

A Simple Subgroup Decomposable Measure of Upward and Downward Income Mobility

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Recent evidence on the impact of the crisis on the European Union shows that changes in income inequality and poverty have been relatively small despite the macroeconomic heterogeneity of the recession across different economies (Jenkins et al., 2013). However, for a complete evaluation of individual well-being it is also crucial to analyze if there have been significant changes in the chances to scale up or lose ground in the income ladder.

Evidence for the US in the last two decades (Hacker et al. 2010; Dynan et al., 2012) shows that the prevalence of income losses grew significantly already before the crisis. In the European context, Ayala and Sastre (2008) analyze income mobility in five EU countries in the second half of the nineties. They find that mobility was significantly different by age cohorts, so that young household heads (together with individuals in single-parent households) experienced the greatest income fluctuations, even if the intensity of this instability varied greatly across countries. More recently, Van Kerm and Pi Alperin (2013) and Cantó and Ruiz (2015) underline that for some EU countries disposable incomes are particularly volatile. In the case of Spain, for instance, a very large part of the population lost more than 25% of their income from one year to the next, most than anywhere else in the EU. Moreover, one of the main determinants of the probability of suffering income losses, both in the US and Spain, was the individual's age cohort. The young and middle-aged cohorts are more likely to lose incomes compared to individuals from older cohorts. Finally, Aristei, D. and Perugini, C. (2015) have concluded that the levels and determinants of short-term mobility differ remarkably in the various institutional models across Europe, particularly regarding household composition, demographic attributes, education levels and job positions. In this setting, there is a clear need to analyze the nature of income mobility using some simple subgroup decomposable measure that clearly identifies the direction of the income change and takes into consideration its dimension.

In this paper, we propose a class of mobility measures that has clear advantages. First, its

simple structure facilitates comprehension and eases communication with policy makers without leaving any axiomatic properties aside. Secondly, its properties allow researchers to evaluate mobility across population subgroups in a coherent way. Thirdly, it is consistent with a simple but complete graphical device. As an empirical illustration of the proposed class of mobility measures we present an analysis of income mobility for different age cohorts in various EU countries during a decade. We use the EUSILC 4-year longitudinal microdata from 2004 up to 2015. Our preliminary results reveal that our class of measures is particularly useful to show (both cardinally and in a graph) how remarkably the level and dimension of upward and downward income mobility differ between age cohorts in the same country and for the same cohort across countries.

References:

- Aristei, D. and Perugini, C. (2015) The Drivers of Income Mobility in Europe, *Economic Systems*, 39 (2), 197–224
- Ayala, L. and Sastre, M. (2008) The structure of income mobility: empirical evidence from five UE countries, *Empirical Economics*, 35:451–473, DOI 10.1007/s00181-007-0172-z.
- Cantó, O. and Ruiz, D., (2015), The Contribution of Income Mobility to Economic Insecurity in the US and Spain during the Great Recession, in Thesia I. Garner, Kathleen S. Short (ed.) *Measurement of Poverty, Deprivation, and Economic Mobility (Research on Economic Inequality, Volume 23)* Emerald Group Publishing Limited, pp.109 - 152.
- Jenkins, S., Brandolini, A. Micklewright, J. and Nolan, B. (2013) The Great Recession and its consequences for household incomes in 21 countries, chapter 2 in Jenkins et al. (2013) *The Great Recession and the Distribution of Household Incomes*, Oxford University Press, Oxford.
- Van Kerm, P. and Pi Alperin, M.N. (2013) Inequality, growth and mobility: The intertemporal distribution of income in European countries 2003–2007, *Economic Modelling*, Elsevier, vol. 35(C), pages 931-939.