

A COMPARATIVE ANALYSIS OF POVERTY AND SOCIAL PROTECTION EXPENDITURE ACROSS EUROPE

Assist. Răzvan-Dorin Burz Ph. D
West University of Timisoara
Faculty of Economics and Business Administration
Timisoara, Romania

Abstract: The objective of this study is to provide some empirical evidences regarding the trends of poverty and social protection expenditures. We are involving a small sample of 27 countries (EU27) for an observation time span between 2005 and 2009. The percentage of total population at risk of poverty and the expenditure per inhabitant reported by Eurostat is used as criteria of analysis. We conclude that social protection expenditure doesn't have a clear direct impact on poverty.

JEL classification: H53, I38

Key words: social protection; social security; poverty; social expenditure; welfare states

1. INTRODUCTION

Today in Europe social protection systems are highly developed. They are designed to protect people against risks like: sickness, disability, old age, survivors, family/children, unemployment, housing, social exclusion not elsewhere classified (BIT, 1995; ESSPROS, 2011, p.29). In the following study we want to discuss another possible factor that affects poverty – social protection expenditure. As background research, until now, we did not find any studies which are investigating this possible direct relation between social protection expenditure and poverty measured as share of people with an equivalised disposable income below the at risk of poverty threshold, set at 60 % of the national median equivalised disposable income after social transfers.

2. OBJECTIVE

The objective of this study is to provide some empirical evidences regarding the trends of poverty and social protection expenditures. We also want to verify the following hypotheses: “the increase of social protection expenditure determine a decrease of poverty”. In other terms between the level of poverty and the expenditure on social protection we do have a strong negative correlation.

3. METHODOLOGY

For this analysis we looked at a small sample of 27 countries (EU27) for an observation time span between 2005 and 2009. For these countries we took into consideration the values of two indicators: at risk of poverty rate as percentage of total population and social protection expenditure expressed as Euro per inhabitant at

constant 2000 prices. The at risk of poverty rate is the share of people with an equivalised disposable income below the at risk of poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers. This indicator measures the low income in comparison to other residents in a specific country. The values of the indicators were obtained from the Eurostat database. To verify the mentioned hypothesis we study the correlation between the proposed indicators at an aggregated level and also at county level. The formula used for the correlation coefficient calculation is as follow:

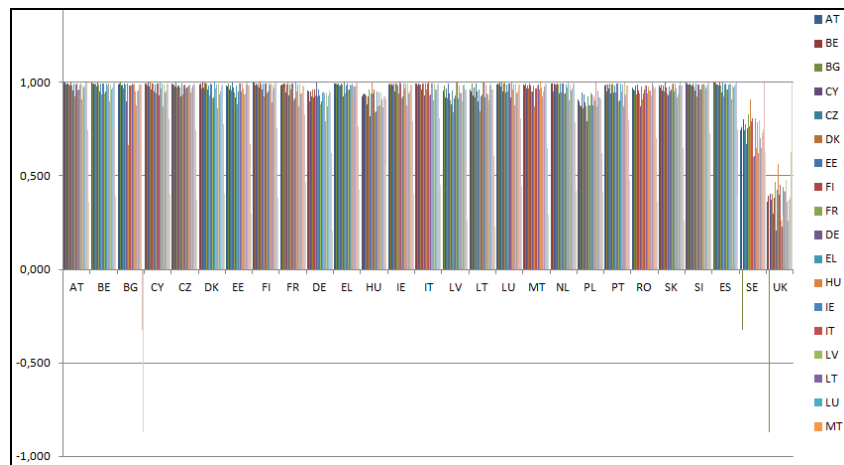
$$r = \frac{n \sum RP \times SPE - \sum RP \sum SPE}{\sqrt{n \sum RP^2 - (\sum RP)^2} \sqrt{n \sum SPE^2 - (\sum SPE)^2}}$$

Where n represents the number of pair of bi-variable values; RP at risk of poverty rate and SPE the social protection expenditure.

4. ANALYSES

At aggregated level we try to compare the general tendence of social expenditure with the one of poverty.

Regarding the social protection expenditure, in a previous paper (Burz, 2012) we concluded, that, in general, in all EU27 countries, the expenditure had a similar increasing trend with some exception, for example, Sweden and United Kingdom. As average we had o strong positive correlation of 0.896 (Figure no. 1).

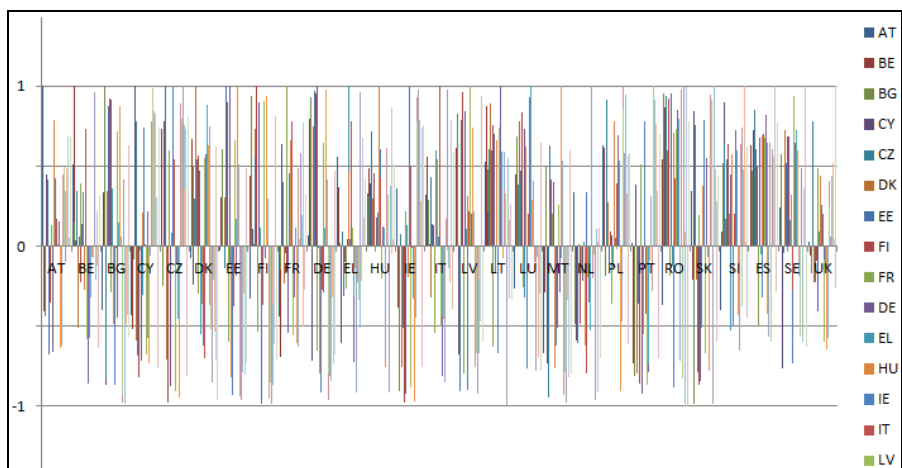


Source: Burz 2012.

Figure no. 1 Social protection expenditure tendency correlation across EU 27 countries

In the case of poverty the situation is different (Figure no. 2). From a total of 351 of trends correlation analyses we had 172 positive correlations and 179 negative correlations. Among this, 89 have a correlation above 0,5 and 106 below -0,5. In total we have a correlation in 195 of the cases (55%). Therefore we can not say that we have a general tendency with a clear direction at EU 27 level. From the EU27 countries 13 had an increase in the poverty level from 2005 to 2009 (Bulgaria, Denmark, Estonia, Finland, Germany, Greece, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Romania, Sweden) and 14 a decrease (Austria, Belgium, Cyprus, Czech Republic,

France, Hungary, Ireland, Italy, Poland, Portugal, Slovakia, Slovenia, Spain, United Kingdom). The average increase was of 18% and the decrease of 9%.



Source: Own calculations – on Eurostat data

Figure no. 2 Poverty tendency correlation across EU 27 countries

Comparing the general tendency of social protection expenditure with the one of the poverty we can not conclude that there’s a clear relation of implication between them. For this to be true we should have had a general increase of social protection expenditure and a general decrease in the tendency of poverty.

At country level we see a negative correlation between social protection expenditure and poverty in case of 16 countries (Austria, Belgium, Cyprus, Czech Republic, France, Greece, Hungary, Ireland, Italy, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom) and a positive correlation in 11 (Bulgaria, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Luxembourg, Malta, Netherlands, United Kingdom).

Table no. 1 The correlation between social protection expenditure and poverty tendency at EU27 country level

	Country	Correlation between RP and SPE		Country	Correlation between RP and SPE		Country	Correlation between RP and SPE
1	Austria	-0,482965582	10	Germany	0,668886881	19	Netherlands	0,40214898
2	Belgium	-0,407138019	11	Greece	-0,125541002	20	Poland	-0,895265886
3	Bulgaria	0,75789858	12	Hungary	-0,635929503	21	Portugal	-0,790896762
4	Cyprus	-0,776169227	13	Ireland	-0,966049214	22	Romania	-0,940068173
5	Czech R.	-0,990093067	14	Italy	-0,520092641	23	Slovakia	-0,727211475
6	Denmark	0,874671128	15	Latvia	0,894602579	24	Slovenia	-0,372867194
7	Estonia	0,921743103	16	Lithuania	0,077849765	25	Spain	-0,786979853
8	Finland	0,929179921	17	Luxembourg	0,534538168	26	Sweden	-0,226700622
9	France	-0,61001199	18	Malta	0,941371205	27	U. Kingdom	0,839242933

Source: Own calculations – on Eurostat data

As we can see we can group countries in four groups:.

- Group 1 (negative correlation below -0,5): 11 cases: Cyprus, Czech Republic, France, Hungary, Ireland, Italy, Poland, Portugal, Romania, Slovakia, Spain;
- Group 2 (negative correlation above -0,5): 5 cases: Austria, Belgium, Greece, Slovenia, Sweden;
- Group 3 (positive correlation above 0,5): 10 cases: Bulgaria, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Luxembourg, Malta, United Kingdom.
- Group 4 (positive correlation below 0,5): 1 case: Netherlands.

Basically the formulated hypothesis is confirmed only in 60% of the cases.

5. CONCLUSIONS

According to our results, we can conclude that social protection expenditure doesn't have a clear direct impact on poverty measured as share of people with an equivalised disposable income below the at risk of poverty threshold, set at 60 % of the national median equivalised disposable income after social transfers. The same result is obtained even if we compare the general aggregated tendency of the EU27 countries or if we analyze each country separately. In the second case we find a negative correlation which confirms the hypothesis that "the increase of social protection expenditure determines a decrease of poverty" but only in 60% of the cases. As consequence we put the evolution of poverty on other major factors.

Another conclusion that can be drawn although intuitively, for future research, is that social protection has an impact on poverty only in those countries in which the expenditure related to social protection is high in comparison with the incomes without social transfers (except maybe pensions).

6. ACKNOWLEDGEMENT

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