Anonymous and Non-Anonymous Growth Incidence Curves: Evidence from the United States over the Last 50 Years

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The distributional incidence of growth is traditionally analyzed through Growth Incidence Curves (GICs). These compare the mean income of distribution quantiles at two points in time. This concept ignores mobility between income ranks. It may be misleading from a social welfare perspective, if individual welfare depends on both initial and terminal income, and not everyone is a winner.

This paper studies Non-Anonymous Growth Incidence curves (NAGICs), in which mobility is fully taken into account. NAGICs quantify the average income growth rates of individuals occupying a specific income rank at the beginning of a given period, but not necessarily the same income rank by the end of the period. They can be downward (upward) sloping depending on whether poorer individuals experience higher (lower) average growth rates than richer individuals. In between, however, they can be of any shape.

We first show evidence that, somewhat surprisingly, empirical NAGICs based on PSID data in the United States are strongly downward sloping. Paradoxically, this occurs even during periods of increasing income inequality. Two factors mechanically create these negative slopes: measurement errors and life cycle effects. Measurement errors lead to an upward bias of income mobility measures. This mechanically attaches higher growth rates to individuals falsely identified as occupying lower income ranks at the beginning of time periods, and vice versa for individuals falsely identified as belonging to higher ranks. Also, life cycle effects are salient. Younger people generally occupy lower income ranks than older people, and their income grows faster.

More generally, the paper studies the properties of NAGICs. We decompose NAGICs into contributions of average income growth, changes in the shape of the income distribution, and rank mobility. We show that NAGICs can be either downward or upward sloping, depending not on inequality changes alone, as in the case of anonymous GICs, but also on mobility. Realistic values of mobility can thus counteract changes in income inequality, and lead to flat or downward sloping NAGICs, even in periods of increasing inequality. We then study the welfare interpretation of the different NAGIC cases.

We proceed with this decomposition, combining cross-sectional and longitudinal US income data. We find that for full-time workers, over periods of several years and for more than a decade, and after controlling for age, NAGICs are neither significantly upward nor downward sloping. This has major implications to how changes in economic inequality are interpreted.

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