

Cohort size and youth labour-market outcomes: the role of measurement error

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Abstract

The effect of the size of the youth population upon its labour-market prospects is of critical importance, particularly in light of demographic trends which will cause the youth share of the population to fall in most countries in coming decades (United Nations, 2015). The cohort-crowding hypothesis suggests that this will be beneficial for young individuals (Easterlin, 1961; Welch, 1979). By contrast, the model of Shimer (2001) implies that smaller youth cohorts will have a detrimental impact as firms create fewer jobs in areas with smaller youth shares. While the bulk of the empirical literature has focused on earnings and generally found negative effects of cohort size (e.g. Welch, 1979; Wright, 1991; Brunello, 2010; Moffat and Roth, 2013; Garloff and Roth, 2016), the effect on unemployment and employment has received less attention and the empirical evidence is so far mixed (Korenman and Neumark, 2000; Shimer, 2001; Skans, 2005; Foote, 2007; Biagi and Lucifora, 2008; Garloff et al., 2013).

In this paper, we propose that the standard identification strategy that has been used in the cohort-size literature does not allow for consistent estimation of the effect of cohort crowding for young age groups. There are two reasons for this, both of which are based on the observation that, due to high rates of participation in education, the relative size of an age group represents a poor measure of age-specific labour supply among the young, the latter being the relevant variable for age-specific employment and unemployment outcomes. First, since the proportion of young people that choose to defer entry to the labour market in order to acquire education may be influenced by cohort size (Fertig et al., 2009), this complicates the interpretation of estimated effects of cohort size since they reflect effects on participation and, conditional on participation, on (un-)employment. More importantly, the use of the number of individuals in an age group as the basis for the cohort-size variable creates measurement error that the standard instrumental variables (IV) approach to estimating the effects of cohort-size is unable to overcome.

We assess this argument by estimating the effect of cohort size on employment and unemployment shares using data from the longitudinal European Union Statistics on Income and Living Conditions (EU-SILC) survey which provides us with data on 49 regions for the period 2005-2012. Our results show that the estimated cohort-size effects are very sensitive to the chosen age range of the sample. Our preferred results come from a sample of individuals aged 25-29 since most of that group has entered the labour market and therefore the decision to participate in the labour market as well as the degree of measurement error are less of a concern. Among this group, we find, in contradiction of the cohort-crowding hypothesis, a negative effect of cohort size on the unemployment share. These results are robust to a variety of changes in the sample and in the empirical specification. This finding is relevant because it casts doubt on the conclusions from previous studies, which have included young age groups, regarding the relationship between the size of the youth population and its members' employment and unemployment outcomes.