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***Income Redistribution and Public Debt (Statistically-Econometric Approach).
Conclusions as Regards Stabilising and Reducing Public Debt.***

Project objectives/Research hypothesis

The aim of the project is to analyse influence of income redistribution on public debt, provided that income redistribution instruments considered are income tax as the source of public revenues and social benefits as elements of public expenditure. The first part of the project identifies redistributive effect of income tax and social benefits, i.e., redistributive impact of net tax. The second part of the project looks into correlation between the net tax redistributive effect and public debt. The third part of the project consists in econometric model which explains relation between the ratio of public debt to GNP and such factors as: so called the net public revenues, interest rate related to public sector financial liabilities, public debt in previous years, inflation, etc.

Research hypothesis states that EU member states can stabilise and reduce their public debt through modifying their income redistribution patterns.

Research methodology

Project provides statistically-econometric approach which is based on Lorenz Curve and income distribution parameters, including the Gini coefficient as income inequality measure. Redistributive effect of net tax, being defined as the relative difference between the Gini coefficient of original income and the Gini coefficient of net income, is decomposed into relevant components related to public revenues and public expenditures. The aforementioned multivariate cross-section econometric model is estimated by a variety of the least squares method. The empirical sample includes private households covered by EU-Survey on Income and Living Conditions conducted by Eurostat in 2012-2013 (the size of the empirical sample in each year is some 130 000 households).

Research project impact

The scientific outcome of the project consists in showing the theoretical relationship between average tax rate and average social benefit rate, which are the components of the net tax redistributive effect decomposition based on Lorenz Curve, and the ratio of public debt to GNP. Estimation of the structural parameters of the econometric model on the basis of statistical microdata representative for all 28 EU member states leads to valuable information for both economists dealing with public finance theoretical questions and the policy-makers facing the necessity to stabilise and to reduce public debt.