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SOCIAL ATTITUDES AND REGIONAL INEQUALITIES[1]

As the budgets of the European Union (EU) become tighter, the questions about the effectiveness of EU's expenditure, especially the most important parts such as Cohesion policy, are hotly debated.

The aim of this paper is to examine whether the presence of social attitudes may influence the effectiveness of EU budget expenditure, measured by the level of regional inequalities. The analysis starts by focusing on individuals' attitudes towards income from their own effort and income which is derived from other people's effort, having in mind that individual actions depend on their attitudes. The next step establishes the link between the income from other people's effort with the re-distributive dimension of the EU budget, considering that different attitudes among individuals in the EU could lead to significant differences in effectiveness of this redistributive policy among European regions and, consequently, diverse regional inequalities.

Empirical research uses data for 27 EU countries observed over two waves of European Value Surveys: 1999-2000 (Wave 1) and 2008–2009 (Wave 2). The results indicate a significant role of social attitudes for regional inequalities, which raises the question of the appropriateness of simplification and uniform regional policy instruments in solving EU regional problems.

Keyword: social attitudes, regional inequalities, EU regional problems

Introduction

During the economic and political integration of the EU, various steps have led to successive inclusion of more and more nations, which resulted in increased regional disparities within the EU. The importance of regional inequalities does not have only ethic and social dimensions but also an economic growth dimension. It is entrenched in the awareness that a common market requires a certain degree of homogeneity in economic development, which is not necessarily an automatic outcome of the EU integration process (Becker et al., 2012). Moreover, a highly spatially imbalanced economy can distort both fiscal and monetary policies and make this problem even deeper (Gardiner et al., 2010).

In order to challenge these inequalities, more than one third of the EU's total budget is spent on the so-called Cohesion Policy. Its main purpose is to promote the "overall harmonious development" of the EU, to reduce disparities between the levels of development of various regions, and to strengthen its "economic, social and territorial Cohesion" (Art. 158 Treaty on European Union). During the years, the budget has increased significantly: from 5% of the total Community budget for period 1975–1978 to 35.7% for the current 2007–2013 programming period (Manzella and Mendez, 2009) indicating the raising importance of the regional inequalities issue.

The global economic crisis has had a major impact on the economies of EU Member States and on the livelihoods of millions of households. As a result of this, public sector budget deficits and public debt levels have risen dramatically.

As the budget of the EU becomes tighter and major recipients of European regional transfers struggle with debt crises, questions about the proper utilization and effectiveness of transfers from EU budget to Europe's member states and regions has been hotly debated. The aim of this paper is to examine whether the presence of social attitudes may influence the effectiveness of EU budget expenditure, measured by the level of regional inequalities.

Theoretical background

Investigating the spatial dimension of EU budget expenditure effectiveness is a broad research topic with mixed and contradictory results.

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Most investigations have mainly concentrated on growth effects. While some authors do find evidence of a positive impact on economic growth (e.g., Dall'erba and Le Gallo, 2008; Ramajo et al., 2008, Becker et Eggert, 2010), others only find a weak positive (e.g., Esposti and Bussoletti, 2008, Becker et al., 2011), statistically insignificant (e.g., Dall'erba and Le Gallo, 2008) or even a negative impact (e.g., Eggert et al., 2007).

There are several possible reasons for the inconclusive results. Firstly, the results might be biased due to the use of imprecise data. This problem is of special concern as the current literature often utilizes structural funds commitments instead of actual payments. This results in measurement error as commitments may not be entirely completed or be called up with a delay, e.g. due to missing absorption capacity (Mohl and Hagen, 2010)

Second possible reason is reverse causality. The allocation criteria of structural funds are likely to be correlated with the dependent variable of economic growth, especially with the ratio of regional GDP per capita and the EU-wide GDP. A region is eligible for the highest transfers relative to GDP if this ratio is below 75%. Furthermore, the effective payments by the European Commission to the regions depend on the abilities of the regions or countries to initiate and co-finance these projects. This ability is presumably affected by the economic situation of the regions themselves (Mohl and Hagen, 2010).

Thirdly, there may be unobserved or omitted variables. They have an impact on regional growth rates but are not included in the specification. If the omitted variable is correlated with one explanatory variable, this could lead to significant problems (e.g. biased estimator).

Lack of clear results is also imminent for the impact on employment. Positive employment effects are established in the papers by Busch et al. (1998), Bouvet (2005) and Bondonio and Greenbaum (2006). Empirical research showing no positive employment effects for EU regions (countries) is available in the papers by Dall'erba and Le Gallo (2007), Heinemann et al. (2009) and Becker et al. (2010). Recently Mohl and Hagen (2011) found no clear evidence that EU funding promotes employment, especially in regions with a high share of the low-skilled population.

Recent literature offers four main theoretical arguments why EU funding is not explicitly associated with positive total employment effects (Mohl and Hagen, 2011). First of all, EU payments increase the employment level if they lead to human capital investment and not if they are used as capital subsidies (e.g. if the "scale effect" is greater than "substitution effect").[1] Secondly, EU expenditure can have a positive effect on technological progress and taking into consideration the "skill-based technological change hypothesis" (Berman et al., 1994), technological progress may lead to an increase of the relative demand for high-skilled labor, and thus to a decrease in demand for low-skilled labor. Thirdly, in order to induce a positive employment effect, regional labor supply must match the additional demand for labor (Mohl and Hagen, 2011). Finally, in case economy is characterized by positive output gap and tight labor market situation, additional expenditure will not promote employment growth but lead to an overheating of the economy with acceleration of price and wage inflation (Kamps et al., 2009).

Taking into consideration all of the above-mentioned arguments and obstacles, the European Commission presented its proposals for Cohesion policy 2014–2020. Simplification has been one of the most popular demands for the new policy (European Commission, 2012). Although simplification can be presented in many forms (such as harmonization of rules for several funds, increased flexibility, increased proportionality, clarification of rules to improve legal certainty, and digitalization of documents and processes), we will focus on the dilemma of whether the uniform EU (regional) policy instruments could be the appropriate answer for effectiveness.

More precisely, we analyze how the presence of social attitudes might influence the effectiveness of re-distributive dimension of the EU budget expenditure, measured by the level of regional inequalities.

The motivation for the research lies in the fact that traditional economic theory, relying on the assumptions of rationality and self-interested behavior, is unable to explain a range of economic phenomena (e.g. collective action, contract theory, the structure of incentives, political economy and the results of several experimental games) (Dhami and Nowaihi, 2010; Flamand, 2012).

Taking into consideration the fact that rational choice theory starts with the idea that individuals choose actions according to their social attitudes (Levin and Milgrom, 2004), it makes sense to show why individuals may respond differently depending on their social attitudes. We do so by following the paper by Witzum (2008).

[1] "Scale effect" implicates that payments reduce capital costs, which leads to more output and employment. On the other hand, reduced capital costs increase relative costs of labor, which may cause (low-skilled) labor to be substituted by capital ("substitution effect") (Mohl and Hagen, 2011).

Social attitudes, defined as our views of the others as a collective, create a difference in response of agents to changes in what is perceived to be "earned" and "unearned" income (Witztum, 2008). The simplest distinction between "earned" and "unearned" income implies that the level of one source of income is directly connected to one's own actions (on labor, or effort), while that of the other, depends on other people's actions (on labor, or effort). Thus, the way we view the others could be detrimental to our response to changes in income.

Also, if it is assumed that social attitudes translate into individuals' choice of action it could be of tremendous help in explaining the existence of individuals with selfish-preferences and with social preferences. Traditional conceptions of rationality indicate that when income depends on our own actions, tension may arise between the disutility of effort (or labor) and the utility derived from additional income. Therefore, actors that are only interested in their own payoffs (selfish-preferences) prefer "unearned" income because it implies the benefit (income) without the cost (effort, labor). Actors motivated by the payoffs of others (social-preferences) are in a position of balance between "benefit without cost" ("unearned" income) and utility derived from the payoffs of actors that provide "unearned" income. If the utility derived from the payoffs of other actors and earned income exceed the utility from "unearned" income such an individual will be named "socially minded". In all other cases it represents "selfish individual".

The above-mentioned classification could be a useful tool for examining how the presence of social attitudes may influence the effectiveness of different aspects of redistributive policies. In case selfish individuals were the dominant group, higher level of "unearned" income from redistributive policies will decrease effort and therefore decrease employment rate (increase unemployment rate) and growth rate in a specific area. However, if the share of "socially minded" individuals is high, then higher level of "unearned" income from redistributive policies will have completely different outcome for employment and growth rate and consequently for regional inequalities.

The crucial point is to define what individuals define as "earned income" and what as "unearned income". Establishing the link between the "unearned income", as an income that depends on other people's actions, and national public expenditure of EU member states can be problematic considering the financial sources of national budgets. On the other hand, this link could be easier to establish with EU budget expenditure taking in mind that most people in the EU still do not see themselves as Europeans in the first place (Special Eurobarometer 379, 2011).

Therefore, different social attitudes could have more intensive consequences for effectiveness of EU budget expenditure than for national public expenditure. Although EU budget is not formally intended to be the main tool of the redistributive policy of EU countries, in the light of possible "more Europe agreement" it makes these aspects an extremely valuable topic.

This research could, therefore, help dealing with the arguments that one reason for the weak performance of EU expenditure is the existence of too many objectives, and that the higher level of effectiveness could only be reached by simplification and unification of the policy instruments for all member countries in the EU. Moreover, considering the possible influence and different values of the social attitudes, it could show that identical instruments of EU policy in different social environments could not be effective. In what follows we test the impact of social attitudes on regional inequalities empirically.

Empirical results

Data issues

The data used is from Eurostat and European Values Survey (EVS) database. The availability of European Values Survey (EVS) data dictates the size of the sample to be estimated. Since these Surveys are not conducted regularly, we do not have a continuous dataset at hand. Considering that our most important variables, social attitudes, extracted from the EVS data, and regional inequalities and EU budget data, extracted from Eurostat, match in only two time-series observations, we use the data for two periods only: 1999/2000 and 2008/2009.

Although this limits estimation techniques that can be used, we believe that the conducted empirical analysis can still give important insights.

The model we use is given below:

$$RI = \beta_1 + \beta_2 EXP + \beta_3 GE + \beta_4 OPT + \beta_5 GDPpc + \\ + \beta_6 SA + \beta_7 GDPpc \times SA,$$

where *RI* stands for Regional inequalities, *EXP* refers to Total EU budget expenditures, *GE* to National Government consumption, *OPT* stands for Openness, *GDPpc* for *GDP* per capita and *SA* for Social attitudes.

Regional inequalities are measured as the sum of absolute difference between regional (NUTS III level) and national GDP per inhabitant, weighted

Table 1

Descriptions and sources of the variables used in our model

Variable	Source	Description
GDP per capita	WDI	Gross domestic product per capita (constant 2000 US$)
Regional Inequalities	Eurostat	The dispersion of regional GDP (at NUTS level 3) is measured by the sum of the absolute differences between regional and national GDP per inhabitant, weighted with the share of population and expressed in percent of the national GDP per inhabitant. The indicator is calculated from regional GDP figures based on the European System of Accounts (ESA95).
Government consumption	WDI	General government final consumption expenditure (% of GDP)
Openness	WDI	Trade (% of GDP)
Total expenditures	EuroStat	Total general government expenditure on the basis of ESA 95 transactions includes expenditure of «all institutional units which are other non-market producers whose output is intended for individual and collective consumption, and mainly financed by compulsory payments made by units belonging to other sectors, and/or all institutional units principally engaged in the redistribution of national income and wealth"
SA(9)	EVS (Wave 1999–2000 and Wave 2008–2009)	Combination of answers to the following questions: Variable e035: equalize incomes vs. incentives for individual effort; Variable e037: individual vs. state responsibility for providing; Variable f114: do you justify: claiming state benefits

with the share of population and expressed in percent of the national GDP per inhabitant. The indicator is calculated from regional GDP figures based on the European System of Accounts (ESA95). The dispersion of regional GDP is zero when GDP per inhabitant in all regions of a country is identical, and it rises if there is an increase in a difference between a region's GDP per inhabitant and a country mean. This measure of regional inequality has been chosen having in mind the fact that this measure fulfills the standards introduced by Portnov and Felsenstein (2010), which are used to test the sensitivity of commonly used income inequality measures to changes in the ranking, size and number of regions into which a country is divided.

Success of this research depends on defining social attitudes. For this purpose, the results from European Value Survey have been used with special focus on topics considering Moral Attitudes, Politics and Society and National Identity. More precisely, a new variable that represents social attitudes (*SA*) includes a combination of answers to the following questions:

— e035: equalize incomes vs. incentives for individual effort;

— e037: individual vs. state responsibility for providing;

— f114: do you justify: claiming state benefits

Individuals preferring equalizing incomes, state responsibility and not claiming state benefits to which they are not entitled to, should represent "socially minded" individuals. Individuals preferring incentives for individual effort, individual responsibility and claiming state benefits, which they are not entitled to, should represent "selfish" individuals.

The assumption that regional inequalities are influenced only by social attitudes is rather restrictive, and results can potentially suffer from the omission of other (possibly) significant determinants of regional inequalities. Thus, we test whether the relationship between regional inequalities and social attitudes holds when additional explanatory variables are included.

In this regard, we would ideally like to include all potential determinants as suggested by the existing literature. However, regional data on these aspects are rarely available and/or are of poor quality, and we thus chose the following variables.

The first explanatory variable considered is a measure of EU budget expenditure. Although most of the researchers use data for EU Cohesion funds (see Boldrin and Canova, 2001, Beugelsdijk and Eijffinger, 2003, De la Fuente, 2002, Becker et al, 2010,) we use the level of EU budget expenditure. The reason is the fact that other parts of EU budget also have redistributive dimension with spatial consequences.

The second variable to be considered is a measure of government expenditure, which may also be a cause of regional divergence in the EU. In order to control for the possible influence of this variable we use the indicator expressed as general gov-

ernment final consumption expenditure as a percentage of *GDP*.

The next control variable is a national trade openness. The inclusion of this variable is important because of technological spillovers, which have been found to be important in the literature for regional inequalities, and related to trade intensity (Coe and Helpman, 1995, Gianetti 2002). The empirical literature on trade and growth generally uses the ratio of total trade (import + export) to *GDP* in order to measure trade openness.

The last additional explanatory variable is the initial level of *GDP*. Descriptions and sources of the variables used in our model are given in Table 1.

Methodological Issues

Our panel consists of 27 EU countries observed over two waves of European Value Surveys: 1999–2000 (Wave 1) and 2008–2009 (Wave 2). This number of "time series" observations (Wave 1 and Wave 2) is relatively small compared to the number of countries. This "wide and short" dimension of our data set is quite important as it determines the estimating technique to be used. Due to a very small time-series dimension we cannot, unfortunately, explore the dynamic behaviour of regional inequalities. As for the cross-sectional characteristics, we account for the country heterogeneity by allowing each country to have its own intercept, by using the fixed effects model (FE). The variables in our model are likely to vary systematically by country for reasons such as different natural resource endowment, hence we need to control for this in order to avoid omitted variables bias. One of the main disadvantages of the FE model is that the conclusions are restricted to the effects in the sample. However, since our main interest is the relationship between the explanatory variables and regional inequalities in the countries in our sample, this does not pose a problem as we do not want to make inference outside the EU27.

Results

The fixed effect model assumes that country heterogeneity (assumed away in pooled data) is captured by the intercept term. This means that every country gets its own intercept while the slope coefficients are the same across all countries. Most researchers would probably agree that cross-sectional heterogeneity is to be expected in our model — there are probably many unmeasured variables that determine regional inequalities and that their influence gives rise to different intercept for each country. In order to make sure that FE model suits our data better than a simple pooled OLS model, we run an F-test comparing the pooled OLS results with the results from the FE estimation. The F-test for the exclusion of the fixed-effects (the p-value is 0.01) suggests that the fixed-effects are not redundant and should be included in the model. Based on that evidence, we pursuit our empirical investigation choosing FE over the pooled OLS estimator. We use the latter, however, only as a robustness check for the obtained FE results. Table 2 reports the FE estimates.

Table 2

FE estimates (dependent variable: regional inequalities)

Coefficients		
Cons	155.3439*	(0.02)
EXP	0.0004	(0.535)
GE	–0.3627	(0.361)
OPT	–0.1885	(0.116)
GDPpc	–0.0031*	(0.077)
SA	–206.3357**	(0.024)
GDPpc × SA	0.0066**	(0.021)
R^2		
No of obs	37	

Notes: Numbers reported in parentheses are p-values. *, ** and *** denote significance at the 10, 5 and 1 percent, respectively.

Aforementioned econometric details are integrated in our analysis with the results presented in Table 2. The most interesting result is a negative and significant coefficient for social attitudes. This finding could be interpreted as an evidence for acceptance of the hypothesis that social attitudes have an important influence on the level of regional inequalities. Moreover, considering the fact that higher values of social attitudes represent higher shares of "socially minded" individuals, this result indicates that societies with less "selfish" individuals have lower levels of regional inequalities.

The coefficients on control variables are not all statistically significant and are not in accordance with the expected signs. A positive, statistically insignificant effect of EU budget expenditure for regional inequalities could be a consequence of the propositions for EU funding and its short period of implementation. The explanation for government consumption is more complex, considering a variety of the determinants that define it. Although the coefficient on real openness does not have the expected sign, it is not statistically significant.

To allow for the possibility that the relationship between GDP per capita and regional inequalities is stronger if a country comprises of "less selfish" individuals, an interaction term between GDPpc and Social Attitudes (GDPpc × SA) is added in the model. The presence of a significant interaction indicates that the effect of GDP on regional

Table 3

Pooled OLS estimates (dependent variable: regional inequalities)

Coefficients		
Cons	116.803***	(0.003)
EXP	0.0006*	(0.083)
GE	–0.5388	(0.12)
OPT	0.0749**	(0.037)
GDPpc	–0.0028**	(0.01)
SA	–125.821**	(0.025)
GDP × SA	0.0039**	(0.034)
R^2		
No of obs	37	

Notes: Numbers reported in parentheses are p-values. *, ** and *** denote significance at the 10, 5 and 1 percent, respectively.

inequalities is different at different values of the Social Attitudes variable. Of course, adding an interaction term in the model changes the interpretation of the coefficients measuring the effects of GDP and Social Attitudes on regional inequalities. Since the interaction indicates that the effect of GDP per capita on regional inequalities is different for different values of Social Attitudes, the unique effect of GDP on regional inequalities is not limited to GDP, but also depends on the values of Social Attitudes and the coefficient on the interaction term. The coefficient on the interaction term between GDPpc and Social Attitudes indicate that on the higher levels of GDP higher share of "socially minded" individuals increase regional inequalities, implying that the choice of actions of individuals are strongly affected by national economic welfare.

Robustness check — Pooled regression

The parsimonious model based on the FE estimator is the model that we favour for inference. We assume that all behavioural differences between countries and over time are captured by the intercept. At this stage, however, as a robustness check, we relax this assumption and simply pool the data, neglecting both time-series and cross-section character of the data. Table 3 gives the Polled OLS results.

The results suggest a negative and statistically significant coefficient for social attitudes. This finding confirms our hypothesis that social attitudes have important influence on the level of regional inequalities.

When compared to their FE estimates, the total expenditures variable (EXP) gains statistical significance (although only at the 10% of statistical significance), while the size of its effect on regional inequalities remains almost the same. The effect of government consumption (GE) remains negative and statistically insignificant, while the effect of trade openness (OPT) changes both the direction and significance. The effect of GDP per capita (GDP) is quite robust as it remains almost identical, particularly in its size. The same holds for both Social attitudes (SA) and the interaction term (GDP × SA).

Conclusion

As the global economic crisis rises and budget of the EU becomes tighter, questions about the proper utilization and effectiveness of transfers from EU budget to Europe's member states and regions are in focus of all relevant actors.

The recent literature investigating the spatial dimension of EU budget expenditure effectiveness offers mixed and contradictory results. Although there are several possible reasons for such inconclusive results this research focuses on the impact of social attitudes.

The motivation lies in the fact that individuals choose actions according to social attitudes. Social attitudes, defined as our views of the others as a collective, create a difference in response of agents to changes in what is perceived to be "earned" and "unearned" income (Witztum, 2008.). Therefore actors that are only interested in their own payoffs (selfish-preferences) prefer "unearned" income because it implies the benefit (income) without the cost (effort, labor). Actors motivated by the payoffs of others (social-preferences) are in position of balance between "benefit without cost" ("unearned" income) and utility derived from the payoffs of actors that provide "unearned" income.

The above-mentioned classification has been the starting point for examining how the presence of social attitudes may influence the effectiveness of different aspects of redistributive policies. In case selfish individuals are the dominant group, higher level of "unearned" income from redistributive policies will decrease effort and therefore decrease employment rate (increase unemployment rate) and growth rate in the specific area and consequently increase regional inequalities.

The crucial point is to define what individuals define as "earned income" and what as "unearned income". Taking in mind that most people in EU still do not see themselves as Europeans in first place (Special Eurobarometer 379, 2011), the authors find it to be a proper solution to establish the link between "unearned income" and EU budget expenditure.

Empirical part of the research covers data for EU member countries used from Eurostat and

European Values Survey (EVS) database. Since these Surveys are not conducted regularly it covers only two time series observations for periods 1999/2000 and 2008/2009.

The results indicate that social attitudes exert an important influence on the level of regional inequalities. Moreover, considering the fact that the higher values of social attitudes variable represent higher share of "socially minded" individuals, the results indicate that societies with less "selfish" individuals have lower levels of regional inequalities.

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