

Title	<b>Income Inequality and Social Outcomes: Bivariate Correlations at NUTS1 Level</b>
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Source	Luxembourg: Publications Office of the European Union
Pub Date	2017
Brief Introduction	<p data-bbox="475 443 724 477"><b>1 Introduction</b></p> <p data-bbox="475 510 1230 701">The last two decades have been marked by a growing concern about rising inequality. In a recent book (2012), Joseph Stiglitz, a former Nobel prize winner in Economics argues that rising income inequality is one of the main factors underlying the economic and financial crisis in the United States. In its 13th-19th October 2012, the Economist, a magazine, has devoted a special report on income inequality in the world.</p> <p data-bbox="475 719 1230 999">Media interest has surrounded the emergence of the inequality debate in public arenas and square. Protesters in the United States (the Occupy Wall Street movement) and in Spain (the <i>indignados</i>) have denounced the present system as fundamentally flawed and unfair. A rally cry of these movement is that bankers benefiting from large bonuses have been bailed out while the victims of the crisis brought by the very same bankers are stuck in unemployment. The We are the 99% slogan and the associated web blog “We are the 99 percent” (see <a href="http://wearethe99percent.tumblr.com/">http://wearethe99percent.tumblr.com/</a>) also refer to this growing unequal distribution of wealth.</p> <p data-bbox="475 1016 1230 1267">On a broader perspective the issue about the benefits (or otherwise) of redistributive policies is at the heart of the presidential election debate Kerry versus Obama in the US at the time of writing the present report. Nobel prize economist and polemist Paul Krugmann in his blog ( <a href="http://krugman.blogs.nytimes.com/">http://krugman.blogs.nytimes.com/</a>) denounces the anti-Keynesian stance and policies of his adversaries. In this debate all is up for discussion, from the interpretation of the Great Depression and the New Deal to the economic success of Latvia in fighting the present crisis, with the issue of inequality squarely at the centre-stage.</p> <p data-bbox="475 1285 1230 1603">The development of income inequality in the EU Member States has been the subject of a recent publication by the OECD (2011). The report highlights a general trend of widening income disparities. While in the 1980s the Gini coefficient was equal to around 0.29 in OECD countries it markedly rose to 0.32 in the late 2000s. Particularly striking is the increase in income inequality of former equal societies, such as the Nordic countries and Germany. The causes of this rising income inequality in the past decades have also attracted much political and scholarly attention. The OECDs (2011) report provides a wealth of explanatory mechanisms, ranging from rising wage inequality to different taxation policies and household structures.</p> <p data-bbox="475 1621 1230 1738">A different perspective is to look at the social and economic challenges associated with rising income inequalities in the EU, i.e. to ask whether and why we should pay attention to the growing polarization between the 1% and the 99% of the population? These questions gained prominence through a widely cited</p>

book by Richard Wilkinson and Kate Pickett entitled "The Spirit Level, Why More Equal Societies Almost Always Do Better" (2009). Although the authors main tenet that more equal societies perform better on a wide range of social outcomes is intuitive and straightforward, the authors do not provide convincing empirical evidence for their propositions and the lack of a causal link between inequality and the many social outcomes analyzed in the book has been the subject of a heated debate, see e.g. the authors own blog for a list of refutations and counter-refutations <http://www.equalitytrust.org.uk/resources/response-to-questions>.

The book of Wilkinson and Pickett has been instrumental in promoting a cooperation between the Directorate General Joint Research Centre (DG JRC) and the Directorate General for Employment, Social Affairs and Inclusion (DG EMPL) on the social and economic challenges associated with the rising income inequality in Europe.

The cooperation aims at analyzing the socio-consequences of rising income inequalities in Europe. The present report is the second outcome of this project, the first being a literature review (EUR No. pending) on the relationship between income inequality and social outcome variables in the area of happiness, criminality, health, social capital, education, voting behavior and female labor participation.<sup>1</sup> In the present report, we complement the literature review by examining the bivariate correlations existing between income inequality and some of the social outcomes mentioned above.

The present analysis is carried out at the sub-national level (NUTS1 level) and focuses on bivariate correlations. In a next report, a multivariate analysis will be performed for a reduced number of social outcomes. In this last report we shall attempt to establish a clear direction of causality. The chosen social outcomes are political participation and crime.

This present report is organized as follows. Section 2 addresses a number of data and methodological issues. In particular, we tackle (i) the regional dimension of the analysis, (ii) the measures employed for income inequality, and (iii) the data sources used for income and the social outcomes. In addition, we provide information on the empirical methods used for the analysis as well as the robustness checks. Section 3 constitutes the main part of this work and starts by presenting an overview over the income inequality observed on NUTS1 level in Europe. The following subsections discuss then the regional distribution of social outcomes over Europe and presents the bivariate correlations between the income inequality measures and the social outcomes as well as the associated ordinary least squares coefficients.

As already noted in the literature review, the correlations presented in this report confirm the negative relationship between income inequality and some social outcomes. More precisely, we find that higher income inequality is significantly related to lower recorded voter turnout, lower participation in voluntary organizations, higher crime rates and higher early school leaver rates. Results remain valid, irrespective of the estimator or the income disparity index employed. Trust and self-reported voting behaviors are also negatively and significantly associated with income inequality, though the findings are found to be sensitive to the estimation method or the inequality index used for the computation of the bivariate statistics. Finally, the social outcomes related to well-being and health are not found to be significantly associated with income disparities.

As the empirical analysis below is only based on bivariate statistics, the results should be taken with a pinch of salt as none of the statistical associations discussed in this paper can be regarded as evidence of a causal relationship, which will be the subject of our next effort.