

## The missing link between financial incentives to work and employment

It has been argued that the reduction of social protection for jobless people in Europe might have had something to do with the increase in employment during the years before the crisis (Atkinson, 2010; Cantillon & Vandenbroucke, 2014). At the same time, 'make work pay' policies generally increased the take-home pay of low wage workers (Immervoll, 2007; Marx, Marchal, & Nolan, 2013). These events might have changed the difference between in- and out-of-work incomes, thus affecting measures of financial work incentives. It is generally believed that this has an effect on the likelihood of taking up work; however, the causal link between changes in such tax-benefit policies and changes in employment status has not been generally established yet. Thus, in this paper we study whether changes in financial participation incentives over two consecutive years affected the likelihood of transitioning from unemployment to employment. We start studying this in Belgium during the two-year transitions between 2005 and 2008 and we are in the process of adding more subsequent years and two countries representing other EU welfare regimes<sup>1</sup>.

We use EU-SILC longitudinal data and proceed in two main steps. First, we operationalise financial participation incentives using Participation Tax Rates (PTRs) (see, e.g., Immervoll, Kleven, Kreiner, & Saez, 2007). PTRs measure the proportion of household earnings taken in tax and withdrawn benefits when a household member moves from unemployment to employment. Hourly gross wages in the hypothetical situation in which unemployed people work are predicted with a Heckman selection model. This model is based on wages and characteristics of employed people and controls for unobserved differences between employed and unemployed people. In relation to hours of work in this hypothetical situation, unemployed women are matched to their most likely hours using observed characteristics and a multinomial logistic regression. Unemployed men are assumed to work a fixed number of hours per week as there is a clear most common option for them. Once we have predicted gross earnings from employment for unemployed people, household (effective) taxes are obtained using the tax-benefit microsimulation model EUROMOD. This microsimulation model runs on the cross-sectional component of EU-SILC (plus some variables from the national versions of this survey) which does not allow us to follow PTRs of the same persons over time. To be able to follow these PTRs, we generate EUROMOD input files based on the longitudinal component of EU-SILC. Second, we study the effect of changes in PTRs on the likelihood of taking up work using a first differences logit model (following Bartels & Pestel, 2015).

A decomposition of the mean change in PTRs indicates that their declining mean out-of-work components (mainly unemployment benefits decreasing automatically or by policy change) tended to improve incentives over consecutive years, while mean in-work components to worsen them. During the crisis this was strongly reverted. Preliminary results show that a 10 percentage point increase in the PTR had an average marginal effect of -5 [-8, -2] percentage points on the probability of taking up work (95%, N=764). This effect is sizable taking into account that the probability of taking up work ranged between 6 [3,13] and 8 [5,12] per cent during the transitions analysed.

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<sup>1</sup> We plan to add countries representing a social-democratic and a liberal welfare regime. The samples of Scandinavian countries in the longitudinal component of EU-SILC are very small and long-term unemployment is comparatively low in these countries. In addition, Finland and Sweden lack important variables for predicting wages (respectively: work experience and whether people changed their jobs between declaring earnings and hours). In relation to a liberal welfare regime, it is not possible to add the UK since for this country EUROMOD does not use EU-SILC but the Family Resources Survey (FRS). Due to these limitations, we will also consider adding other countries such as The Netherlands and Ireland.