

2020

36th IARIW General Conference

Paper Prepared for the 36th IARIW General Conference, Oslo, Norway, August 24-28, 2020

Intergenerational Education Mobility in India: Nonlinearity, and the Great Gatsby Curve

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Intergenerational mobility is a marker of the opportunity for a generation to move beyond its social and economic origins. This paper explores aspects of, and factors affecting intergenerational mobility in India by analysing the association between parent's and adult child's educational outcomes. Education is one of the major channels of transmission of economic and social opportunity from parents to children. It plays out through multiple direct and indirect mechanisms such as cultural aspects, teaching practices, propensity to invest in children, 'inheritability' of traits and endowments, etc. Moreover, we choose education as a lens to study intergenerational mobility as it is less prone to errors than income and occupational status in terms of measurement, is mostly available unlike data on earnings (especially in the context of a developing country), and life cycle biases are circumvented.

We employ the second round of Indian Human Development Survey (IHDS-II) (2011-12) and utilise the retrospective information provided for the educational attainment of the father/husband of the male/female head of the household to prepare a representative dataset consisting of 44,532 adult males (age group 25-64) with paired educational details of their respective fathers. The retrospective information helps to preclude the 'co-resident only' sample restriction and hence, truncation bias.

In section one, after resolving the sample into appropriate birth (year)-cohorts and subgroups, intergenerational elasticity estimates, and to a lesser extent, intergenerational correlations, reveal that there is still a high degree of intergenerational persistence in education, although it is decreasing steadily over time. The intergenerational mobility is higher among Brahmins and upper castes as compared to other backward castes, scheduled castes and scheduled tribes. Similarly, Hindus are held back by their circumstances to a much lower extent compared to the Muslims.

Given that different households have heterogeneous endowment levels, and hence experience varying resource and expenditure thresholds, it appears plausible that a parent's educational achievement explains the child's educational attainment differently for a child lying at the top of the children's conditional educational distribution compared to a child at the bottom of the distribution. Hence, there is merit and utility in investigating the intergenerational linkage across

the children's conditional schooling attainment distribution from a policy point of view. In section two, by analysing Education Transition Matrices and employing quantile regressions, we detect a non-linearity in the relationship between fathers' and sons' schooling outcomes along the conditional education distribution. The estimates underscore the fact that a son's circumstances typified by his father's educational outcome is the more important explanatory variable for the son's life chances at the bottom of the son's conditional education distribution than at the top. This is true for all subsamples. However, the mobility gap between the historically advantaged subgroups (urban population, upper castes, Hindus, etc.) and the others (rural population, lower castes, Muslim, etc.) increasingly widens along the middle and upper quantiles of the distribution.

It is relevant to understand the factors that play an important role in promoting or inhibiting the intergenerational education association. In light of this, we check if 'The Great Gatsby Curve' phenomenon, i.e. a negative relationship between income inequality and intergenerational mobility, works out in the case of - 'education inequality (during fathers' generation) – intergenerational education mobility' - in India in the third section of this paper. We augment the IHDS-II micro dataset with a few other macro datasets at the state-level to find statistically significant evidence corroborating 'The Great Gatsby Curve'. Other macro variables, economic growth and public expenditure in education, bear a positive association with education mobility, lending credence to their respective roles in levelling the playing field. Finally, we examine whether the structural break caused by the opening of the economy following the economic liberalization in 1991 had an effect in promoting intergenerational mobility.

To test the sensitivity of results, several robustness checks were conducted. First, instead of the measure 'years of schooling' as the educational outcome, we consider the outcome variables for both sons and fathers as – 'primary school completion', and 'secondary school completion' categorical variables in sections one and three. Second, to check whether the results are generalizable or are specific to father-son pairs, we explore the effects for mother-daughter and mother-son pairs. Third, to investigate heterogeneities due to geography, religion, and caste, we split the sample into subsamples of father-son pairs hailing from rural and urban regions; following Hinduism, Islam, and others; and belonging to upper castes, scheduled castes and tribes, and other backward castes, respectively. Fourth, in section three, we employ different measures of economic growth (per capita Gross State Domestic Product (GSDP) growth vs per capita GSDP at constant prices) and government expenditure on education (per capita expenditure on education as proportion of GSDP per capita vs government spending on education per child (5-17 child population)) to examine if the effects are sensitive to changes in definitions. All results lend credence to the effects established in the main estimates.