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## A brief analysis of the administration costs of national social protection systems in EU member states

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### Abstract

The complex issues associated with the term European Social Model was analyzed in terms of administration costs that European Union member states incur to assure the operation of social protection schemes. The study shows that there is a high heterogeneity both in terms of the amount (share of GDP) allocated by member states through social protection systems (or welfare systems) and in terms of administration costs of these systems. In the last part of the article was presented an econometric analysis based on panel data regression in which administration costs of social protection systems was used as an endogenous variable and employment, unemployment and real GDP growth rate as explanatory variables.

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*Keywords:* European Social Model; social policy system; administration costs

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### 1. Introduction

In this article the complex issue associated with *European Social Model* (ESM) was analyzed in terms of administration costs that European Union (EU) member states incur to assure the operation of social protection schemes. During the analysis I used the main instruments of social policy as, for example, unemployment benefits, health care costs or governmental measures used for the implementation of active labour market policies (LMP) (such as employment services or training courses offered to the unemployed persons). In the same time, the study shows that there is a high heterogeneity both in terms of the amount of benefits (as share of GDP) allocated by member states through social protection systems (or welfare systems) and in terms of administration costs of these systems.

In the last 6 years, amid deep problems faced by almost all UE member states - high unemployment rate, low economic growth rates or even prolonged recession, fiscal austerity measures, high public debts, loss of competitiveness, internal devaluation measures (*Weisebrot, Ray, 2011*) – modernization and reform of the social protection systems gradually became regarded as a *sine qua non* condition for recovery in UE, to cope globalization (*Sapir, 2006*) and, to some degree, for European Economic and Monetary Union functioning. In the latter case, social

protection systems and their effects are particularly important because they could be useful tools that can alleviate some shocks that may affect national economies, supporting labor market flexibility and labor mobility (or *spatial flexibility* (Schmid, 2014)). Secondly, an effective social protection system can reinforce external competitiveness (see for more details Hermann, 2013; Vaughan – Whitehead, 2014 and Martin, 2004).

External competitiveness of Member States represent a topic that frequently occurs in all strategic documents adopted at EU level, but also into all forms of societal actors agenda, starting with Lisbon Strategy in 2000. Nowadays, competitiveness has new fundamental determinants, along the one based on quality and low costs, is increasingly important competitiveness based on innovation and creativity. Even though its importance was reduced, costs competitiveness of EU states remained on policymakers agenda, especially regarding how high levels of labor taxation – which in some degree is necessary to support social protection expenditures – generates an increase in *Unit Labor Costs* (ULC) for business in the context of an unsatisfactory labor productivity growth rate.

However, during last years ESM reform was extensively discussed, both at political level and academic level (ILO, 2014), especially amid the financial and economic crisis that deepened social imbalances (high rates of poverty, high youth unemployment, high income inequality index, etc.) (OECD, 2011; IMF, 2014). Also, the need for fiscal consolidation measures in many EU Member States has repositioned in the front of public debate the present *role, size and effects* of ESM, particularly of so-called european "welfare state" (Hermann et al., 2013).

This paper is organized in three parts and focuses on heterogeneity identified in the European Social Model and social protection systems of EU Member States. Approach mainly concerns the relationship between administration costs and the efficiency and effectiveness of these systems. *In the first part* of the analysis was made a brief presentation of welfare state development in Europe and its main phases (starting with 1880's) which are recognized in the literature. *In the second part* was emphasized the position of administration costs of social protection schemes in the general picture of social protection expenditures and the relationship between them and other important indicators for social issue (i.e., capacity to reduce the rate of poverty through social transfers, employment rate or the share of long-term unemployment in total unemployment). *In the last part* of the article was presented an econometric analysis based on panel data regression in which administration costs of social protection systems was used as an endogenous variable and employment, unemployment and real GDP growth rate as explanatory variables.

Analysis of administration costs of social protection systems was considered relevant as it is observed that an effective social protection systems (usually with a large size) generates high administration costs. Amid discussions about ESM reform, Member States efforts to support employment and labor market flexibility through active policies should take into account the size and costs of managing the social policies implemented, these expenditures representing a significant share of GDP in some EU countries.

## 2. Welfare state development in Europe

Relevant literature distinguishes between several stages in the evolution of welfare state and, respectively, of social protection systems in Europe.



Fig. 1. Brief timeline of welfare state development in Europe

Source: Own computations after Castles et al., The Oxford Handbook of Welfare State, 2010

The initial phase of this process cover the period between 1880 and the onset of World War I. This period can be labeled as the "introductory stage" of welfare state, when were designed and implemented first forms of social insurances. The starting point in modern times is the Otto von Bismarck's *Imperial Decree of Social Policy* (1881), in Germany, a country followed closely by UK and Nordic countries regarding introduction of various forms of early social insurances.

However, some authors (see Ritter, 1986 and Castles *et al.*, 2010) noted that, at the time of the first institutional and social security regulations, Germany was less developed compared with other European countries in terms of industrialization level and democratization, but the rapid industrialization process before the end of XIX century and favorable political context have allowed introduction of an extensive social protection system based on social insurance, concept regarded as an innovation at the time. Otto von Bismarck's program from 1881 was implemented between 1883 and 1889, and involved a gradual introduction of several types of social insurances: health insurance (1883), accidents insurance (1884), old-age pension and disability insurance (1889).

This new policy was considered a sort of shock therapy, but his most important vector proved to be the way in which individual citizens (mostly industrial workers) were mandatory insured and entitled to social benefits based on individual rights rather than certain benefits granted to alleviate poverty based on discretionary needs and means tested benefits (Castles *et al.*, 2010).

Thus, was born a new institutional framework that extended and covered an increasing number of citizens and, starting with German experience, European states have created so-called „national welfare regimes” with different principles regarding eligibility criteria, coverage, administration, financing and redistribution.

The second phase covers the period 1914-1945 and was characterized by an expansions of social protection schemes and a growing number of citizens was included. Same time, in this period it can be said that there was an increase in the level of internationalization of social problems, after the International Labour Organization (ILO) creation, in 1919, which helped to a gradually recognition of social rights as universal human rights. An explicit mention of universal social rights was made in the *Universal Declaration of Human Rights* adopted by the United Nations General Assembly, in 1948.

Between 1945 and 1953 can be recognized a third phase in the evolution of the welfare state, when these systems were completed and social policy (or welfare policy) has become increasingly important in the government policy framework. William Beveridge's report (*Report on Social Insurance and Allied Services*) has an important role in this period. Published in 1942 in UK, this report conceived an life-long universalist welfare system which accompanied individuals and families (characterized by the idiom "from the cradle to the grave").

Some authors believed that the impact of William Beveridge vision was to some extent influenced by the experience of Second World War, finished in 1945. T.H. Marshall (1964) and Richard Titmuss (1950) considered that war experience has provided a strong *momentum* to national solidarity and amid this friendly climate was accepted: (a) an increasing role of social policy and (b) creation of an universalist social benefits system regardless class and status of individual citizens.

Between 1953 and 1971 was the so-called "Golden Era" of the welfare state, during which social policies were strengthened and the share of social protection spending in GDP increased considerably. According to OECD database, social expenditures in 21 actual Member States of the EU increased between 1960 and 1975 about 7 p.p. (which meant an increase in relative terms by 74%). Even in more liberal states, like United States, this share almost doubled, from 7.2% of GDP in 1960 to 14.2% in 1975.

In the literature of welfare state development has been rooted the view that, after 1972, welfare state entered into a period of decline in terms of number of innovations introduced and persons covered by social protection systems. However, this assumption is not validated using aggregated data on the evolution of social protection expenditure as a share of GDP (the growth trend continued even after the 1990s and *Maastricht Treaty*).

According OECD database, for the EU21 social expenditures as share of GDP increased between 1975 and 2000 from around 17% to 22.6%. Same time, this upward trend in social spending is not necessarily determined only by demographic changes resulting from the aging of the European population, because there wasn't only an increase in spending on old-age pensions, but also in areas such as health, unemployment and families.

### 3. The role and importance of administration costs in EU

*Social policy* is one of the main instruments to achieve a sustainable economic growth in EU, as well in terms of creating jobs and promoting a higher social cohesion. In general, social protection spending include all institutions (public and private) interventions with the intention of improving the task of households and individuals to cope various risks or needs, usually associated with old-age, disease and / or health care, child care and family, disability, unemployment, etc. (EC, 2013).

*Expenditures on social protection* includes (i) social benefits; (ii) administration costs; and (iii) other expenditures. Obviously, the biggest part of spending on social protection was represented by social benefits (96% of the total in 2012), followed by administration costs (3%) and other expenditures (1%). Same time, in EU Member States in 2012 40.6% of total social protection expenditure represented old-age pensions and 30% health care spending.

From another point of view, empirical evidence shows that in EU is a high heterogeneity in terms of social protection models (see *Esping-Andersen*, 1990) and size of social benefits per capita. In 2012, social benefits allocated in EU28 countries amounted between 922 EUR per capita and 18550 EUR per capita, according to national or regional historical developments, social systems generosity, national budgetary resources and demographic structures.

In 2012, the lowest welfare benefits per capita in EU28 were in Bulgaria and Romania, with 922 and, respectively, 1012 EUR (amounts do not include administration costs and other expenses). Moreover, Bulgaria and Romania are also the countries with the lowest GDP per capita. EU28 average is at a level of 7272 EUR per capita, which means that, overall, the EU28 allocate to social benefits around 30% of GDP. The euro area average of social benefits is around 8300 EUR per capita.

*Administration costs* represent the costs of management and administration of social protection schemes. These usually include expenses for registering beneficiaries, collecting mandatory social security contributions, benefits administration, inspection, reinsurance, financial management and other general expenses. The EU28 average of these expenditures as a share of GDP is around 1%, but there are significant differences between Member States. While countries like Romania, Malta, Hungary and Estonia have administration costs of social protection systems representing around 0.2% of GDP. In countries like Denmark, Ireland, the Netherlands and France these costs are between 1.4 and 1.6% of GDP.

*Figure 2* shows that, in general, countries that succeed in reducing the percentage of people at risk of poverty have the biggest administration costs. Poverty rate reduction was expressed by the percentage change in people at risk of poverty rate before social transfers (excluding pensions) and after social transfers. There have been taken into account the average poverty rate reduction for period 2000-2013 and the average administration costs per capita in period 2000-2012.

It is noted that there is a significant heterogeneity in terms of reducing poverty rates through social transfers - from 15% in Greece to levels of over 60% in Ireland. However, countries like Slovenia, Czech Republic and Hungary, although allocated in this period significantly fewer resources for managing social protection systems relative to population, administration costs were under 70 euro per capita (even 34 euros in Hungary) and people at risk of poverty rate decreased during the period 2000 - 2013 on average by over 45% as a result of the social transfers.

In comparison, even if administration costs of social protection systems are twice as high in Greece to the three countries mentioned above, the Greek welfare system succeeded in reducing the poverty rate through social transfers only by 15.2%. Same time, UK - a country that has administration costs per capita similar to those of Greece - recorded a poverty rate reduction by about 46%.

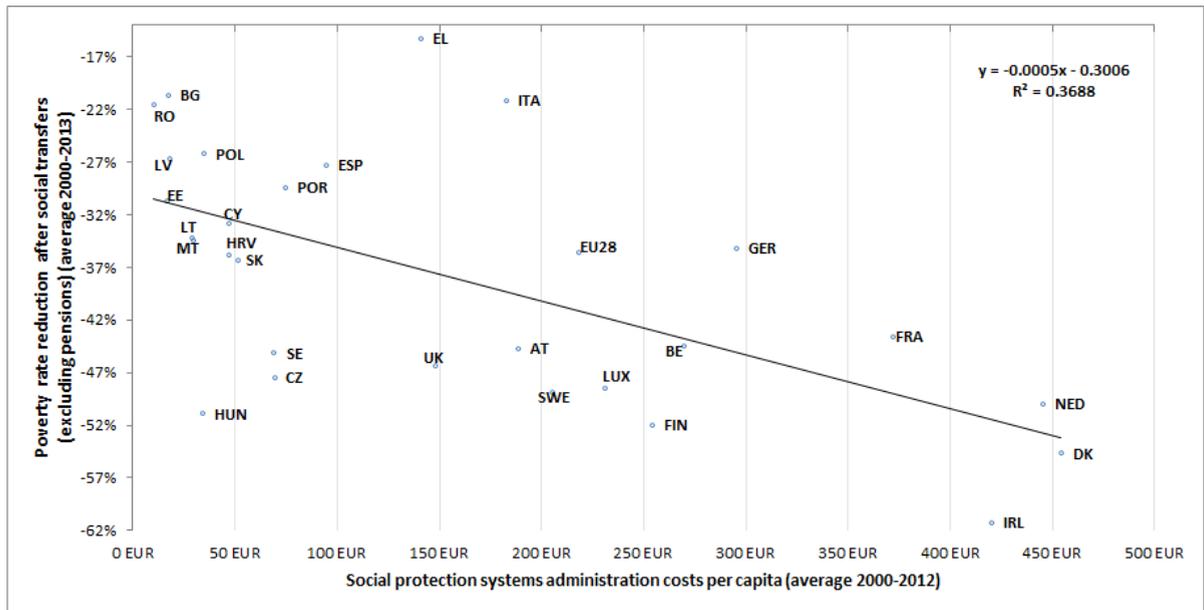


Fig. 2. Relationship between administration costs of social protection systems and poverty rate reduction in EU

Source: Eurostat; own computations

Similarly, in terms of labour market policies through which European states want to reduce unemployment and increase the number of employed people, countries with the largest funds allocated to this category of spending has, again, significant administration costs, as seen in *Figure 3*.

Policies associated with labour market include a wide range of tools and forms of government support for individuals who are unemployed or those who, for one reason or another, are disadvantaged in the labor market. According to the methodology of the *European Statistics Office* (Eurostat), for LMP are identified 3 types of interventions: (1) *labour market services* – helping unemployed to find a job or supports employers in recruitment; (2) *labour market measures* – or active measures, like training, recalification, employment incentives, start-up incentives, etc.; and (3) *financial support* – or passive measures, like income support for unemployed.

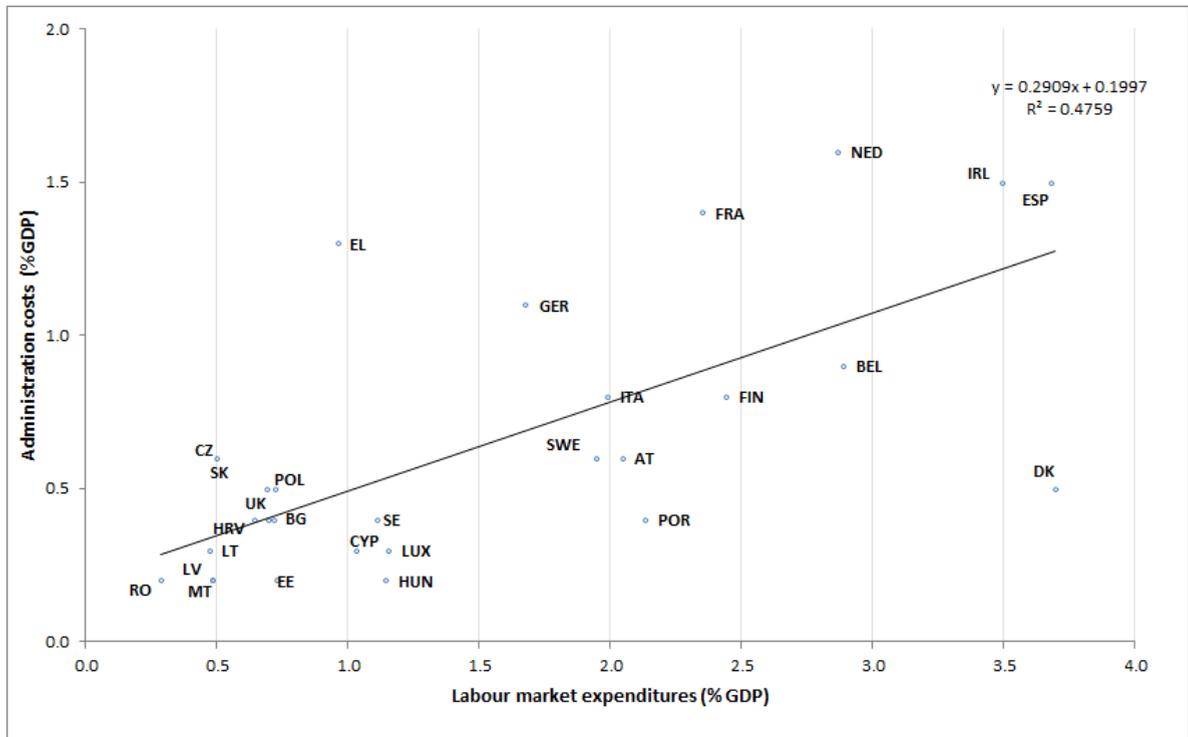


Fig. 3. Relationship between labour market expenditures and administration costs of social protection systems (2012)

Source: Eurostat; Note: Due the lack of data for labour market expenditures in Greece and UK was used values for 2010. For Ireland, Cyprus, Luxembourg, Malta and Poland was used values for 2011.

In European Union as a whole it is noted that, by allocating additional funds for LMP, particularly active measures, countries succeeds in obtaining lower shares of long-term unemployment (unemployed individuals for a period longer than 12 months) in total unemployment. Nevertheless, the intensity of this relationship appears to be extremely low according to the *R-square coefficient* - most likely amid persistent cyclical problems in countries such as Spain, Portugal, Italy, Greece and even Ireland (so-called PIIGS), where there is a significant shortage of domestic demand (private consumption, government consumption and investment). However, if these states are removed, *R-square coefficient* increase significantly, to 31.5%. On the other side, countries like Denmark, Sweden and Finland, where the share of LMP spending in GDP is significant, has some of the lowest rates of long-term unemployed.

Even though Spain and Ireland have a share of GDP allocated for expenditure on LMP like Denmark (over 3.5% of GDP), the share of long-term unemployed in total unemployment is extremely high (over 50%), compared with Denmark where the level is 50% lower, as shown in *Figure 4*. A plausible explanation for this may be that in the pre-crisis period, when Spain and Ireland had a strong expansion of the real estate sector and, especially, the construction sector. Amid the collapse of these sectors, the ability to retrain employees and difficulties in finding another job, along with severe recession, banking crises and consumption reduction, led to a significant persistence of unemployment.

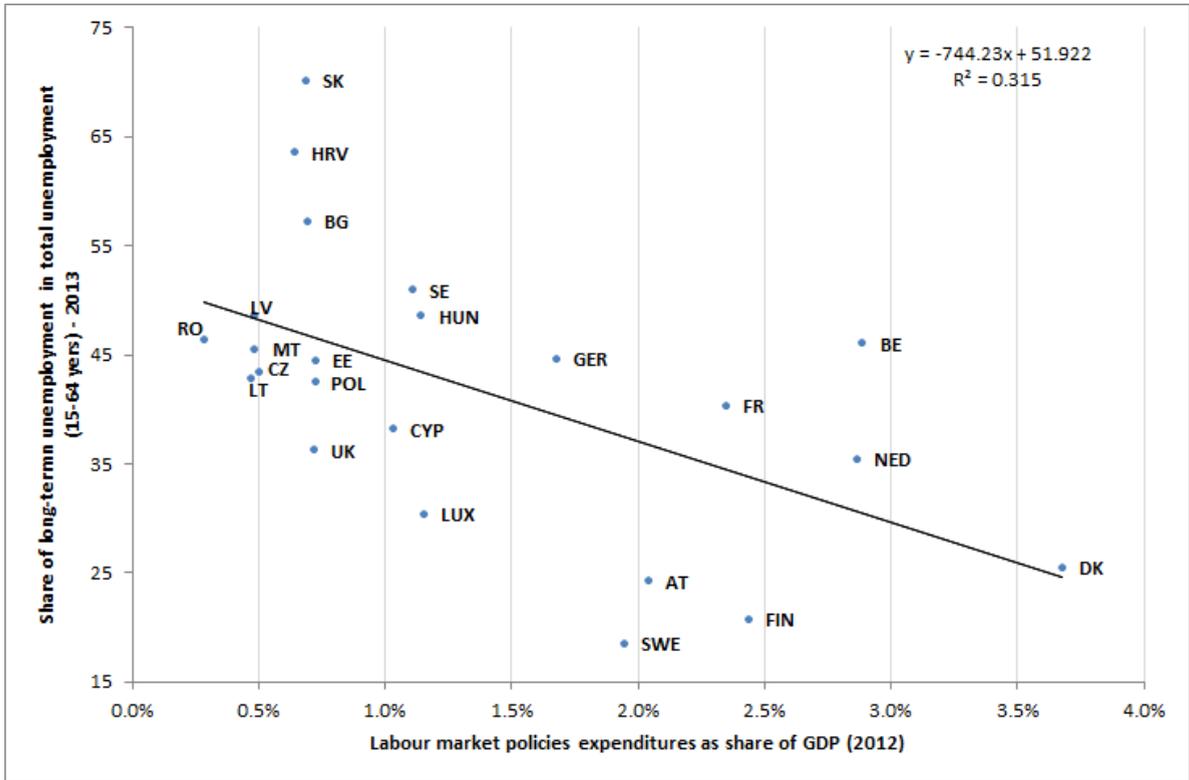


Fig. 4. Relationship between GDP share of LMP expenditures and long-term unemployment share in total unemployment

Source: Eurostat; Note: excluding PIIGS

#### 4. Estimating reaction of administration costs of welfare systems through a panel data model

In the last part of the paper I highlighted how the administration costs of social protection schemes react in relation to other relevant variables for the labour market. The econometric model used takes into consideration the period 1999-2012. The model has three explanatory variables (number of persons employed, number of unemployed persons and the growth rate of real GDP). The endogenous variable is represented by the administration costs of social protection systems.

The model is a panel data model with fixed effects. Time series have annual frequency and cover all 28 Member States of EU. The panel data regression uses both a cross-sectional index and a temporal index to estimate the coefficients. In the model below *i* index shows cross-sectional dimension and *t* index shows temporal dimension.

$$admcost_{it} = c + \alpha * empl_{it} + \beta * unempl_{it} + \mu * GDP_{it} + \varepsilon_{it} \tag{1}$$

Where:

*admcost* = percentage change of administration costs of social protection systems

*GDP* = growth rate of real GDP

*empl* = percentage change of employment

*unempl* = percentage change of unemployment

*c* = intercept

$\varepsilon$  = residual error

$\alpha, \beta, \mu$  = explicative variables coefficients

To consider that there is an effective social protection system, the relationship between first two explanatory variables (employment and unemployment) and dependent variable (administration costs) should be negative regarding employment and, respectively, positive regarding unemployment. In the first case, an increase in employment may lead to a decrease of the number of individuals who use social protection systems and active/passive measures that governments implement to ensure a properly social protection.

At the same time, the relationship may be positive if the increase in the employment is done by increasing government spending (direct support measures – i.e.: subsidies for job creation, employment assistance, etc.) that can lead to additional budgetary costs with its management and hiring new civil servants responsible for managing this programs. Thus, administration costs will rise.

Secondly, for the unemployed persons, usually it is considered that an increase in the number of unemployed should lead to an increase in administration costs amid their introduction in training or retraining programs and vice versa in case of unemployment reduction.

In terms of real GDP growth, relationship between dependent variable and GDP growth is expected to be negative. Economic growth contributes, on the one hand, to reduction of unemployment and support employment, on the other hand, to the increase of income per capita in general. Disposable income increases may lead to a reduction of government intervention and, respectively, to a lesser need for social programs to help individuals.

Results obtained after the econometric estimation with the Eviews program are presented in *Table 1* below.

Table 1. Panel data regression results

Dependent Variable: <b>ADMCOST</b>				
Method: Panel Least Squares				
Date: 11/22/14 Time: 12:56				
Sample (adjusted): 2000 2012				
Cross-sections included: 28				
Total panel (unbalanced) observations: 345				
<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
<b>C</b>	0.026175	0.012399	2.111090	0.0356
<b>EMPL</b>	1.010229	0.537604	1.879132	0.0612
<b>UNEMPL</b>	0.126854	0.064136	1.977883	0.0488
<b>GDP</b>	0.009380	0.003532	2.655485	0.0083
<b>Effects Specification</b>				
<b>Cross-section fixed (dummy variables)</b>				
AUS	-0.016892			
BEL	-0.013665			
BULG	0.049675			
CRO	-0.056469			
CYP	-0.016328			
CZE	0.025670			
DNK	0.059908			
EST	-0.015707			
FIN	0.002210			
FRA	-0.001000			
GER	-0.013469			
GRE	0.055127			
IRL	0.060550			
ITA	0.000492			

LET	-0.007133		
LIT	0.015550		
LUX	-0.052725		
MAL	-0.020645		
NED	0.002499		
POL	0.032345		
PORT	-0.037478		
ROM	0.050809		
SLK	0.003994		
SLOV	-0.011879		
SPA	-0.017974		
SWE	-0.004009		
UK	-0.069876		
UNG	-0.016195		
<b>R-squared</b>	0.109034	<b>Mean dependent var</b>	0.057002
<b>Adjusted R-squared</b>	0.023910	<b>S.D. dependent var</b>	0.150681
<b>S.E. of regression</b>	0.148869	<b>Akaike info criterion</b>	-0.885945
<b>Sum squared resid</b>	6.958833	<b>Schwarz criterion</b>	-0.540583
<b>Log likelihood</b>	183.8256	<b>F-statistic</b>	1.280884
<b>Durbin-Watson stat</b>	2.232602	<b>Prob(F-statistic)</b>	0.153937

Source: Own estimations based on Eviews program

As the results shows, there is a positive relationship between administration costs and the three explanatory variables used, even if the real GDP growth rate influence is very small.

The sample was adjusted by the Eviews program to the period 2000-2012 and the number of observations was 345. Same time, according to the *Prob* column, coefficients obtained have a semnification threshold at 1% (for real GDP growth rate), under 5% (for unemployment variable) and under 10% (for employment variable). However, it must be said that the chosen variables explains only about 11% of the administration costs behavior, as the *R-square coefficient* shows, meaning that there are other important explanatory variables that were not considered in the model.

Thus, it appears that an increase of 1 p.p. in employed population will lead to a similar growth in administration costs, by 1 p.p. Additionally, an increase in the number of unemployed by 1 p.p. lead to a relatively small increase in administration costs, by 0.17 p.p. Regarding the last explanatory variable used, the results shows that the real GDP growth rate has no influence on administration expenditures of social protection systems. The elasticity coefficient obtained in the model is close to zero and statistically significant at a significance level of less than 1%.

The direct relationship between employment growth and the rising in administration expenditures can be justified by the fact that Member States efforts to boost the employment rate and the number of people employed, implementing and managing labour market policies (passive and active LMP) have led both to an increase of social benefits expenditures as well as additional costs for managing social programs designed to help citizens to take a job. In this case we are considering the costs of registration of beneficiaries, collection of social security contributions, benefits administration, inspection, etc.

## 5. Conclusions

In this article the complex issues associated with the term European Social Model (ESM) was analyzed in terms of administration costs that European Union (EU) member states incur to assure the operation of social protection schemes. The study shows that there is a high heterogeneity both in terms of the amount (share of GDP) allocated by member states through social protection systems (or welfare systems) and in terms of administration costs of these systems. Also, has been emphasized the position of administration costs of social protection schemes in the general

picture of social protection expenditures and the relationships between them and other important indicators for social issue (i.e., capacity to reduce the rate of poverty through social transfers, employment rate and the share of long-term unemployment in total unemployment).

Analysis of administration costs of social protection systems was considered relevant as it is observed that an effective social protection systems (usually with a large size) generates high administration costs. Amid discussions about ESM reform, Member States efforts to support employment and labor market flexibility through active policies should take into account the size and costs of managing the social policies implemented, these expenditures representing a significant share of GDP in some EU countries. *In the last part* of the article was presented an econometric analysis based on panel data regression in which administration costs of social protection systems was used as an endogenous variable and employment, unemployment and real GDP growth rate as explanatory variables. As the results shows, there is a positive relationship between administration costs and the three explanatory variables used, even if the real GDP growth rate influence is very small.

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