

## Understanding the Drivers of Low Income Transitions in Luxembourg

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In Luxembourg, household size and composition are associated with poverty (defined as low income). A salient fact of the Luxembourg cross-sectional poverty profile is that individuals living in households with children are at higher risk of low income than individuals living in households without children (Allegrezza et al, 2004; Berger et al, 2009). This situation is surprising given the generous Luxembourg welfare state (Bradshaw and Chzhen, 2009). Despite the availability of longitudinal data, little is known about the effect of household composition on low income transitions. Tackling this issue is precisely the aim of this paper. More specifically, we analyse the determinants of low income transitions – entry and persistence – in Luxembourg, focusing on the effect of household composition and of the presence of children. Using the first-order Markov model proposed by Cappellari and Jenkins (2004), we control for potential endogeneity to low income transitions due to both initial condition and non random attrition. Preliminary results show that the number of children present in the household significantly increases the probability of entering poverty, but has a lower impact on the probability of remaining poor. In addition, we find a high level of genuine state dependence (the extent to which experiencing low income in a given period increases the probability of experiencing low income in the subsequent period accounting for individual observed and unobserved heterogeneity). However, it should be noted that household composition might be an endogenous variable: for example the decision of having children and of participating to the labour market (and hence poverty) are likely to be simultaneous so that a positive association between low income and household composition (presence of children) does not necessarily mean that the link is causal. Attempts to tackle this potential endogeneity will be made by extending the model proposed by Cappellari and Jenkins using the methodology proposed by Rivers and Vuong (1988). Data used are those from the Luxembourg socioeconomic panel ‘Liewen zu Lëtzebuerg’ (PSELL3) which is the Luxembourg component of the European Union – Statistics on Income and Living Conditions (EU-SILC) running from 2003 to 2009.

**Key words:** low income dynamics, household composition, Luxembourg, Markov transitions models, attrition, initial condition

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