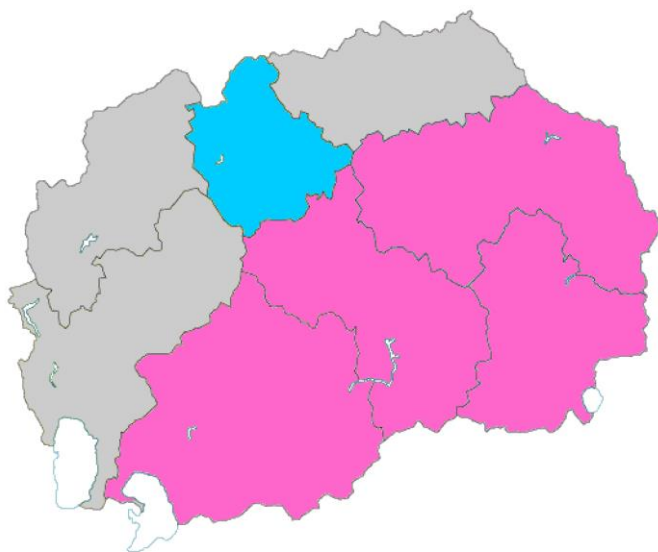


Balanced Regional Development and Fiscal Decentralization: Regional Disparities and Fiscal Decentralization in North Macedonia

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The purpose of the research was:

To assess the impact of fiscal decentralization on balanced regional development



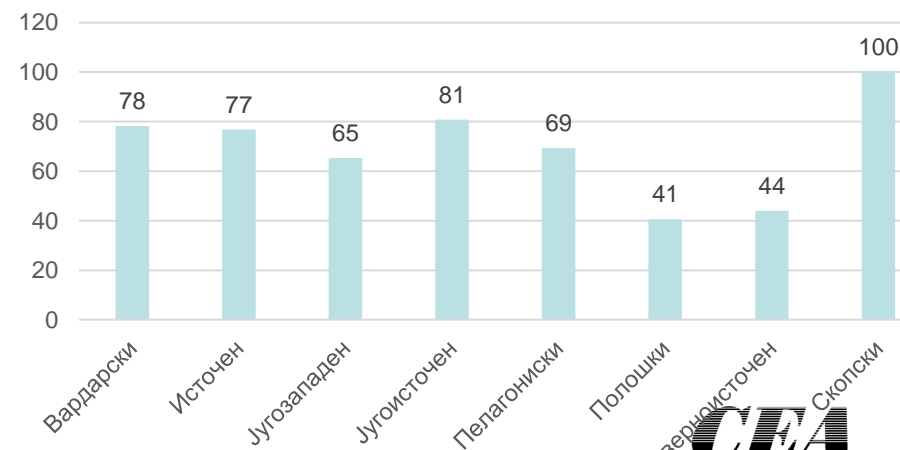
Balanced regional development

- Although the RNM has the established strategic and normative framework and institutional setting, it does not contribute to the effective reduction of disparities in and between planning regions and their appropriate demographic, economic, social and spatial cohesion.
- It is even more worrying that this inequality has increased over the last years as measured with the coefficient of variation of GDP per capita for regions

Coefficient of variation of GDP per capita for regions



Gross added value; Skopje=100



Beta-convergence

Beta-convergence refers to a process in which poorer regions grow faster than richer regions:

- Long-term steady state depends on **exogenous** factors then **Beta-convergence is said to be absolute**

(exogenous: depends on rates of technological progress, institutional trust and labor force growth)

- Long-term steady state depends on **endogenous** factors then **Beta-convergence is said to be conditional.**

(endogenous: depends on the resources in the regions or on the quality of the institutions in the regions),

$$\ln(\Delta y_{i,t}) = \alpha + \beta \ln(y_{i,t-1}) + \gamma Z_{i,t} + \mu_{i,t}$$

- If the value of γ is equal to 0, it is assumed that there is **absolute convergence**, and if this parameter is statistically significant and different from zero, then it is assumed that there is **conditional convergence**.

	$\ln(\Delta y_{i,t})$
α Intercept	-0.260 (-1.406)
β GDP growth rate per capita	0.028** (1.751)
γ Time	-0.003*** (-1.881)

Endogenous factors:

$$\ln(\Delta y(i, t)) = \alpha + \beta_1 TIME + \beta_2 \ln(y(i, t-1)) + \gamma_1 \ln(GUS) + \gamma_2 \ln(URRU) + \gamma_3 \ln(LAB) + \gamma_4 \ln(ETF) + \mu(i, t)$$

	$\ln(\Delta y_{i,t})$
α Intercept	1.265* (1.453)
β_1 Time	-0.012**** (-3.797)
β_2 GDP growth rate per capita	0.187**** (3.827)
GUS	-0.075* (-1.435)
URRU	0.043 (1.366)
LAB	-0.780**** (-3.332)
ETF	-0.001 (-0.011)

More densely populated regions and those where the labor force is more active in the labor market have a slower convergence.

Greater urbanization drives the economic growth of regions (statistically significant at 20% statistical significance).

Ethnic fragmentation has no statistically significant influence on the convergence of planning regions.

Fiscal decentralization

- Bahl and Linn-1992 suggest that decentralization for developing countries may be limited to rhetoric i.e. that decentralization is more likely to be successful (or at least less dangerous) in more developed countries
- Other possible reasons for the small success in the achievement of positive expectations from the decentralization in the RNM on economic plan:
 - Voters' preferences are not revealed low fiscal transparency and accountability and national topics at local elections.
 - Decentralization is more of a deconcentration and less of a fiscal autonomy and devolution.
 - Inadequate transfers of financial resources
 - Lack of proper experience, skills and knowledge.
 - Constitutional requirements that have arisen after the Ohrid framework agreement

Fiscal decentralization impact on the balanced regional development

$$Ineq_{i,t} = \alpha + \sum_{j=1}^k \beta_j Control_{j,t} + \gamma Dec_{i,t} + \mu_t + \epsilon_{i,t}$$

$$Ineq_{i,t} = \alpha + \sum_{j=1}^k \beta_j Control_{j,t} + \gamma_1 Dec_{i,t} + \gamma_2 Dec_{i,t} GDPPOP_{i,t} + \gamma_3 Dec_{i,t} BUDGEREAL_{i,t} + \mu_t + \epsilon_{i,t}$$

- Coefficient of variation, GINI and Weighted coefficient of variation
- We measure the degree of decentralization of expenditures (EXP) and the decentralization degree of revenues (REV)
- These two variables (EXP/REV) are taken in three variants: as nominal (EXP/REV), per capita (EXPPOP/REVPOP) and as a share of the total revenues of the LSGU (EXPSH/REVSH)
- We take the budget realization of LSGU (BUDGREAL) as measures for institutional effects and good governance
- We group all these variables by LSGUs to the respective regions

Dependent variable is the inequality, the estimation for the control variables are also presented- Control: GUS; LAB; ETF; URRU	CV	WCV
α	-1.212*** (-2.031)	-2.977**** (-2.462)
TIME	0.006**** (3.312)	0.006**** (2.014)
GUS	0.012 (0.344)	0.089 (1.361)
LAB	0.097 (0.718)	0.200 (0.854)
ETF	0.003 (0.167)	-0.003 (-0.100)
URRU	0.005 (0.231)	0.009 (0.233)
EXP		0.053 (1.361)
REVPOP	-0.040** (-1.773)	

$$Ineq_{i,t} = \alpha + \sum_{j=1}^k \beta_j Control_{j,t} + \gamma Dec_{i,t} + \mu_t + \epsilon_{i,t}$$

- The effect is such that a 1% increase in income per capita in the LSGU is correlated with up to a 4% reduction in inequality in the regions.
- Other endogenous factors are not statistically significant, except for the time which shows that inequality grows over time.

	CVREV	CVREVPOP	CVREVSH	WCVREV	WCVREVPOP	WCVREVSH	GINIREV	GINIREVPOP
α	-1.346**** (-4.501)	-1.248**** (-4.161)	-1.412**** (-5.017)	-0.756 (-1.014)	-0.614 (-0.813)	-0.663 (-0.906)	-2.200**** (-4.542)	-2.209**** (-4.464)
TIME	0.001 (0.667)	0.001 (0.571)	-0.001 (-0.373)	-0.023**** (-7.293)	-0.022**** (-7.393)	-0.021**** (-6.775)	-0.007**** (-3.704)	-0.008**** (-3.726)
REV	-0.070**** (-4.388)	-0.200**** (-4.825)	1.019**** (5.041)	-0.126*** (-2.184)	-0.368**** (-3.539)	1.596**** (3.038)	-0.076**** (-2.940)	-0.194**** (-2.849)
GDPPOP	0.002*** (2.093)	0.006**** (2.937)	0.037**** (5.041)	0.004*** (2.232)	0.014*** (2.551)	-0.058** (-1.690)	0.002** (1.731)	0.006** (1.633)
BUDGREAL	0.008**** (7.148)	0.021**** (7.406)	-0.134**** (-7.694)	0.014**** (4.865)	0.036**** (5.033)	-0.197**** (-4.354)	0.011**** (5.867)	0.027**** (5.715)
GUS	0.036*** (2.305)	0.033*** (2.214)	0.031*** (2.051)	0.070** (1.783)	0.070** (1.856)	0.053 (1.352)	0.050** (1.965)	0.052*** (2.088)
LAB	0.109* (1.621)	0.076 (1.241)	0.058 (0.963)	0.116 (0.691)	0.100 (0.644)	0.048 (0.309)	0.115 (1.051)	0.119 (1.175)
ETF	-0.006 (-0.761)	-0.003 (-0.412)	-0.003 (-0.352)	-0.005 (-0.249)	-0.001 (-0.003)	-0.009 (-0.439)	-0.012 (-0.895)	-0.011 (-0.780)
URRU	-0.032**** (-2.996)	-0.021*** (-2.149)	-0.029**** (-2.995)	-0.050** (-1.862)	-0.037* (-1.528)	-0.046** (-1.810)	-0.036*** (-2.051)	-0.033*** (-2.067)

$$Ineq_{i,t} = \alpha + \sum_{j=1}^k \beta_j Control_{j,t} + \gamma_1 Dec_{i,t} + \gamma_2 Dec_{i,t} GDPPOP_{i,t} + \gamma_3 Dec_{i,t} BUDGEREAL_{i,t} + \mu_t + \epsilon_{i,t}$$

Some of the findings

- 1% increased revenues at LSGUs are correlated with 7% to 7.6% reduction in regional inequality (CV or GINI) but if we take into account the number of population in the regions, then the impact per capita can be higher and up to 12.6 % in reducing the inequality of GDP per capita for the planning regions.
- A decrease in the number of inhabitants by 1% leads on average to 2% increased inequality in the planning regions in the RNM.
- For the decentralization measure - revenues per capita (REVPOP), the impact is higher which indicates that the inequality of the regions is correlated with a double-digit percentage reduction if LSGUs have a higher effort to collect their own revenues per capita.
- On the other hand, an increase in the share of LSGUs' own revenues in their total revenues is correlated with increased inequality of the regions. In that sense, the economic power of the region has a strong effect that exceeds the effect of a greater effort to collect own revenues at LSGUs in some regions.

Implications and recommendations

Implications:

The focus on average economic growth does not lead to absolute Beta-convergence but to conditional convergence where the endogenous factors for the regions have the influence on the regions that are clustering to converge towards different steady states (e.g., different equilibrium between production growth and population growth).

In that direction, **the recommendation** for the central government is to focus on raising the potential for economic growth in less developed regions. Even to consider the transfer of funds from the more developed to the less developed regions either through Robin Hood models or by leaving out the more developed regions for a certain period of time until the absolute convergence of the planning regions in the RNM is achieved.

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