impact, others to negative impact
- Imports a methodology applied to assess effectiveness of aid to development…
- … which has been criticized for its deep methodological flaws
- (Rodrik 2012 – https://scholar.harvard.edu/files/dani-rodrik/files/why-we-learn-regressing-nothing-by-regressinggrowthonpolicies.pdf)

- **Examples**

Assessing the impact of the policy

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Fagerberg and Verspagen (1996)	Negative impact
Boldrin and Canova (2001)	No impact
Dall'erba and Le Gallo (2008)	No impact
de la Fuente and Vives (1995)	Positive impact
Cappelen et al. (2003)	Positive impact
Mohl and Hagen (2008)	Positive impact

Assessing the impact of the policy

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Most frequently cited problems

- Endogeneity of explanatory variables
- Model selection
- Omitted variables
- …

Results are strongly biased

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Key issue 1

- Policy injection depends on GDP per head: simultaneity => endogeneity => biased results

Assessing the impact of the policy

Let's create data using the following model:

$$\Delta GDP = \alpha + \beta\, GDP\ at\ starting\ date + \gamma Z + \delta\, CP + \varepsilon_1$$

With

$$\alpha = 1;\quad \beta = -0.02;\quad \gamma = 1;\quad \delta = 0.1$$

$$Z = UD(1,1);\ \varepsilon_1 = N(0,1)$$

$$CP = 1/\, GDP\ at\ starting\ date\ (+ \varepsilon_2)$$

Estimation with OLSQ (2,3SLSQ, FIML):

	α	β	γ	δ
Est.	1.18	-0.02	0.88	-0.10
T-stat	4.55	-8.14	3.10	-0.11

R-Sq: 0.44; DW:1.96

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Key issue 2

- Bad controls

- Example:

  - Inclusion of investment in growth regression (in Z)…
  - Investment is affected by policy…
  - … hence not an independent variable…
  - … possibly captures the impact of the policy
  - … leading to the erroneous conclusion that the policy is ineffective.

Assessing the impact of the policy

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Key issue 3

- Rodrik (2012) *Why We Learn Nothing from Regressing Economic Growth on Policies* *(Seoul Journal of Economics 2012, Vol. 25, No. 2)*

- If policy is meant to tackle market/institution failures, its magnitude should be higher in places where such failures are strong…

- … and where growth is therefore likely to be low…

- A negative sign can then be interpreted as has selected the right recipients.

Some solutions

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Improve policy relevance, e.g. focus on the question of when the policy works

- **Conditioning factors**

Beugelsdijk and Eijffinger (2005)	Positive impact
Ezcurra and Rapún (2006)	Positive impact beyond a threshold of GDP per capita
Ederveen and al (2006)	Positive impact, conditional on 'right' institutions.
Bähr (2008)	Positive impact if decentralised state
Becker, Egger, & Von Ehrlich (2013)	Posititive impact but the transfer intensity exceeds the impact maximizing level
Fratesi and Perucca (2014)	Impact depends on the type and amount of territorial capital
Crescenzi and Giua (2016)	Positive impact but stronger in richer regions (anti-convergence)

Some solutions

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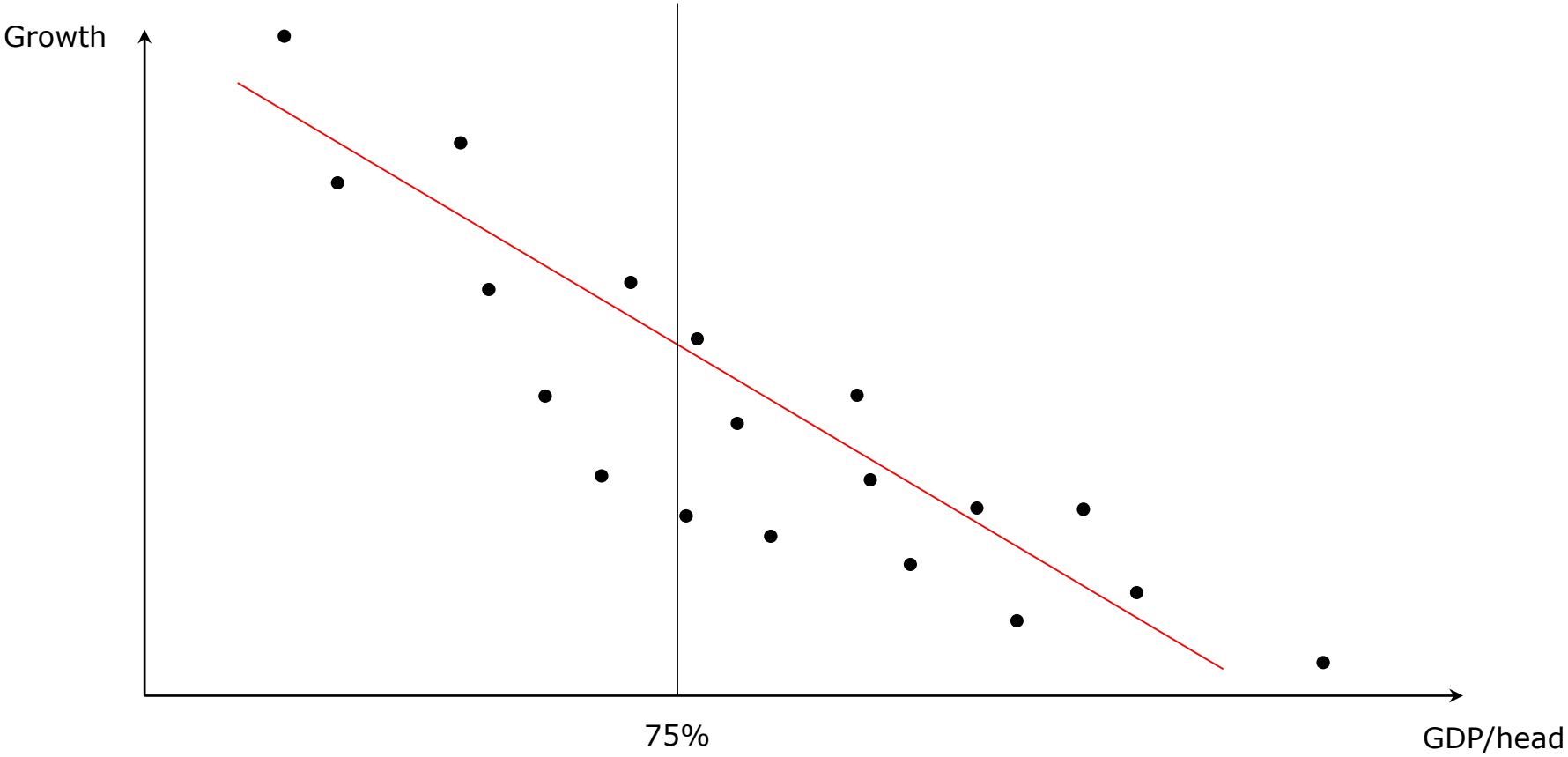
- **Regression discontinuity analysis**



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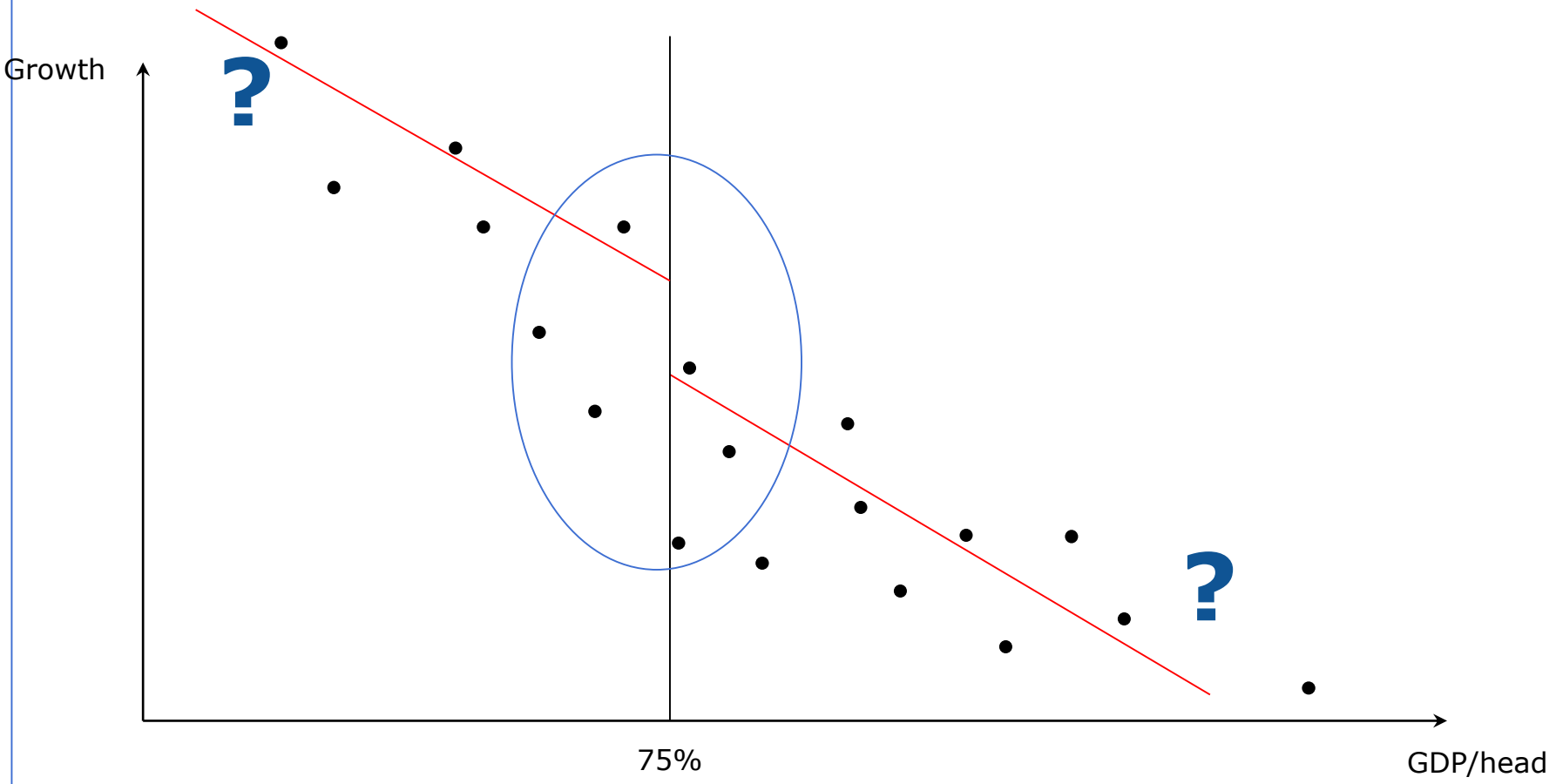

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Some solutions

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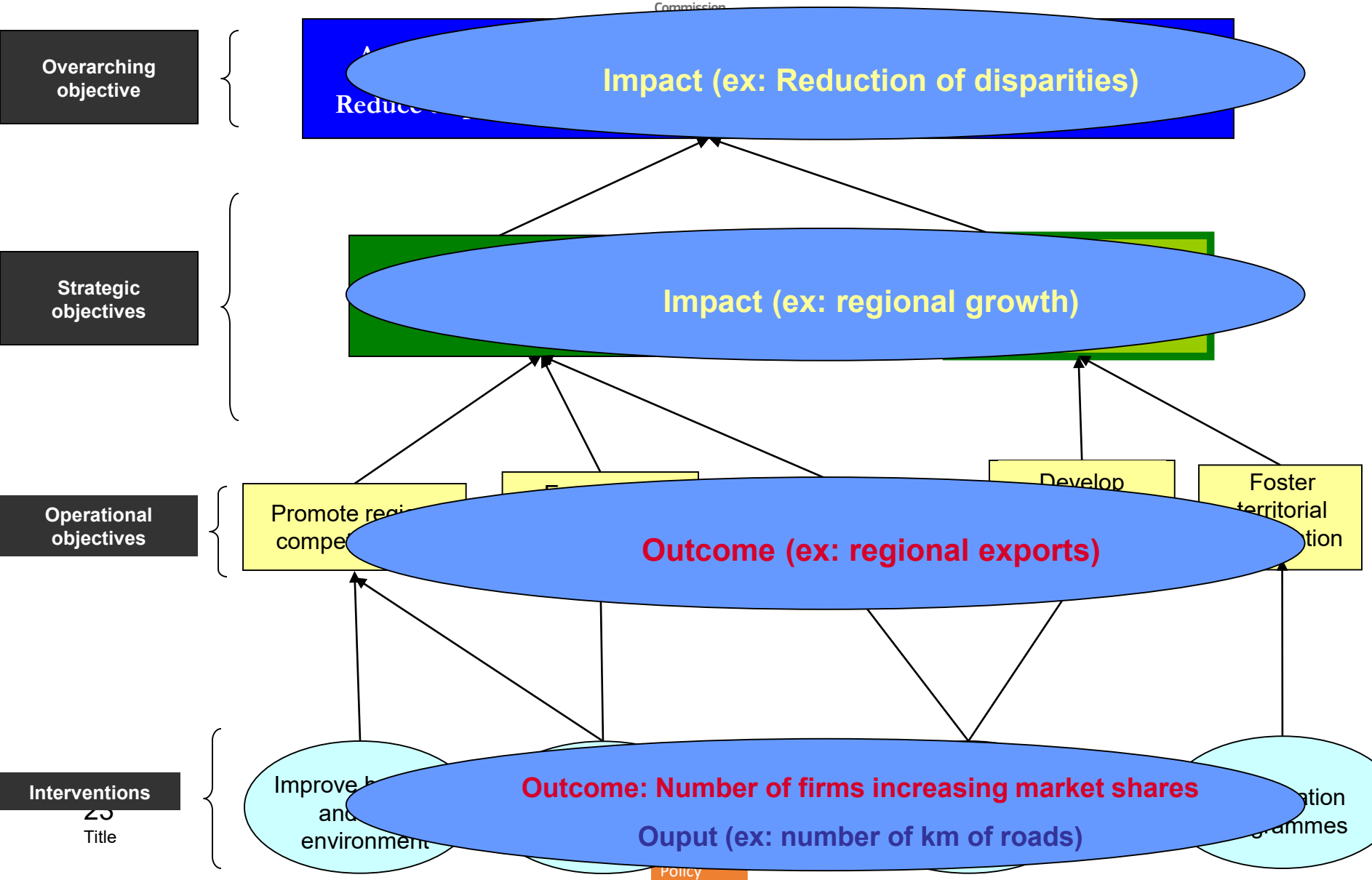
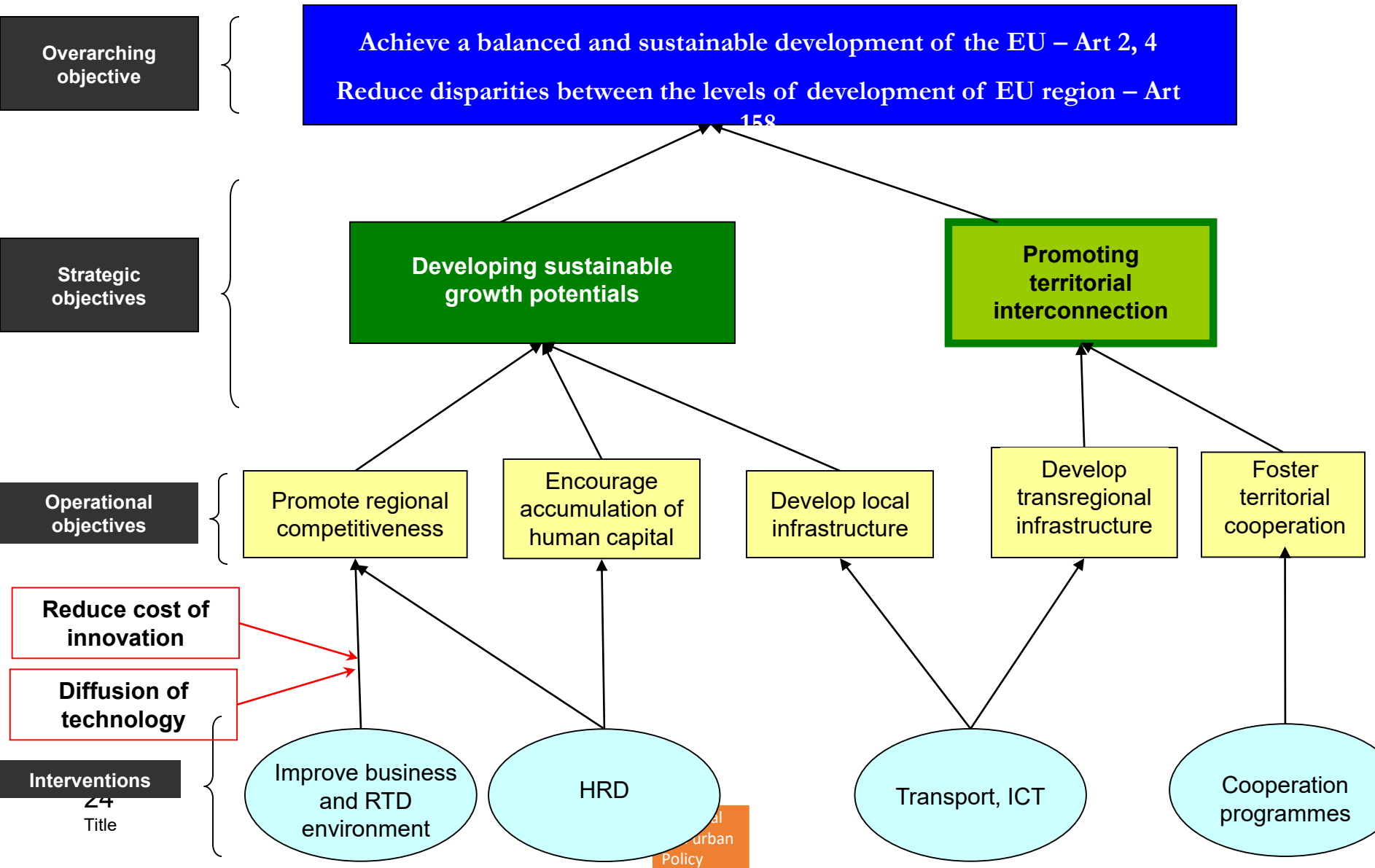
- **Explore transmission channels**

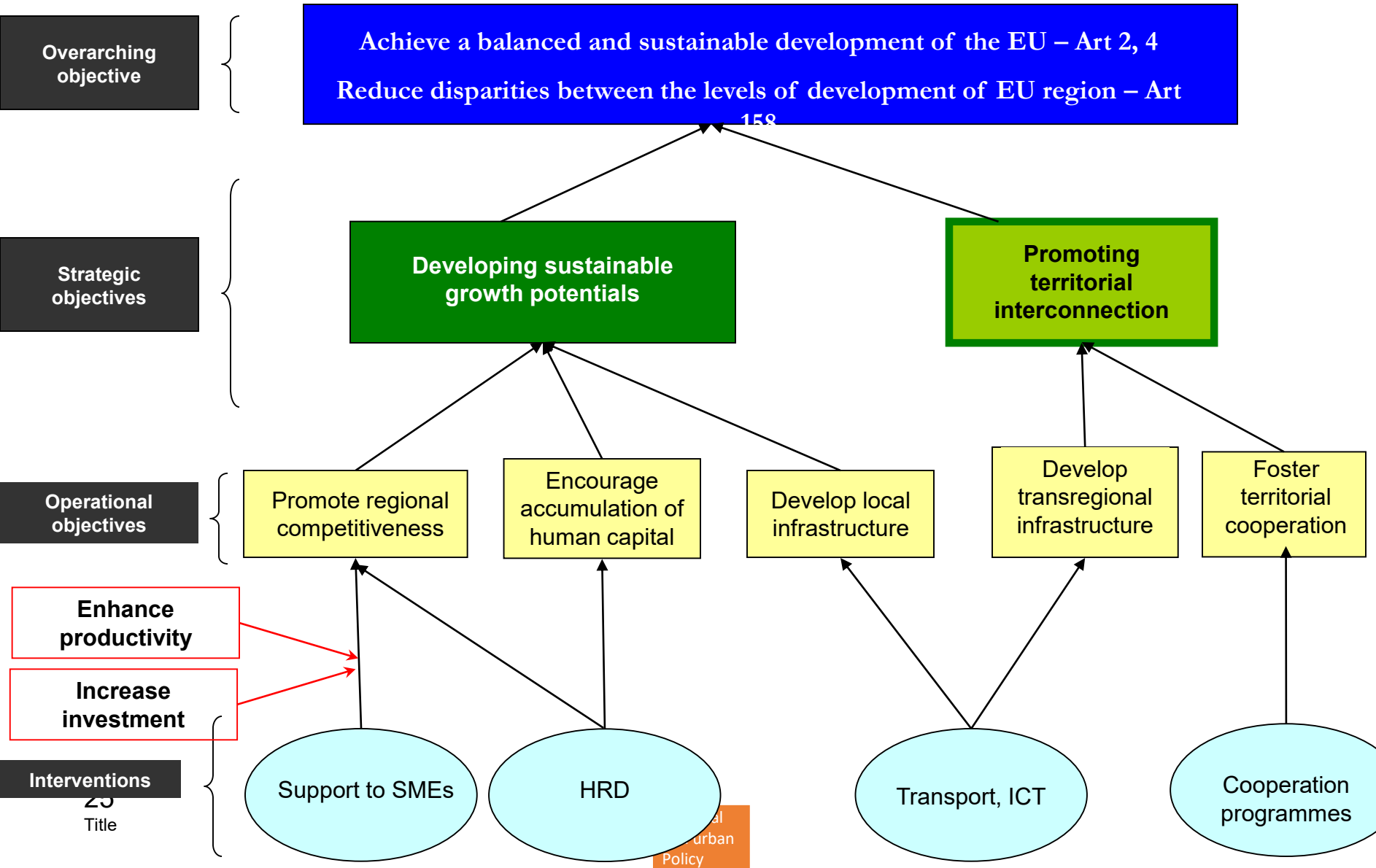
Transmission channels



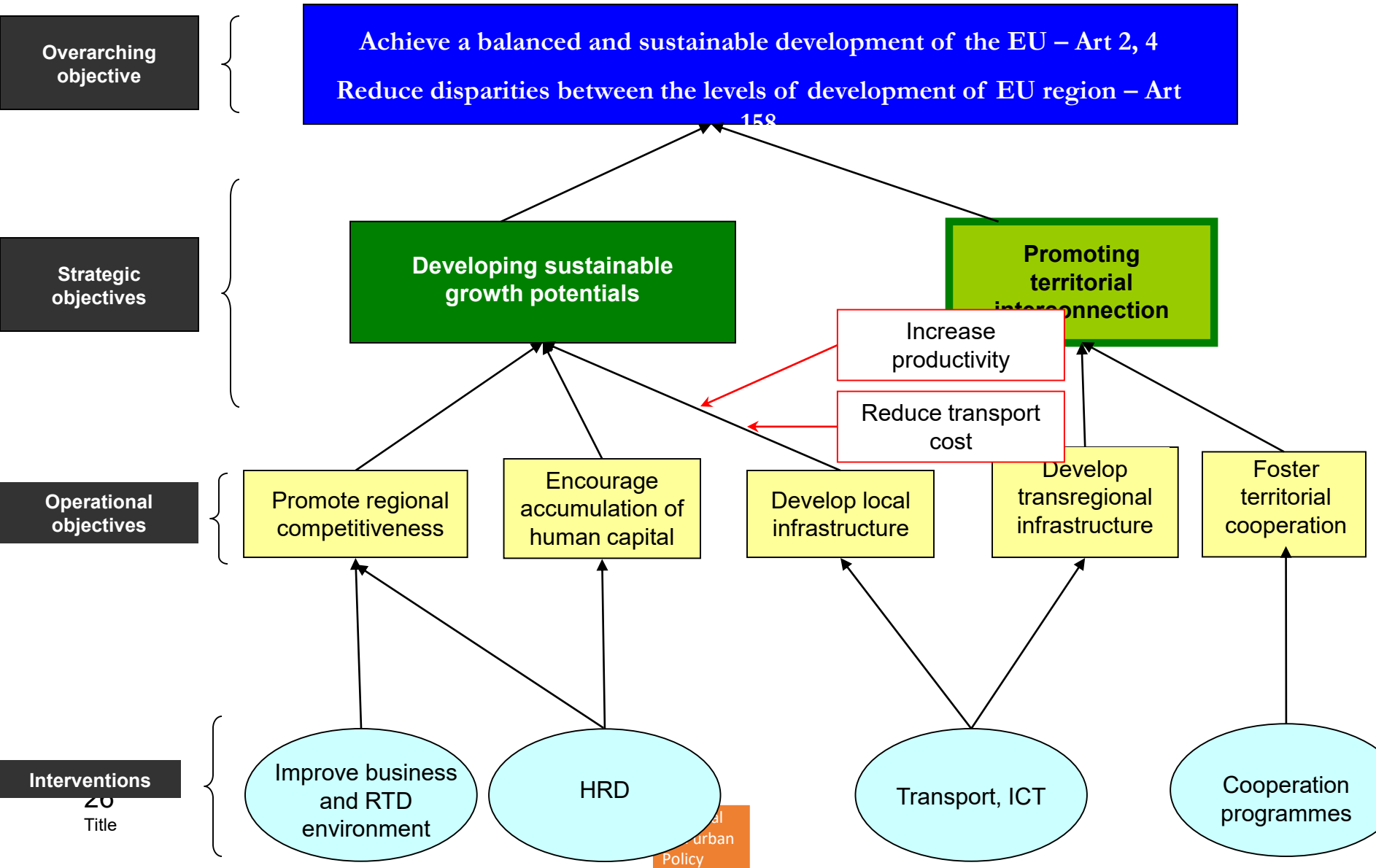
Transmission channels



Transmission channels



Transmission channels



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Complement analysis at macro with analysis of transmission channels

- **Advantages**

  - Avoid some key methodological many flaws
  - Use of data at micro level
  - Forces to dig deeper into the theories underlying the raison d'être of Cohesion Policy and the manner in which it is expected to produce its impact
  - Much closer to programme implementation and key questions raised by policy makers (e.g. how support to R&D in poor regions should be designed to produce foster catching up?)

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Thank you for your attention

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