Fiscal Decentralization and Inequality. An Analysis on Romanian Regions

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INTRODUCTION

Research motivation

- At the level of the EU there are discrepancies between and within states, although harmonization efforts have been intensified in recent years. In the case of Romania, according to statistics, it is one of the most unequal state of the EU and this inequality have been driven by a complex of historical, economic, cultural and social factors.

Research objective:

- Firstly, we intend to use Gini index to measure the dispersion of local fiscal capacity over the period 2004-2015, and also the standard decomposition of the Gini index to distinguish the contribution of per capita local revenues and per capita central transfers to the inequality of local expenditure.

- Secondly, we intend to develop an econometric model using a panel data approach to determine the extent to which decentralization involves inequality and the impact of FD on income inequality.

Research hypothesis: in Romania the fiscal policy does very little reduce inequality and poverty overall, finding a certain inequality in the distribution of revenues and an alarm signal regarding the "healing" nature of transfers from the state budget as decentralization theory stipulates, well defined and targeted fiscal rules may help in promoting fiscal consolidation, fiscal discipline and can help attain a sustainable FD.
Local fiscal disparities were investigated mainly from the perspective of fiscal decentralization in relation to:

- income inequality and regional development (Tselios et al, 2012, Pose et al, 2009),
- poverty reduction or income inequality (Sepulveda and Martinez-Vazquez, 2011; Sacchi and Salotti, 2011),
- equity and poverty reduction (Hofman and Guerra, 2007),
- political institutions (Beramendi, 2003),
- political economy (Lockwood, 2005).
Short Literature Review (II)

Mixed results with regard to the relationship between fiscal decentralization (FD) and inequality:

- **Prud'homme (1995)** - the possible detrimental effect of FD on regional income inequality, because decentralization measures can adversely affect the distribution of equity.

- **Shankar and Shah (2003)** - regional inequality increases with decentralization, particularly in developing countries.

- **Canaleta et al. (2004)** analyses the impact of both fiscal and political decentralization on regional inequalities finding a strong negative correlation between decentralization, especially FD and regional inequalities, and also a positive influence of decentralization on regional convergence.

- **Dollar (2007)** - FD that gives the provincial and LG more power and autonomy with respect to public expenditures and revenues, might lead to larger income inequality.

- **Sepulveda and Martinez-Vazquez (2011)** - FD may have significant effects on poverty and inequality, respectively FD appears: i) to reduce poverty as long as the share of subnational expenditures is not greater than one third of total government expenditures, and ii) to help to reduce income inequality only if the general government represents a significant share of the economy (over 20%). The authors, also list several channels through which FD might affect income inequality indirectly, such as economic growth, macroeconomic stability, the convergence of regions, government size and the level of institutional development.

- **Tselios et al. (2012)** - find that greater FD is associated with lower interpersonal income inequality, but, as regional income rises, further decentralization is connected to a lower decrease in inequality.

- **Torgler (2007) and Güth et al. (2005)** - revenue decentralization may reduce income inequality by improving tax collection, especially of the self-employed, therefore increasing redistribution.

- **Lessmann (2009)** reveals that a high degree of decentralization is connected with low regional disparities, but (Lesmann, 2012) fiscal decentralization increases inequality at low levels of development.
Some Preliminary Evidence: Laws regarding Decentralization in Romania (I)

- **Law on local taxes and charges (no. 27/1994)**
  - empowering SNG to establish, collect and administer certain taxes and fees, considered own revenues of the local budget.
  - was amended by GO no 36/2002 in order to facilitate the SNG own revenues increasing.

- **Law on local public finances (no. 189/1998)**
  - provided a new framework for local finance mechanism, clarifying and expanding local control over revenues and formation of the local budgets.
  - an equalization system that aimed to correct expenditure and fiscal capacity disparities among SNGs was also elaborated regulating the intergovernmental transfers and the distribution of the equalization funds based on a mathematical formula where the indicators used in the equalization decision making process were the length of the streets, the number of high school, the secondary school students, etc.
  - although the establishment of an equalization system has been an important step towards local financial autonomy, there were still problems that were mainly related to: the indicators as well as the place of the financial capacity formula in the whole equalization process were annually revised in the context of the State budget law; the lack of transparency of the allocation of funds and the political interference in the financial decentralization process at different levels.
  - included the timing local budget process and an appendix on the budgetary classification that must be followed by the SNGs while administrating the own budgetary revenues and expenditures.
  - Regarding fiscal revenues, to SNGs was given a share of the percentage of the income tax collected in their community and earmarked transfers allocated to autonomous enterprises or to public services and investments were eliminated.
  - followed by subsequent modifications, in 2006 was adopted a new **Law on local public finances (no. 273/2006)** which has been amended and completed several times so far.
• **Fiscal Code (Law no. 571/2003)**

  - provided an integrated legal framework for the taxes and fees, as revenues of the state budget and local budgets, specifying the taxpayers, the manner of calculating and paying the taxes and fees, the procedure for modifying taxes and fees.

  - followed by subsequent modifications and it was replaced by the new **Fiscal Code (Law no. 227/2015)**, which also has been amended and completed several times so far.

• **Fiscal Procedures Code (GO no. 92/2003)**

  = The legal framework for administering the taxes and fees governed by the Fiscal Code

• **Framework-Law no. 195/2006 on decentralization**

  - defined decentralization as the transfer of administrative and financial responsibility from the central government to the local government or the private sector.

  - powers fall in three categories: exclusive, shared and delegated to different subnational public authorities according with their level: communes, towns/cities and county.
Table 1. SNG fiscal rule practices in Romania

<table>
<thead>
<tr>
<th>Fiscal rules</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Borrowing constraints</strong></td>
<td>Access conditions</td>
</tr>
<tr>
<td></td>
<td>Prior approval is required</td>
</tr>
<tr>
<td></td>
<td>No restriction on purposes on access to borrowing</td>
</tr>
<tr>
<td></td>
<td>Restrictions on borrowing and guarantees</td>
</tr>
<tr>
<td></td>
<td>Numerical constraints</td>
</tr>
<tr>
<td></td>
<td>On debt level</td>
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<tr>
<td></td>
<td>On debt service</td>
</tr>
<tr>
<td></td>
<td>Guarantees</td>
</tr>
<tr>
<td></td>
<td>Exceptional basis</td>
</tr>
<tr>
<td><strong>Tax limits</strong></td>
<td>Subnational government autonomy over</td>
</tr>
<tr>
<td></td>
<td>Rate and reliefs</td>
</tr>
<tr>
<td></td>
<td>Taxes are shared</td>
</tr>
<tr>
<td></td>
<td>By stable formula</td>
</tr>
<tr>
<td></td>
<td>Decided on an annual basis</td>
</tr>
<tr>
<td><strong>Expenditure limits</strong></td>
<td>Are set for individual spending items</td>
</tr>
<tr>
<td><strong>Subnational budget</strong></td>
<td>Budget balance in nominal terms</td>
</tr>
<tr>
<td><strong>constraints</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Source: computed by authors based on Romanian legal framework*
Some Preliminary Evidence: summary of the SNG fiscal rule practices in Romania (IV)
SNG fiscal rule constraints in Romania

- “Soft” budget constraints appears in the form of excessive expenditure of Romanian SNGs and, so that, there are distortions in local public expenditure that generate local debts, where excess of expenditure over revenues are paid by central government through transfers, and so that excessive transfers. In this context, the efficiency of public expenditure and the fiscal discipline of the administrative-territorial units may be jeopardized.

- “Soft” taxation appears in Romania because the rules are negotiable, subject to bargaining, political pressures, ad hoc exemptions, postponements, etc.

  - **direct legal constraints on local revenue autonomy**: the statutory rules on specific parameters of own-source revenues, respectively on tax base assessment, exemptions, deductions, rates, earmarking of user charge revenues;

  - **direct legal constraints on local budget autonomy**: the statutory rules on deficit, borrowing and debt in local public finance law;

  - **indirect legal constraints**: the right and the practice of the national legislative to revise the laws on local taxation and grants every year or more frequently;

  - **non-legal direct constraints**: a lower productive efficiency of own-source revenues;

  - **non-legal indirect constraints**: a lower productive efficiency of revenues feeding the grants system.
Observation: The level of the fiscal gap of SNG in Romania is high in 2005 and 2015. Intergovernmental conditional fiscal transfers usually fill this gap which clearly reflects a limited local fiscal autonomy.
Some Preliminary Evidence: Basic SNG Finance Indicators (II)

**Figure 3: The local dependence on fiscal transfer in Romania (at the county level) during 2000-2015**


**Observation:**
the coefficient value close to 1 indicates an increase of financial dependence
the coefficient value more close to 0, reflects a high financial autonomy of local governments
Observation: The Romanian local public finance Act stipulates that local authorities can contract internal and external loans, short, medium and long-term, for local public investments and for refinancing local public debt, based on an important prudential rule (Act 273/2006 on local public finance). However, prudence is recommended when employing local indebtedness because the practice of local indebtedness in the context of a big central government debt stock can generate the unfulfilment of the convergence criteria.
Some Preliminary Evidence: Basic SNG Finance Indicators (IV)

Observation: Local fiscal autonomy in Romania at the county level is under 0.5 showing a significant weak fiscal decentralization.
Some Preliminary Evidence: Basic SNG Finance Indicators (V)

**Observation:** Standardised fiscal rules index for Romania over the period of time 1990-2016 shows a positive relationship between the fiscal rule index and budgetary outcomes. Starting with 2014 the high index values (2,33) shows better budgetary outcomes on average, exceeding the EU average (1,76).

Figure 5: Standardised fiscal rules index for Romania and EU-28, 1990-2016

Some Preliminary Evidence: Basic SNG Finance Indicators (VI)

Observation: Fiscal rule strength index (FRSI) for subnational governments regarding budget balance rule (BBR) is better positioned than fiscal rule strength index (FRSI) for subnational governments regarding debt rule (DR) in Romania, over the period of time 2000-2014.
**DATA AND METHOD (1)**

*Sample:* 42 Romanian counties


*Data sources:*

DATA AND METHOD (2)

(1) How does the dispersion of PCEXP change over time and what is the situation of local fiscal capacity?

Gini's coefficient as half of the absolute difference in the arithmetic mean (Sen, 1997):

\[ G = \frac{\sum_i \sum_j |x_i - x_j|}{2 \sum_i \sum_j x_i} \]

The Gini index of income can be decomposed by the sources of revenue that make up the total income. Let \( Y_t^k \) denote the income of individual \( i \) (\( i = 1, \ldots, n \)) from source \( k \) (\( k = 1, \ldots, K \)), then the Gini index \( G(Y) \) can be transformed to (Fei et al., 1978):

\[ G(Y) = \sum_k \mu_k \frac{\mu}{\mu} G(Y^k) \]

Where:
- \( \mu \) = the mean of \( y \)
- \( \mu_k \) = mean of \( Y^k \)
- \( G(Y^k) \) = pseudo-Gini for factor \( k \)

For total income, which relate that Gini coefficient for total income, \( G \), can be represented as (Lerman and Yitzhaki, 1985):

\[ G(Y) = \sum_{k=1}^k S_k G_k R_k \]

\( S_k \) = share of source \( k \) in total income
\( G_k \) = the source Gini
\( R_k \) = Gini correlation of income from source \( k \) with the distribution of total income
DATA AND METHOD (3)

(2) How does fiscal decentralization impact income inequality?

\[ GINI_{it} = \alpha_0 + \alpha_1 GRT_{it} + \alpha_2 [CONTROL_{it}] + \eta_{it} + \mu_{it} \]

Where:

\( GINI_{it} = \) Gini index for country region \( i \) at time \( t \)

\( GRT_{it} = \) the proxy for fiscal decentralization- share of intergovernmental grants in total local revenue for country region \( i \) at time \( t \)

\( [CONTROL_{it}] = \) control variables \( (POP, INV, LFRSI, EDU, HDI, IHNUTS2) \)
EMPIRICAL RESULTS AND DISCUSSIONS (1)

**Results:** PCREV are significantly more dispersed than PCGDP, an explanation of this phenomenon could be the fact that the local revenue disparities are wider than economic disparities and PCGRT have a direct implication on the dispersions of PCEXP. In line with this, it is well known that income inequality affects mostly the low-income population and worrying statistic provided by the National Statistics Institute shows that approximately 25% of the population is considered part of the national relative poverty rate.

*Figure no 1. Romanian Gini Index evolution in the period 2004-2015, based on own revenues, transfers and expenditures*

*Source: own calculations using INSSE data*
EMPIRICAL RESULTS AND DISCUSSIONS (2)

Table 2. Gini index values for Romanian regions, based on own revenues in 2015

<table>
<thead>
<tr>
<th>Region</th>
<th>Gini Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>North-East</td>
<td>0.09</td>
</tr>
<tr>
<td>South-East</td>
<td>0.14</td>
</tr>
<tr>
<td>South</td>
<td>0.11</td>
</tr>
<tr>
<td>South-West</td>
<td>0.07</td>
</tr>
<tr>
<td>West</td>
<td>0.14</td>
</tr>
<tr>
<td>North-West</td>
<td>0.15</td>
</tr>
<tr>
<td>Centre</td>
<td>0.09</td>
</tr>
<tr>
<td>Bucharest-Ilfov</td>
<td>0.19</td>
</tr>
</tbody>
</table>

Source: own calculations using INSSSE data

Results: The highest value of the Gini coefficient we identify on the profile of some regions like Buc-Ilfov, NW, W and SE and the lower value in regions like NE or SW.
Results: The coefficient ranges from 0 (or 0%) to 1 (or 100%), with 0 representing perfect equality and 1 representing perfect inequality. The highest value of the Gini coefficient we identify on the profile of some regions like Buc-Ilfov, NW, and the lower value in regions like S or SW.
EMPIRICAL RESULTS AND DISCUSSIONS (4)

**Table 4. Distribution of revenue within the Romanian region and Gini index value in 2015**

<table>
<thead>
<tr>
<th>Region</th>
<th>Cumulative Pop</th>
<th>Cumulative income</th>
<th>Area</th>
<th>Gini Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0</td>
<td>0</td>
<td></td>
<td>0.134901</td>
</tr>
<tr>
<td>North-East</td>
<td>9.94</td>
<td>7.03</td>
<td>34.9506071</td>
<td></td>
</tr>
<tr>
<td>South-East</td>
<td>19.15</td>
<td>16.77</td>
<td>109.58</td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>36.58</td>
<td>28.14</td>
<td>391.39</td>
<td></td>
</tr>
<tr>
<td>South-West</td>
<td>51.02</td>
<td>40.67</td>
<td>496.88</td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>62.84</td>
<td>53.30</td>
<td>555.62</td>
<td></td>
</tr>
<tr>
<td>North-West</td>
<td>75.63</td>
<td>66.26</td>
<td>764.43</td>
<td></td>
</tr>
<tr>
<td>Centre</td>
<td>88.62</td>
<td>79.86</td>
<td>949.04</td>
<td></td>
</tr>
<tr>
<td>Bucharest-Ilfov</td>
<td>100.00</td>
<td>100.00</td>
<td>1,023.62</td>
<td></td>
</tr>
</tbody>
</table>

*Source: own calculations using INSSSE data*

**Results:** 9.94% of the pop. accrues 7.03% of the NE region's total revenue. The revenues are concentrated in the central, NW, W and SW regions, which show clear inequality in the distribution of revenue. NE, SE and S regions, constitute 28.14% of the population and accrue 36.58% of the total revenues.
The income Inequality- Lorenz Curve for Romania 2004-2015 for expenditure
Results:
The factors used in the regression model have the expected significant coefficient signs.
The relation between Gini and \( GRT \) is (+) and significant at the 1% level, this stressing that the higher the level of \( GRT \), the higher the Gini value.
The variable regarding the implications fiscal local rules strength index (\( LFRSI \)) is negatively correlated with Gini Index, being significant at the 5% level and the explanation is that at the EU level, IMF report shows a folding these rules rather towards the tightening of local financial autonomy, but not towards empowering local authorities, such as normal.
CONCLUSIONS

- The income distribution in Romania is marked by the general low-income level and a relatively low sum in own local revenue, which shows the lack consolidation of fiscal decentralization and the use of central transfers (grants) as an instrument which contributes to the general disparities or an instrument that affects administrative capacity.

- Romania needs a clause for empowering local decision makers and creating sustainable public finances.

- The calculation of the coefficients for each region and for the whole country shows a certain inequality in the distribution of revenues and an alarm signal regarding the "healing" nature of transfers from the state budget.

- **Policy implications:** Focusing on SNG' role in decentralization, we can say that FD is a government policy that affects and relates to various sectors and also can have a direct implication on inequality if implemented reforms aiming to enforce fiscal discipline strengthened the local budgetary framework and restrained, therefore, the local discretionary power to act towards development.

- Comparing results obtained with some theoretical arguments supporting the view that regional income inequalities, the degree of fiscal decentralization and the quality of government are simultaneously determined, we can say that decision-making authorities are obliged to recognize the need for sustainable fiscal policy to limit the expansion of this unfavorable phenomenon. Moreover, with the increasing role of SNG in FD, the impacts of local policies should also be considered in programs with nation-wide coverage and all reforms aiming to enforce fiscal discipline shouldn't strengthened the local budgetary framework or restrained local discretionary power to act towards development.

- **Future research directions:**
  - extend the analysis at macroeconomic level, by evaluating relationship between FD and fiscal rules of different developed and developing countries
Thank you for your attention!

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