# Polarization of work between households and changes in income inequality: the case of CEE countries 2004-2014

## Introduction:

The period after 2004 has been characterized by considerable macroeconomic volatility in CEE countries. During the first part of the period most countries recorded economic growth, with increasing employment rates and rising wages. This period of prosperity was halted by the economic crisis in 2008-2009. This analysis investigates how changes in the distribution of employment among individuals and households have changed and how this contributed to changes in the income distribution during this period of economic growth and decline.

Changes in employment affect the income distribution in multiple ways. First of all, declining employment increases inequality of labour earnings between those working and not working (Jenkins et al. 2011). To assess the effect of changing employment on household income, one has to consider also how employment and earnings of individuals are combined in households. The effect of an increase in employment on household earnings inequality will be different if someone living in a jobless household gets a job or if someone from a household with full-time working members enters into employment. The study of household employment patterns and the effect of polarization in the household distribution of work has received considerable attention in the literature (Gregg and Wadsworth 2008, Corluy and Vandenbroucke 2012). The concepts developed are used here to study the drivers of inequality change during these years of economic boom and recession during the period between 2004 and 2014. The contribution of the study is to focus on the effect of changing employment polarisation between households on income inequality, which has been rarely studied in the literature (de Graaf-Zijl and Nolan, 2011).

# Data and methods:

The analysis here is based on the microdata from user databases of the EU-SILC 2005, 2008, 2011 and 2015. These data cover 10 CEE countries (Czech Republic, Slovakia, Poland Hungary, Slovenia, Estonia, Lithuania, Latvia, Bulgaria and Romania) in the latter two years of the study, but data for Bulgaria and Romania is not available in EU-SILC 2005.

For the study of the distribution of employment among households we use the method proposed by Gregg and Wadsworth (2008), who suggested to measure inequality in the distribution of work by comparing the actual workless household rate to the rate that would prevail, if non-employment was randomly and equally distributed in the population. To decompose changes in income inequality the decomposition proposed by Yun (2006) will be used.

#### Results:

Analysing the distribution of work among households we found that during the growth years the percentage of workless households declined, most importantly in the Baltic states and Poland. During the crisis years the percentage of workless households increased in the Baltic states, but was stable or even declined in the case of other countries. When work inequality is defined as the percentage of workless households compared to the percentage that would prevail if non-employment was randomly and evenly distributed we find that inequality in was increasing in Hungary and to a lesser extent in Slovenia in the first period, while in the case of Estonia and Latvia we saw a decline in inequality. During the 2007-2010 period inequality in the distribution of work increased in Latvia, while in Lithuania and Estonia the increase has been only marginal.

In the second step, we analysed the contribution of work intensity to income inequality by a decomposition method based on regression models. We analysed how work intensity affects the extent of inequality in income distribution along with other household characteristics (age of the head of household, education level, the household's structure). Results show that in case of CEE countries work intensity and also education of the household head are more important in shaping income distribution compared to age or household structure. The contribution of work intensity to total inequality is highest in the Baltic states and Bulgaria (19-20% of the level of inequality), while it is just 6% of overall inequality in Romania and just over 10% in Poland. Decomposing changes in income inequality showed that in all Baltic states change in the distribution of work among households (work intensity) contributed to change in income inequality during both periods.

## References:

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