

Beyond Poverty Escapes – Social Mobility in the Global South: A Survey Article

Abstract: While social mobility in advanced economies has received extensive scholarly attention, crucial knowledge gaps remain about patterns and drivers of social mobility in the Global South. Addressing intergenerational income, educational and occupational mobility, we presently lack in-depth understanding of the multiple hurdles to more pronounced progress, which go beyond poverty escapes, and are captured by what we describe as moderate and large ascents. Similar knowledge gaps exist for large descents, which raise additional concerns in low income settings. Innovative research requires critical engagement with theory and with methodology and data challenges that deviate notably from those encountered in Western contexts.

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Social mobility – defined as “the ability to move between different levels in society or employment”¹ and e.g. “..... usually from a lower to a higher social class”² – is the hope of economic development and the mantra of a good society. There are disagreements about what constitutes social mobility, but there is broad agreement that in a just society all people should “have a roughly equal chance of success regardless of the economic status of the families to which they were born” (Sawhill and McLanahan 2006: 4).

Social mobility, studied so far mainly in OECD countries, with a preponderance of research covering the United Kingdom and the United States, has not been studied in anywhere near the same depth and extent in developing countries.³ While development research has added immensely to our understanding of movements out of (and into) poverty, and the fragility and often marginal nature of such ascents (Krishna 2010, 2013; Dercon 2005; Addison, Kanbur, and Hulme 2009), much less is known about the extent and empirical foundations of moderate or large individual ascents (e.g. Krishna 2010; Chetty, Hendren, Kline and Saez 2014).⁴ Studies of social mobility in developing countries are only beginning to emerge, instigated perhaps by concerns over rising inequality.

In our review of this emerging literature and its strong roots in traditions and methods of studying social mobility in the West (e.g. Torche 2014), we bring in perspectives from poverty measurement and dynamics when relevant: overall, we propose that existing social mobility research methods are only partly useful for analyzing trends, progress and setbacks and for identifying the factors that matter in poor country settings. Investments of two types will be required before social mobility studies in these contexts can hope to meet the exacting data and

other standards now expected in research covering advanced economies. The first is investments in high-quality, longitudinal data. A less obvious requirement is the need for more intellectual effort to assess methodological options and merit in lieu of contextual ground realities and prevailing data constraints. While waiting for these agendas to take shape, new methods that make use of more select data and have the potential to gain traction on trends and causes do, as discussed later, have considerable appeal.

This review essay has four parts. Part A takes stock of research to date and of where we are in relation to conceptualization, measurement, and analytical understanding of social mobility. We trace the roots of the emerging research addressing low-income settings to the sociology and economics literatures covering industrial countries: as Torche (2014; 620) remarks in her review of the literature on Latin America, methods and analytical approaches are “imported” from the industrial world. In Part B we take a deeper look at these methods and measures, pointing to their limitations when applied to poorer country settings. In Part C, we consider the evidence on and knowledge gaps about the drivers and impeters of social mobility. In Part D, we advance recommendations about a future research agenda

(A) Where we are in the study of social mobility: from richer to poorer countries

Pioneered by Sorokin’s (1927) monograph, studies of social mobility in Western countries took off in response to David Glass’s (1954) landmark study of intergenerational mobility in Great Britain. This tradition has produced a variety of methodological advances and options for comparing the achievements of parents and children (e.g Solon 1999; Black and Devereux 2011; Blanden 2013; Bevis and Barrett 2015). As discussed below, economists working on advanced economies prefer income or earnings data while sociologists have prioritized changes in

occupational status. The latter may be measured as a weighted average of the mean level of earnings and education for a given class of occupations.⁵ Because of the exacting data requirements, nationally representative research on intergenerational mobility in developing economies often focuses on educational or occupational mobility (Hertz et al 2007; Motiram and Singh 2012; Blanden 2013). Estimates can differ, depending on whether income, education or occupational status is the baseline criterion (see e.g. Beller and Hout 2006 and Laurison and Friedman 2016).

Mobility flows can be thought of as composed of two elements: the element of structural change affects the society in toto (including the transition from agrarian to industrial and more urban societies and occupations) and is referred to as structural mobility; the second element, relative mobility, captures the association between origins (parent's status or income) and destination (own status or income) of individuals or classes of individuals, net of structural mobility (Erikson and Goldthorpe 2002; Torche 2015).

The further a child has moved *ahead* of its parent, the higher is the resulting measurement of national (or structural) social mobility. In Bhattacharya and Mazumder's (2011) elegant measure, intergenerational relative mobility requires that the son's percentile rank in the income distribution of sons exceeds the father's rank in the income distribution of fathers.⁶ Countries like Norway, Sweden, Canada, and Germany are typically found to be more socially mobile compared, for instance, to the United States and United Kingdom (Jantii, et al. 2005). Among classes within societies, relative mobility has fluctuated over time, with the children of the poor

in the United States, for instance, performing better in earlier decades than in the 1990s (Mazumder and Acosta 2015).

However, problems of a conceptual and a practical nature are deeply implicated with measures of social mobility. Two kinds of problems have persisted. First, the conceptual basis of these measures is not universally accepted; there are issues of clarity and interpretation. Second, and as alluded to above, orthodox concepts and measures may not travel well to the very different contexts of poorer countries. Turning to data-related issues, income and occupational *status*, in particular, are hard to accurately measure. Consider incomes or earnings first. Single-period observations are often insufficient to capture an individual's income or earnings level: there is a consensus that multi-period, year on year data to approximate permanent (or expected) income, are better suited (Solon 1999; Black and Devereux 2011). Social mobility estimates may change substantially depending on whether single-year or a sequence of annual incomes is averaged (Mazumder 2005).⁷ The same could – but need not – happen when occupational status is measured using a ten year average of father's occupation (Mazumder and Costa 2015). Educational comparisons are more straightforward since a person's level of education typically remains proximately constant during adulthood.

Further, it is difficult to define and measure income precisely. The clarity, particularly with which income can be defined and measured in a setting where most people have a fixed paycheck starts falling apart in countries, with large agrarian sectors – where incomes may fluctuate dramatically from one year to the next - and with large informal economies. While scholars studying advanced economies have taken recourse to administrative records, including tax returns and social security data (e.g., Chetty et al. 2014 and Anand and Segal 2017), such

data are simply not available or have little coverage within poorer countries. Similarly, classifications of occupational status can be blurry-edged and tendentious; societies vary across time and place, and the prestige and pay scales of different occupations move upward and downward as a society transforms during the course of a (rapid) development process, making some comparisons across people of different generations or countries imprecise. While some “empirical analysis shows widely different results for class/occupational status mobility when compared with earnings/income mobility” (Torche 2015: 49), others report close alignment (Blanden 2013).

Another complication is that fathers and sons or mothers and daughters should be compared at a similar stage in their life cycles. This is pertinent to earnings and to occupational categories when career progress represents a genuine prospect. While valid, this concern should not be exaggerated. Many household surveys include retrospective questions about the father of the household head’s main occupation – ideally with fine-grained occupational categories – as well as his years of schooling.⁸ While recall does not constitute a challenge for the study of intergenerational educational and occupational mobility, similar questions for earnings are not viable. Apart from regional or small sample nationally representative studies, e.g. Bevis and Barrett (2015) and Lambert, Ravallion and van de Walle (2014), studies of intergenerational income or earnings mobility in developing countries will require waiting for the time it takes for panel data sets to be assembled.⁹ Apart from focusing on educational and occupational mobility and methods that are well equipped for studying social mobility in developing country settings, new methods and approaches need to be developed and tested.

Additional challenges are induced by instances of downward mobility. Not everyone in a society is moving up. While some individuals and groups move upward over time, others move downward simultaneously (Krishna 2010). Fine-grained data that enable researchers to discern which groups are moving up and which are moving down – and the prevalence and consequences of such marginal or large *descents* – along with comparisons of richer country settings – and ascertaining the reasons behind such descents, are urgently required, adding another agenda for the study of social mobility in low income settings.

Finally, there are the underlying causes or drivers of social mobility. What wider range of economic and social conditions make a difference, including state policies and the quality of health care and education? As Hout (2015: 28-29) pointed out in a review essay, “We are not intrinsically interested in the father or mother of the person who is part of our mobility study... Instead of focusing entirely on, say, father’s and son’s occupation or mother’s or daughter’s education, focusing on social origins [more broadly] invites us to characterize as fully as possible the conditions of early life” and to assess which among these conditions makes a substantial difference to social mobility. This focus on early life conditions is the subject of a vast literature within economics and is carefully reviewed by Heckman and Rosso (2014). Our main priority, here, will therefore be on factors and circumstances that matter beyond early childhood. The list of conditions and circumstances that make a potential difference include the attributes and aspirations of the person, the family, the neighborhood, the historical era, race, ancestry and citizenship. Unless data are assembled to study each of these factors in conjunction with others, the task of understanding social mobility will remain incomplete.

(B) Intergenerational mobility: measures, methods and their limitations

To study the three main outcomes of interest to social mobility scholars – comparisons of incomes, education levels and/or occupational status – alternative measures may be considered. In this section, we briefly review the main measures, commenting on their respective strengths and weaknesses with a special reference to developing nations.

Income

A workhorse in social mobility research in economics, the intergenerational elasticity of earnings (IGE), can be estimated using the following equation¹⁰:

$$y_1 = \alpha_1 y_0 + u_i \quad (1)$$

where y_0 is the natural log of parental earnings (often father) and y_1 is the corresponding category for offspring (often son). α_1 is the IGE. The sensitivity of α_1 estimates to measurement errors in parental earnings or income (attenuation bias) and to other estimation challenges have been extensively discussed by Solon (1999) and Black and Devereux (2011). As touched upon above, the main revision to earlier practice has been to replace single with sequential annual earning observations to secure the best possible proxy for ‘permanent income’. The following estimates, a selection from Blanden (2013), and presented in a condensed and simplified manner in Table 1, illustrate the range and inter-country variation in IGE estimates:

INSERT TABLE 1 here

The broad overall message, where a zero value would imply no relationship between parent and offspring outcomes, is that intergenerational mobility in Latin America is low, that the US performs poorly when compared with other industrial countries and that mobility in Scandinavia is high. The demanding data requirements and contextual attributes (more below) make earnings-based analysis of intergenerational mobility in poorer countries a particularly challenging task.¹¹

Two less demanding and therefore more popular variants of (1) are, firstly:

$$Y_1 = \beta_0 + \beta_1 Y_0 + u_i \quad (2)$$

where β_1 is the intergenerational regression coefficient (IGRC): in (2), Y_0 captures parental educational or occupational achievement while Y_1 is the corresponding category for offspring.¹²

The (often preferred) alternative, the intergenerational correlation coefficient (IGC), is given by:

$$\rho = \beta_1 \left(\frac{\sigma_0}{\sigma_1} \right) \quad (3)$$

where σ_0 and σ_1 are the standard deviations of occupational or educational achievements in the parent and child generation.¹³

While a rich literature has discussed estimation problems with IGE, the challenges that arise from estimating the IGRC or the IGC using the data that are available, and given the structure and patterns in data that may be particular to low income settings, are not well understood. We return to these knowledge shortfalls below.

Income & wage mobility: data and measurement pitfalls in low income settings

Convincing IGE estimates do, as noted, require earnings data of high quality and representative of the population, not just for one but for multiple years. In developing countries, such data simply do not exist, and efforts to assemble long-period datasets have only just been commenced. As also noted, father-son comparisons require observations at similar ages or career stages. The relevance of this timing argument depends on how work experience affects labour market outcomes: such experience effects may be limited in stagnant, rural areas and pronounced in ‘modern’ sector jobs. In addition, the turmoil of social, locational and rapid economic transitions can differentially affect the upward mobility prospects of diverse individuals.¹⁴

Given the prominence of rural residence and agriculture-based occupations, father-son comparisons may also require apportioning of (pooled) income across working individuals within agricultural households (Shahe Emran and Shilpi 2015).¹⁵ If parent generation incomes were rainfed agriculture-based, both timing and year of measurement could affect intergenerational comparisons. In addition, a not inconsiderable fraction of workers in low income settings earn income from multiple sources, through in-kind and cash, amplifying measurement challenges. There are also other challenges of a normative and conceptual nature.¹⁶

Hnatkovska, Lahiri and Paul’s (2012) study of intergenerational wage convergence across social groups in India raises another concern. While the number of households in each of the successive five National Sample Survey Organisation (NSSO) rounds that they rely on is about 120,000, the father-son pairs containing wage observations is limited to 7,000-9,000 individuals (at most

4,500 households) and thus a highly select sample in each round. Accordingly and in spite of the considerable conceptual appeal of e.g. Bhattacharya and Mazumder's (2011) measure, recall inaccuracy and data limitations restrict the scope for wage and income based study of intergenerational mobility in poorer country settings.

Educational mobility

Educational and occupational data give rise to fewer concerns. Once the child is an adult, it is usually straightforward to compare her education with that of her parent. Cross-sectional data combined with straightforward and sufficiently granular retrospective questions can yield the information required (Blanden 2013; Torche 2014). Years of schooling is often preferred, easy to use and frequently available from large-scale surveys.

A wellknown drawback for poorer country settings is that years of schooling is an inaccurate measure of human capital formation (e.g. Hanushek and Woessman 2009). This matters since much could happen to educational quality - and unevenly across the school types children from well and less well to do households attend - from one generation to the next. As with Chetty et al's (2014) reporting of IGE sensitivity to low or zero income observations in the United States, more in depth understanding of how the structure of data - shaped by the ground realities in low-income settings - may affect the regression based social mobility estimates represented by the IGRC and the IGC is crucial. An interesting example is Hertz, Jayasundera, Piraino, Selcuk, Smith and Verashchagina's (2007) finding for rural Ethiopia (using 1994 data) where progress from a low base - where children of unschooled parents advanced to the primary level - helps

explain Ethiopia's top ranking among the 42 countries studied. An IGC value of 0.10 put Ethiopia well ahead of high educational mobility nations like Denmark (0.30) and Finland (0.33).

Aside from problems with interpretation and questionmarks about the properties of the measures used, the data requirements of a reliable measurement of intergenerational educational mobility include a comprehensive data set, statistically representative of all parents (of a certain age group) and their children. In practice, especially when parents and children live far apart, matching up parent-child pairs becomes a major logistical hurdle. Often, scholars avoid this hurdle by restricting their analysis to co-resident father-son pairs (e.g., Hnatkowska et al 2012; 2013). However, as Azam and Bhatt's (2015) analysis using the Indian Human Development Survey (round I) suggests, this coresidence restriction cuts feasible father-son comparisons by about two thirds, and biases the results. Shahe Emran, Greene and Shilpi (2017) carefully consider the implications of intergenerational information being available only for coresident parent-offspring pairs. While IGRC-based analysis using coresident data substantially inflates mobility estimates, the IGC bias is less pronounced.¹⁷

Hertz et al.'s (2007) analysis of data from 42 countries found global verdicts about educational mobility over time to depend on whether the IGC or the IGRC was used: while the IGRC suggested reduced persistence (and increased mobility), the IGC pointed towards a status quo.¹⁸ Table 2 report IGC based estimates of intergenerational educational mobility for the same countries as in Table 1. For countries where estimates are available, the ranking for education is identical to the IGE estimates ranking in Table 1.

INSERT TABLE 2 here

Educational mobility can also be captured by studying convergence in educational (or occupational) progress across social groups. Lacking information on years of education, Hnatkovska et al. (2013) use educational categories and merge secondary and higher education into a single category. Given the limited progress into tertiary education for individuals from rural and minority backgrounds, this accentuates the similarity in gains in education by the more advantaged groups in society and historically disadvantaged groups (Scheduled castes and Scheduled tribes) in India.¹⁹ The analytical categories also treat educational progress from ‘literate below primary’ to ‘primary’ on par with improvements from ‘primary’ to ‘middle’. These categories may thus inflate convergence by construction since minority parents are less educated at the outset.

Occupational mobility

For the occupational rankings that social mobility analysis rests on, historians and others prefer the Armstrong classification system, which assigns a person to one out of five social classes and occupational categories (Armstrong 1972; Long 2013: 7-8), thus tackling comparability concerns at the outset. Two canonical contributions in the sociology literature, which facilitate international comparisons, are Erikson, Goldthorpe and Portocarero (1979) and Ganzeboom and Treiman (1996). While the former is based on class categories, the latter draws on the ILO’s International Classification of Occupation (ISCO88) (Table 3).²⁰

INSERT TABLE 3 here

Motiram and Singh (2012) use the official National Classification of Occupations for India (2004), with local adjustments to the ILO’s occupational categories and compress these into four.

With data from IHDS Round 1, they find high intergenerational persistence, especially for SCs. SCs are also less likely to experience what Iversen, Krishna and Sen (2016) define as large intergenerational ascents: these are ascents from agricultural and other manual labour to top tier jobs. SCs are also more likely to experience large descents (from top to bottom tier jobs). Using IHDS 2, Iversen et al. (2016) find surprising similarities between the mobility constraining effects of hukou in China and caste in India.

Problems of definition and interpretation have, along with data gaps, beset each of these investigations. A major but avoidable constraint – evident in the five country Africa comparisons in Bossuroy and Cogneau (2013) - is the lack of a sufficiently granular occupational classification for the parent generation.²¹ this limits the scope of their otherwise interesting analysis to a narrow focus on farm to non-farm occupational shifts.

Table 4 provides a summary of a selection of recent studies of intergenerational mobility in developing countries that have used nationally representative data-sets: as indicated and for reasons explained above, studies of educational and occupational mobility dominate. Along with sample size, we report on the method for measuring social mobility used along with a synthesis of the main findings: we also flag methodological and other concerns. On the latter, the coresidence bias is a common concern, but as Shahe Emran, Greene and Shilpi (2017) make clear, the bias is less pronounced for IGC-based social mobility estimates. What main lessons do Table 4 and our preceding discussion convey? The first lesson is that estimates are highly sensitive to how variables are constructed and to the method used: another key insight, partly a reflection of this sensitivity, is that findings for the same country and for the same type of

mobility quite often point in different directions. A third lesson is that some of the most widely used social mobility measures may not deliver transparent and meaningful results: Hertz et al.s (2007) 0.10 IGC estimate for Ethiopia is, perhaps, the most compelling example. Paying more attention to basics and to the reporting of detailed descriptive statistics, as in Maitra and Sharma (2009), is therefore appropriate.

INSERT TABLE 4 HERE

The case for better, more robust and more transparent measures

The above points to the need for social mobility measures that are more robust to developing country contextual features. A number of alternatives are available. Torche (2013) and Bussoroy and Cogneau (2013) note how, for instance, odds ratios are simple to derive, robust to the econometric concerns that plague the IGRC and IGC and provide sharp insights about opportunities for progress from modest origins to desirable destinations. Other social mobility measures, with a few applications in poorer country settings, are sibling correlations (Shahe Emran and Shilpi 2015) and the Altham statistic (Azam 2015). Given the experiences with social mobility research covering poorer countries so far, the properties, strengths and possible weaknesses of such alternative measures are in need of careful scholarly scrutiny. Another alternative, focusing on short term rather than intergenerational progress or setbacks is to use earnings or income data from household panel surveys (Chatterjee, Murgai and Rama 2016). Using a synthetic panel, Dang and Lanjouw (2015) consider mobility between three ‘classes’ – ‘the poor’, ‘the vulnerable’ and ‘the middle class’ – covering different (and short) time periods and by social identity. Once meaningful class demarcations have been fixed – and there are weaknesses – with middle class defined as about double the poverty line - one can define moderate and large ascents (and descents) and study the attributes of households and locations

that facilitated up- (and downward) mobility. When compared to much of the above, this is compellingly transparent.

Another line of inquiry involves collecting retrospective information on asset holdings (e.g., Krishna 2010). While this may yield results that are less precise and less fine-grained than those based on measurements of income, for investigating some questions about intergenerational change, we will contend, such methods may be among the best that are currently available. We return to this below.

(C) Drivers of Mobility

A common finding of the empirical literature discussed in the previous section is that the child's income, education or place in the occupational status ladder is strongly correlated with the income, education or occupational status of his or her parents. How does this transmission occur? Is it through the productive assets that parents leave for their children? Is it through the lack of parental investment in the child's education, possibly related to the lack of resources? In such a case, why cannot poor parents borrow to finance their children's education, even when the returns to the child's human capital are large enough to justify such an investment? Is the intergenerational persistence of inequality related to social and cultural factors such as aspiration failures and the lack of role models and social connections among the poor? Or is it due neighbourhood effects relating to lack of good schools and absence of social networks among particular communities?

In the literature on social mobility, the following factors have been identified as determinants of intergenerational persistence in inequality: i) parental investment in the education and human

capital of their children, ii) parental endowments and income, iii) the returns to children's human capital, iv) credit constraints, v) peer influence and role model effects, and vi) geographical factors. We discuss each of these factors in turn.

Human Capital and Parental Endowments

In economics, the benchmark model of intergenerational mobility is Becker and Tomes (1979), further developed by Solon (1999 and 2004). In this model, parents decide how much to consume out of their income and how much to invest in their children's human capital. As Durlauf (2006) observes, a key driver of intergenerational persistence in these models is the effect of low income upon investment in the education of children. Parental investment is also increasing in the returns to human capital investment – that is, parents invest more in their children's education when the pay-off is higher – as well as in the degree of altruism of the parent – that is, the value that the parent puts in the future earnings of the child. Further, social mobility is a function of the strength of the intergenerational transmission of the parent's endowments to the child's endowments, where these endowments could be genetic factors as well as non-financial capital such as ethnic or social capital. For example, cultural values that parents pass on to their children that are not correlated with parental income may explain why children of low earning immigrants achieve high earnings.

Several empirical micro studies find a significant association between parental family background, particularly parental associations and family income, and investment in the human capital of children in developing countries (Strauss and Thomas 1998, 2008, Behrman and Knowles 1999 and Orazem and King 2008).²² However, a recent study using cross-national

cohort panel in Ethiopia, India, Peru and Vietnam that follows children from 6 to 18 months to about 8 years does not find a large effect of parental schooling and consumption (as a proxy for income) on reducing poverty and inequality in the human capital accumulated in the next generation (Behrman et al. 2017). This may be due to the lack of efficacy of human capital investment due to the low quality of schooling in these countries or due to credit and other constraints that operate in the parental environment that limit the investment that they can make in their children's human capital, which we discuss next.

Credit Constraints

Banerjee and Newman (1993) provide a model that shows that capital market imperfections constrain the amount poor households can borrow, restricting their ability in to move into occupations that require high initial investment. Mookherjee and Ray (2010) show that in a model with large entry costs (in terms of educational investment and training) to higher end occupations, intergenerational inequality can persist and lock the children of poor parents out of “prized” occupations (doctors, engineers, lawyers, etc.) that require large human capital investments for entry. Research in Western contexts has examined, but not generated strong evidence in support of the credit constraint hypothesis (Grawe 2004; Solon 2004; Mazumdar 2005). This lack of support is less plausible in low income settings. Among the few studies with a credible strategy for identifying the impacts of relaxing credit constraints – albeit with a poverty reduction focus - is Burgess and Pande (2005), who find that state-led rural branch expansion in India led to significant reduction in rural poverty.

Peer Influence and Role Model Effects

Several studies have emphasized how peer influence and role models, including via the mediation of aspiration formation affect social mobility. Appadurai (2004: 68-70) notes how better off individuals tend to ‘have a more complex experience of the relationship between a wide range of ends and means, because they have a bigger stock of available experiences... Poorer members have a more brittle horizon of aspirations... and a thinner, weaker sense of pathways.’²³ In the same vein, Ray (2006) suggests that ‘Individual desires and standards of behavior are often defined by experiences and observation. In Dalton et al.’s (2014) model, poverty imposes additional external constraints on the poor by exacerbating the adverse effects of the behavioral bias in setting aspirations. This leads to a self-fulfilling equilibrium where low aspirations lead to low effort, which in turn reinforces low aspirations, generating persistent intergenerational inequality.’²⁴ Pasquier-Doumer and Brandon (2015) find persuasive evidence of poverty influencing aspiration formation in a cohort of children aged 8, 12 and 15 years in Peru where high aspirations among children positively affect their language acquisition. This suggests that aspirations failure provides an additional channel for intergenerational inequality by exacerbating the effect of socio-economic background on educational achievement.

A person’s behavior is conditioned by the experiences of other individuals in the cognitive neighbourhood. These experiences may be all-important. For first-generation learners, ascent opportunities depend, on information²⁵ but also, as Krishna (2010) carefully documents, on contacts and dedicated mentors who can advise, provide information and offer sustained (psychological and) other support when this is required, indicating a sustained and

comprehensive role for social networks. An innovative example of such integrated supports is Jensen's (2012) bundling of job vacancy information with recruitment services with the intent of facilitating entry into outsourcing jobs for women from rural north India. Krishnan and Krutikova (2013) find that a long-term intervention of an NGO in targeting non-cognitive skills among children and adolescents from poor backgrounds drawn from slums in Mumbai, led to increases in self-esteem as well as success in school-leaving examinations and improved initial labour market outcomes for these children and adolescents.

Inequality and upward mobility: rural-urban and other spatial contrasts

While most research suggests that inequality impedes social mobility (e.g. Corak 2006; Blanden 2013; Chetty et al 2014), Deaton's (2013) idea of inequality as a transformative catalyst – where others imitate local individuals who were able to move ahead – warrants consideration. While social learning among farmers can be strong, and amplified by their human capital endowments (Foster and Rosenzweig 1996), such learning involves tweaks to cultivation related practices in locations and within production systems that farmers are deeply familiar with. In contrast, the moderate or large educational or occupational ascents of interest here, involve *first generation pathways* that are completely unfamiliar to most. For such ascents, the opening question is how a person gets on the ladder to a software engineer education and then perseveres for the time completion takes. In rural, low income settings, the hurdles to imitating successful, but unfamiliar strategies – and where education is a prerequisite for upper ladder career prospects - are multiple and formidable. In short, the particulars of the economic activities and educational choices of those who moved ahead is likely to strongly affect the prospects for the positive externalities envisaged by Deaton (2013).

Could inequality in urban settings and neighbourhoods be more catalytic? For the son of a manual or agricultural labourer in India, the probability of becoming a professional and thus of a large (occupational) ascent is 0.032 in an average rural setting and 0.083 – 2.6 times higher - in an average urban setting (Iversen et al. 2016). A key issue, therefore, is how such spatial and locational contrasts can be explained. While US-based research offers little optimism about internal dynamism within low-income, urban neighbourhoods, developing country cities may be different in how selection into urban residence works and in the response to credit, information, education and job opportunity access: a possibly sharp contrast to US inner cities is the fierce competition for social status - with a distinct materialist core - among communities and social groups in South Asia.

Another factor, closely related to neighborhood and role models/information is geographic location. Within richer countries, specific cities and abutting regions have grown much richer than others – and these inequalities are growing very quickly (Florida 2017). The particulars of the economic activities and educational choices of those who moved ahead is likely to strongly affect the prospects for the positive externalities that Deaton (2013) envisages, which squares with Chetty et al.'s (2014) large ascent observations in the United States and Krishna's (2010) parallel observations in India.²⁶ Using data from India and 'neighbourhood' fixed effects, Shahe Emran and Shilpi (2015) find support for the 'location matters' hypothesis and report large neighbourhood effects and compelling rural-urban contrasts.

Such studies, which conclude that ‘location matters’, need to be leavened, however, with other choice-set constraints, agroecological conditions (e.g. Palmer-Jones and Sen 2003) and isolation and remoteness (Krishna 2017); other granular contextual attributes may impede (or alternatively, assist) mobility in low income settings (Li and Rama 2015). For example, Munshi (2011) shows that newly established community based networks in the Indian diamond industry allowed for relatively high intergenerational mobility by improving information flows and reducing commitment problems associated with risky business activity.

Large versus small changes

While small changes are common and more easily picked up in large-sample studies, including those considering less-than intergenerational periods, much less is known about moderate or large ascents (e.g. Krishna 2010; Chetty, Hendren, Kline and Saez 2014; Clark 2014; Iversen et al. 2016), by individuals or households and the empirical underpinnings of such more fundamental progress. The questions of interest include: how common is it for offspring of a manual labourer to become a business executive or a medical doctor? Do such moderate or large ascent prospects vary with location or by identity? Further, what are the prospects for holding on to a higher echelon level on the occupational ladder from one generation to the next once a white collar job has been secured?

To illustrate what is already known about stakes and challenges, consider the following research snapshots from a sample of 20 villages in rural Karnataka, India, reported by Krishna (2010). During a 10 year period, and from a total population of about 60,000 people, 397 individuals graduated from high school. Two became engineers, four became lawyers and one became a

medical doctor. While more people made it into middle level occupations which include respectable careers as school teachers, police constables or army soldiers, the small number of large ascents is a grim predicament. Nationally representative data from the Indian Human Development Survey (IHDS 2) tell a similar story (Iversen et al. 2016): occupational persistence is considerably stronger in rural areas and large ascent prospects much higher in cities and among individuals from forward castes. Location may make a bigger difference than was previously thought in influencing individual's starting and ending positions. A growing body of literature points to the widening rift between rural and urban areas.

While the large scale Moving to Opportunity experiments in the United States added understanding about the impacts of neighbourhoods, the links to long term economic outcomes – mobility included – were tenuous in early studies (e.g. Kling, Liebman and Katz 2007). In contrast, Chetty, Hendren and Katz (2016) find long term effects on college completion rates and earnings that increase with the duration of exposure to a better neighbourhood during childhood: the gains from moving are highest at age 9 (the first year covered by the data) and then gradually decline and reach zero by age 22. Another crucial insight here relates to how the difficult challenge of identifying the effects of a new neighbourhood and environment can be tackled through sibling comparisons and by exploiting the variation in exposure duration during critical childhood or youth years.

Paralleling the distinction between large and small ascents – to which the literature has paid relatively little attention so far – is the distinction between upward and downward mobility. Identifying drivers and inhibitors more comprehensively requires paying attention to both directions of change. Conceptually, the extent of social mobility that an individual experiences is

the resultant effect of two sets of forces – those with a buoyant effect, raising the individual upward, and those with a depressing effect, leading to reversals of fortune. It is the balance of these effects that determines whether the individual will move up (or down) and by how much. Large descents have been reported for China and India (e.g. Xu et al. 2003; Wu and Treiman 2007; Iversen et al. 2016). For India, Iversen et al. (2016) also find large occupational descents to be much more prevalent than e.g. in Victorian Britain: such descents are also more common among individuals of minority background. The assumption that holding on to a higher echelon level on the occupational ladder from one generation to the next is straightforward once a white collar job has been secured is thus not supported by the data. While this resonates with insights from the study of poverty dynamics, it also matters for thinking about affirmative action programmes: if the likelihood of failure to sustain higher educational or occupational achievements correlates strongly with social identity, the capacity of e.g. a quota system to support social transformations may be harder than expected and recognised so far.

(D) Looking ahead: needs and opportunities

We end the review with a discussion of what we see as the directions for future research on social mobility in the Global South.

New methods and questions

As noted earlier, the inter-generational income elasticity (IGE) is an empirical workhorse in social mobility research covering the West. The IGE and its more suitable variants, for developing country contexts and data, may provide less stable and more misleading estimates than acknowledged so far (e.g. Iversen 2017). Other social mobility measures have the potential

to improve understanding of occupational or educational intergenerational mobility including the Altham statistic (Azam 2015), the Lieberman (1975) net difference index of occupational mobility (e.g. Li and Heath 2016)) and sibling correlations (Bjorklund, Lindahl and Lindquist 2010; Shahe Emran and Shilpi (2015). While these measures may be less sensitive to data and data patterns typical of low income settings, more intellectual effort should be invested to explore their properties and suitability.

There are valuable lessons from social mobility research in the West. One alternative is to consider variation in intergenerational (occupational) mobility across the distribution of offspring education, where a much discussed finding for the US (and elsewhere) is of college education as ‘the great leveller’ (Torche 2011). Intergenerational occupational persistence is strong for less educated offspring and almost disappears for those with BA degrees. An innovative take on moderate and large occupational ascent prospects – in a given developing country – is to look for changes in intergenerational occupational mobility across time: is occupational choice persistent at the bottom of the educational ladder? Are there educational thresholds beyond which persistence begins to weaken? Do these thresholds change over time – if so how – and why? To what extent does persistence or thresholds vary with minority background or by gender? Here, we believe, are seeds to novel and meaningful ways of understanding women’s progress (or lack thereof) in low-income settings.

Causes of Social Mobility

For policymakers and others concerned with finding viable means to reverse or ameliorate rising inequality, the greatest research need is for identifying the drivers and inhibitors of social

mobility. However, “the attribution of causality – to what extent and through which mechanisms family economic standing (and other factors, our addition) affects children’s socioeconomic attainments – is a challenging task, which researchers are only beginning to consider” (Torche 2015: 38). The rich variety of factors hypothesized to affect mobility, discussed above, together explain no more than one-quarter of the observed intergenerational correlation in earnings. Hence, “The transmission of economic success across generations remains something of a black box’ (Bowles, Gintis and Groves 2005: 3). Notably, there is scope to build better – and more complete – bodies of explanation for social mobility.

Research in the Global South does, as noted, need to provide new and sharper evidence on the correlates of social mobility: this precedes the need to tackle the harder task of identifying causes. Data and methodological approaches that facilitate causal inference could combine structural models (as in Heckman and Mosso 2014), experimental methods that test the role of aspirations (and role models) in personal development (as in Ghosal et al. 2015), combination interventions as in Jensen (2012) and longitudinal studies that track the long term effects of interventions during childhood (see Attanasio 2015). The variation in exposure to new neighbourhoods and environments across siblings provides another promising avenue for causal identification (Chetty, Hendren and Katz 2016).

Panel data sets of the sophistication required for analysing social mobility in the Global South are unlikely to become available soon. Two remedial strategies are, first, to use shorter panels, drawing on lessons from the study of poverty dynamics to obtain clues about moderate and large ascents (and descents) not from one generation to the next but at the level of households as in

Dang and Lanjouw (2015). A second strategy is to introduce new methods of assessing the extent and drivers of social mobility. For instance, the composition and social origins of a country's CEOs or those of its legislative leaders; examining intake in its most prestigious educational institutions; comparative examinations of the destinations reached by age-specific cohorts from diverse source communities and so forth. Krishna (2014) looks within engineering colleges in India that are of different quality levels, identifying the social origins of students who secure admissions in each quality category. Similarly, Krishna and Brihmadessam (2006) study the social origins and educational pathways of newly recruited software engineers in three carefully selected Bangalore firms. By examining the characteristics of individuals who are able to reach these desirable destinations, these inquiries advance the frontiers of knowledge about the scope and extent of social mobility in these contexts and the factors that matter.

References

- Addison, T., D. Hulme and R. Kanbur. (2009). Poverty Dynamics: Measurement and Understanding from an Interdisciplinary Perspective, in Addison, Hulme, and Kanbur, eds., *Poverty Dynamics: Interdisciplinary Perspectives*, pp. 3-26. Oxford, UK: Oxford University Press.
- Anand, S. and P. Segal. (2017). Who are the Global Top 1%?, *World Development*, 95: 111-26.
- Appadurai, A. (2004). 'The Capacity to Aspire: Culture and the Terms of Recognition', in V. Rao and M. Walton, eds., *Culture and Public Action: A Cross-Disciplinary Dialogue on Development Policy*, pp. 59-84. Palo Alto, CA: Stanford University Press.
- Armstrong, W. A. (1972). The use of information about occupation, in E. A. Wrigley (ed.): Nineteenth Century Society, pp. 191-310. Cambridge: *Cambridge University Press*,
- Attanasio, O. (2015). The Determinants of Human Capital Formation During the Early Years of Life: Theory, Measurement, Policies. Presidential Address to European Economic Association.
- Azam, M. (2015). Intergenerational Occupational Mobility among Men in India. *Journal of Development Studies*, 51 (10):1389-1408.
- Azam, M. and V. Bhatt (2015). Like Father, Like Son? Intergenerational Education Mobility in India. *Demography* 52 (6): 1929-59.
- Banerjee, A. and A. Newman (1993). Occupational Choice and the Process of Development. *Journal of Political Economy*, 101(2): 274-98.
- Becker, G. S. and N. Tomes (1979). An equilibrium theory of the distribution of income and intergenerational mobility. *Journal of Political Economy*, 87: 1153-89.
- Behrman, J. and J. Knowles (1999). Household Income and Child Schooling in Vietnam. *World Bank Research Observer*. Vol. 13, No. 2, pp. 211-256.
- Behrman, J., W. Schott, L. Thuc, S. Mani, L. Fernald, B. Crookston, A. Stein and K. Dearden (2017). Intergenerational Transmission of Poverty and Inequality: Parental Resources and Schooling Attainment and Children's Human Capital in Ethiopia, India, Peru and Vietnam. *Economic Development and Cultural Change*, forthcoming.
- Beller, E. and M. Hout. (2006). Intergenerational Social Mobility: The United States in Comparative Perspective. *The Future of Children*, 16 (2): 19-36.
- Bevis, L. and C. Barrett (2015). Decomposing Intergenerational Income Elasticity: The Gender-Differentiated Contribution of Capital Transmission in Rural Philippines. *World Development*. 74: 233-252.
- Bhattacharya, D. and B. Mazumder. (2011). A nonparametric analysis of black-white differences in intergenerational income mobility in the United States. *Quantitative Economics* 2: 335-79.
- Bjorklund, A., L. Lindahl, and M. Lindquist (2010). What more than parental income, education and occupation? An exploration of what Swedish siblings get from their parents. *B.E. Journal of Economic Analysis & Policy* 10(1) (Contributions), Article 102.

- Black, S. E. and P. Devereux (2011). Recent Developments in Intergenerational Mobility. in O. Ashenfelter & D. Card (Eds.). *Handbook of labor economics* pp. (1487–1541, 1st ed., Vol. 4). Elsevier.
- Blanden, J. (2009). How much can we learn from international comparisons of intergenerational mobility? Paper no. CEEDP0111 (Centre for the Economics of Education, LSE).
- Blanden, J. (2013). Cross-country rankings in intergenerational mobility: A comparison of approaches from Economics and Sociology. *Journal of Economic Surveys* 27(1): 38-73.
- Blume, L., W. A. Brock, S. N. Durlauf and Y. M. Ioannides (2011). Identification of Social Interactions. in Benhabib, J., A. Bisin and M. Jackson (eds): *Handbook of Social Economics*, Volume 1. Chapter 18. Elsevier Science Publishers.
- Bowles, S. and H. Gintis (2002). The Inheritance of Inequality. *Journal of Economic Perspectives* 16(3): 3-30.
- Bowles, S., H. Gintis, and M. O. Groves (2005). Introduction. in S. Bowles, H. Gintis, and M. O. Groves (eds). *Unequal Chances: Family Background and Economic Success*, pp. 1-22. Princeton: Princeton University Press.
- Burgess, R. and R. Pande (2005). Do Rural Banks Matter? Evidence from the Indian Social Banking Experiment. *American Economic Review* 95(3): 780-95.
- Chatterjee, U., R. Murgai and M. Rama (2016). Pathways to Reducing Poverty and Sharing Prosperity in India : Lessons from the Last Two Decades. Working Paper. World Bank.
- Chetty, R., N. Hendren, P. Cline and E. Saez (2014). Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States. *Quarterly Journal of Economics*. doi: 10.1093/qje/qju022.
- Chetty, R., N. Hendren and L. F. Katz (2016). The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment. *American Economic Review* 106(4): 855–902.
- Clark, G. (2014). The Son also Rises: Surnames and the History of Social Mobility. *Princeton University Press*.
- Clark, G. and N. Cummins (2014). Inequality and social mobility in the Era of the Industrial Revolution. in: Floud, R, J. Humphries and P. Johnson (eds.) *The Cambridge Economic History of Modern Britain. Volume 1: Industrialisation, 1700–1870*. (pp 211-36). Cambridge, UK: Cambridge University Press.
- Corak, M. (2006). Do poor children become poor adults? Lessons from a cross-country comparison of generational earnings mobility. in: J. Creedy and G. Kalb ed., *Research on Economic Inequality*, Vol. XIII (Amsterdam) pp. 143-188.
- Corak, M., M. J. Lindquist and B. Mazumder (2016). A Comparison of Upward and Downward Intergenerational Mobility in Canada, Sweden and the United States. *Labour Economics*, 30:185-200.
- Dalton, P. S., S. Gosal and A. Mani (2016). Poverty and Aspirations Failure. *Economic Journal*, 126 (590): 165-88.

Dang, Hai-anh and P. Lanjouw (2015). Poverty Dynamics in India between 2004 and 2012: Insights from Longitudinal Analysis using Synthetic Panel Data. Policy Research Working Paper 7270, World Bank, Washington DC.

Deaton, A. (2013). *The Great Escape – Health, Wealth and the Origins of Inequality*. Princeton University Press.

Dercon, S. (2005). Risk, Insurance, and Poverty: A Review. in S. Dercon, ed., *Insurance against Poverty*, pp. 9-37. Oxford: Oxford University Press.

Durlauf, S. N. (2006). Groups, Social Influences and Inequality in Bowles, S., S. N. Durlauf and K. Hoff (eds.). *Poverty Traps*. Princeton University Press.

ECLAC - Economic Commission for Latin America and the Caribbean (2007). Social Panorama of Latin America. United Nations Publications.

Erikson, R. and J. H. Goldthorpe (1992). *The Constant Flux: A Study of Class Mobility in Industrial Societies*. Oxford: Clarendon Press.

Erikson, R. and J. H. Goldthorpe (2002). Intergenerational Inequality: A Sociological Perspective. *Journal of Economic Perspectives*. 16(3): 31-44.

Ferrie, J. P. (2005). History lessons: The end of American exceptionalism? Mobility in the United States since 1850. *Journal of Economic Perspectives* 19: 199-215.

Ganzeboom, H. G. and D. J. Treiman (1996). Internationally Comparable Measures of Occupational Status for the 1988 International Standard Classification of Occupations. *Social Science Research*, 25(3): 201-39.

Genicot, G. and D. Ray (2017). Aspirations and Inequality. *Econometrica*, 85(2):489-519.

Ghosal, S., A. Mani, S. Jana, S. Roy and S. Mitra (2015). Sex Workers, Stigma and Self-Belief: Evidence from a Psychological Training Program in India,-CAGE Working Paper No.152, Warwick University.

Glass, D. V. (1954). *Social Mobility in Britain*. Routledge.

Goldthorpe, J. H. (1985). On Economic Development and Social Mobility. *The British Journal of Sociology*, 36 (4): 549-73.

Grawe, N. D. (2004). Reconsidering the use of nonlinearities in intergenerational earnings mobility as a test for credit constraints. *Journal of Human Resources* 39: 813-827.

Hanushek, E. A, and L. Woessmann (2008). The Role of Cognitive Skills in Economic Development. *Journal of Economic Literature*, 46(3): 607-68.

Heckman, J. and S. Mosso (2014). The Economics of Human Development and Social Mobility, NBER Working Paper no. 19925.

Hertz, T., T. Jayasundera, P. Piraino, S. Selcuk, N. Smith and A. Verashchagina (2007). The inheritance of educational inequality: International comparisons and fifty-year trends. *The B.E. Journal of Economic Analysis & Policy* 7, Article 10.

- Hnatkovska, V., A. Lahiri, and S. B. Paul (2012). Castes and Labor Mobility. *American Economic Journal: Applied Economics*, 4(2): 274-307.
- Hnatkovska, V., A. Lahiri, and S. B. Paul (2013). Breaking the Caste Barrier: Intergenerational Mobility in India. *Journal of Human Resources*, 48 (2): 435-73.
- Hout, M. (2015). A Summary of What We Know about Social Mobility. *Annals*, 657: 27-36.)
- Iversen, V., A. Krishna and K. Sen (2016). 'Rags to Riches? Intergenerational occupational mobility in India. Global Development Institute Working Paper 2016-004, University of Manchester.
- Iversen, V. (2017). On the measurement of social mobility in developing countries. mimeo.
- Jantti, M., B. Bratsberg, K. Roed, O. Raaum, R. Naylor, E. Osterbacka, A. Bjorklund and T. Eriksson. (2005). American Exceptionalism in a New Light: A Comparison of Intergenerational Earnings Mobility in the Nordic Countries, the United Kingdom, and the United States. Available at papers.ssrn.com/sol3/papers.cfm?abstract_id=878675.
- Jalan, J. and R. Murgai (2008). Inter-generational Mobility in Education in India. mimeo. Available at www.isid.ac.in/~pu/conference/dec_08_conf/.../RinkuMurgai.doc.
- Jensen, R. (2012). Do Labor Market Opportunities Affect Young Women's Work and Family Decisions? Experimental Evidence from India. *Quarterly Journal of Economics*, 127 (2): 753-792.
- Krishna, A. and V. Brihmadeseam (2006). What does it take to become a Software Professional. *Economic and Political Weekly*, 41(30).
- Krishna, A. (2010). *One Illness Away: Why People Become Poor and How they Escape Poverty*, Oxford University Press, Oxford, UK.
- Krishna, A. (2013). The Mixed News on Poverty, *Current History*, 112 (750).
- Krishna, A. (2014). Examining the Structures of Opportunity and Social Mobility in India: Who Becomes an Engineer? *Development and Change*, 45 (1): 1-28.
- Krishna, A. (2017). *The Broken Ladder. The Paradox and the Potential of India's One Billion*. Penguin India.
- Krishnan, P. and S. Krutikova (2013). Non-cognitive skill formation in poor neighbourhoods of urban India. *Labour Economics*, 24: 68-85.
- Lambert, S., M. Ravallion and D. van de Walle (2014). Intergenerational mobility and interpersonal inequality in an African economy. *Journal of Development Economics*, 110: 327-44.
- Laurison, D. and S. Friedman. (2016). The Class Pay Gap in Higher Professional and Managerial Occupations. *American Sociological Review*, 81 (4): 668-95.
- Li, Y., Zhang, S., Kong, J. (2015). Social mobility in China and Britain: a comparative study. *International Review of Social Research*, 5(1): 20-34.

- Li, Y. and A. Heath .(2016). Class Matters: A Study of Minority and Majority Social Mobility in Britain, 1982-2011. *American Journal of Sociology*, 122(1): 162–200.
- Li, Y. and M. Rama (2015). Households or Locations? Cities, Catchment Area and Prosperity in India. *Policy Research Working Paper 7473*, World Bank, Washington DC.
- Lieberman, S. (1975). Rank-sum comparisons between groups. In David Heise (ed.), *Sociological Methodology*. San Francisco: Jossey-Bass, pp 276-91.
- Long, J. (2013). The surprising social mobility of Victorian Britain. *European Review of Economic History* 17, 1-23.
- Maitra, P. and A. Sharma (2009). Parents and Children: Education across Generations in India, mimeo, Department of Economics, Monash University.
- Mani, A., S. Mullainathan, E. Shafir and J. Zhao (2013). Poverty Impedes Cognitive Function. *Science* 341 (6149): 976-980.
- Mazumder, B. (2005). Fortunate Sons: New estimates of intergenerational mobility in the United States using Social Security Data. *Review of Economics and Statistics*, 87 (2): 235-55.
- Mazumder, B. and M. Costa. (2015). Using Occupation to Measure Intergenerational Mobility. *Annals*, 657: 174-201.
- Miles, A. (1999). *Social Mobility in Nineteenth – and Early Twentieth Century England*. New York: St Martin’s Press.
- Mookherjee, D. and D. Ray (2010). Inequality and Markets: Some Implications for Occupation Diversity. *American Economic Journal: Microeconomics* 2:38-76.
- Motiram, S. and A. Singh (2012). How Close Does the Apple Fall to the Tree? Some Evidence on Intergenerational Occupational Mobility from India. Working Paper 2012-017. Mumbai: Indira Gandhi Institute of Development Research.
- Munshi, K. (2011). Strength in Numbers: Networks as a Solution to Occupational Traps. *Review of Economic Studies*, 78:1069-1101.
- Munshi, K. and M. R. Rosenzweig (2006). Traditional Institutions Meet the Modern World: Caste, Gender, and Schooling Choice in a Globalizing Economy. *American Economic Review*.
- Orazem, P. and E. King (2008). Schooling in Developing Countries: The Roles of Supply, Demand and Government Policy in *Handbook of Development Economics*, Vol. 4, ed. T.Schultz and J. Strauss, Amsterdam: North Holland.
- Oster, E. and B. M. Steinberg (2013). Do IT Service Centers Promote School Enrollment? Evidence from India. *Journal of Development Economics*.
- Palmer-Jones, R. and K. Sen (2003). What has luck got to do with it? A regional analysis of poverty and agricultural growth in rural India. *Journal of Development Studies* 40(1): 1-31.

- Pasquier-Doumer, L. and F.L. Brandon (2015). Aspiration Failure: A Poverty Trap for Indigenous Children in Peru?. *World Development*, 72:208-223.
- Ray, D. (2006). Aspirations, Poverty, and Economic Change in A. Banerjee, R. Benabou, and D. Mookherjee (eds). *Understanding Poverty*, pp. 409-21. Oxford: Oxford University Press.
- Ray, D. (2016)/ Aspirations and the Development Treadmill. *Journal of Human Development and Capabilities*, 17 (3): 309-323.
- Sawhill, I. and S. McLanahan (2006). Introducing the Issue. *The Future of Children*, 16 (2): 3-17.
- Shahe Emran, M. and F. Shilpi (2015). Gender, Geography, and Generations: Intergenerational Educational Mobility in Post-Reform India. *World Development*, 72: 362-80.
- Shahe Emran, M., W. Greene and F. Shilpi (2017). When Measure Matters: Coresidency, Truncation Bias, and Intergenerational Mobility in Developing Countries”, *Journal of Human Resources* doi: 10.3368/jhr.53.3.0216-7737R1
- Solon, G. (1999). Intergenerational Mobility in the Labor Market, in O. Ashenfelter and D. Card (eds): *Handbook of Labor Economics*, Vol 3, Chapter 29. Elsevier Science.
- Solon, G. (2004). A Model of Intergenerational Mobility Variation over Time and Place, in M. Corak,(ed): *Generational Income Mobility in Europe and the United States*, Cambridge University Press.
- Sorokin, P. A. (1927). *Social Mobility*. Harper & Row.
- Strauss, J. and D. Thomas (1998). Health, Nutrition and Economic Development. *Journal of Economic Literature*, 36 (2): 766-817.
- Strauss, J. and D. Thomas (2008). Health over the Life Course, in *Handbook of Development Economics*, Vol. 4, ed. T.P.Schultz and J. Strauss, Amsterdam: North-Holland.
- Torche, F. (2011). Is a College Degree Still the Great Equalizer? Intergenerational Mobility across Levels of Schooling in the United States. *American Journal of Sociology* 117(3):763-807.
- Torche, F. (2013). How do we characteristically measure and analyze intergenerational mobility?, mimeo. Stanford Centre on Poverty and Inequality.
- Torche, F. (2014). Intergenerational Mobility and Inequality: The Latin American Case, *Annual Review of Sociology*, 40: 619-42.
- Torche, F. (2015). Analyses of Intergenerational Mobility: An Interdisciplinary Review. *Annals*, 657: 37-62.
- Xu, K., D. B. Evans, K. Kawabata, R. Zeramdini, J. Klavus, and C. J. L. Murray (2003). Household Catastrophic Health Expenditure: A Multi-country Analysis. *The Lancet*, July 12: 111-117.

Wu, X. and D. J. Treiman (2007). Inequality and equality under Chinese socialism: the Hukou system and intergenerational occupational mobility. *American Journal of Sociology*, 113(2): 415-45.

Table 1. Income mobility: Selected Industrial and Middle Income Countries

	IGE
Brazil	0.52
USA	0.41
Germany	0.24
Sweden	0.24
Canada	0.23
Denmark	0.14

Source: Reported in Blanden (2013)

Table 2. Educational Mobility: Selected Industrial and Middle Income Countries

	IGC
Brazil	0.59
USA	0.46
Germany	-
Sweden	0.40
Canada	-
Denmark	0.30

Source: Hertz (2007)

Table 3. Major Occupational Classifications: ISCO88

<i>1000</i>	<i>Legislators, Senior Officials and Managers</i>
<i>2000</i>	<i>Professionals</i>
<i>3000</i>	<i>Technicians and Associate Professionals</i>
<i>4000</i>	<i>Clerks</i>
<i>5000</i>	<i>Service Workers and Shop and Market Sales Workers</i>
<i>6000</i>	<i>Skilled Agricultural and Fishery Workers</i>
<i>7000</i>	<i>Craft and Related Trades Workers</i>
<i>8000</i>	<i>Plant and Machine Operators and Assemblers</i>
<i>9000</i>	<i>Elementary Occupations</i>

Source: Armstrong (1972)

Table 4 Intergenerational mobility in developing countries: synthesis and results

	Region ASIA	Data-set	Sample size & whether nationally representative (NR) at outset	Bias and other methodological concerns	Social mobility measure	Main findings
Educational mobility	<p>India: Azam and Bhatt (2015)</p> <p>Shahe Emran and Shilpi (2015)</p> <p>Hnatkovska, Lahiri and Paul (2013)</p> <p>Maitra and Sharma (2009)</p> <p>Jalan and Murgai (2008)</p> <p>Bangladesh, China (rural) Indonesia, Malaysia, Nepal, Pakistan, Philippines, Sri Lanka and Vietnam: Hertz (2007)</p>	<p>India Human Development Survey (IHDS) Round 1 (2004- 05)</p> <p>National Family and Health Survey (NFHS) Rounds 1 (1992-93) and 3 (2005-06)</p> <p>Five successive National Sample Survey Organisation rounds between 1983 and 2005</p> <p>IHDS 1 (2004- 05)</p> <p>NFHS Round 2 (1998-99)</p> <p>World Bank LSMS or similar household surveys conducted e.g. by national statistical agencies World Bank LSMS</p>	<p>55,450 (NR)</p> <p>34,585 (1993) 39,562 (2006) (NR)</p> <p>Working sample of about 21,000 households (20 % of the original total) (NR)</p> <p>Upto 123,701 (NR): Sample restricted to individuals aged 20 and above</p> <p>33,444 (children aged 15-19) (NR)</p>	<p>Coresidence (for IGC)</p> <p>Coresidence: educational category definitions</p> <p>Coresidence: does not rely on retrospective questions to identify father-son pairs</p> <p>Coresidence combined with IGRC</p> <p>Coresidence</p>	<p>IGC, IGRC</p> <p>Sibling correlation, IGC</p> <p>Comparing probabilities of switching educational categories</p> <p>Non- parametric (LOWESS); IGRC with controls</p> <p>Non- parametric (LOWESS); IGRC with extensive controls</p> <p>IGC using average of father's and mother's educational attainment</p>	<p>IGRC decline by cohort, IGC persistence (0.53) which is explained by increase in persistence at the upper and decline in persistence of the lower end of fathers educational distribution</p> <p>Sharp IGC decline to 0.508 for urban (upper and lower caste) daughters; (from 1993 to 2006). Persistence elsewhere.</p> <p>Convergence between historically marginalised and other social groups: probability of educational category switch of SC/ST and non-SC/ST were both 67 % in 2005.</p> <p>Report strong educational progress over time: women gaining the most and divergence for Muslims and Scheduled Tribes.</p> <p>Decline in educational persistence by birth cohort for men and women (treated as suggestive). Less education mobility for rural girls. Consistent mobility increase across social groups.</p> <p>Bangladesh:0.38; China (rural) 0.20; Indonesia 0.55; Malaysia, Nepal, Pakistan, Philippines, Sri Lanka 0.48; Vietnam 0.40</p>
Occupational mobility	India: Azam (2015)	IHDS Round 1 (2004-05)	28,292 Father- Son pairs	Classification of construction workers	Altham statistic	Progressive occupational mobility by birth cohort. High mobility among SC/STs born during 1965-84, exceeding mobility among higher castes.

	Motiram and Singh (2012)	IHDS Round 1 (2004-05)	28,270 Father-son pairs (NR)		Mobility tables: transition matrices and eigenvalues	Higher mobility in urban areas: immobility pronounced in low-skilled, manual occupations. Unable to discern upward mobility differences across social groups: substantive and higher downward mobility among SCs/STs.
	Hnatkovska, Lahiri and Paul (2013)	Five successive NSSO rounds between 1983 and 2005	Not reported	Coresidence	Occupation switch probability (three digit level). Transition matrix (three broad occ categories)	For SCs/STs from 0.33 to 0.42: for others from 0.3 to 0.39. Results for two or one digit switches are lower but not reported in paper.
	Nepal and Vietnam: Shahe Emran and Shilpi (2011)	Nepal Living Standard Survey (1995/96) Vietnam Living Standard Survey (1992/93)	6,544 individuals (NR) & 8,592 individuals (NR) at the outset	Analysis restricted to farm to non-farm mobility. Drop observations where a woman's employment status is not reported	Univariate probit based IGC (there are only two occupational categories)	Unconditional probability of being in non-farm occupation is 0.47 for a man and 0.19 for a woman in Nepal: 0.31 and 0.29 for a man and woman in Vietnam: The (marginal) effect of mother's non-farm participation on daughters is 0.45 in Nepal and 0.4 in Vietnam. For father-son, the corresponding estimates are 0.23 in Nepal and 0.2 in Vietnam
Income or earnings mobility	India: Hnatkovska, Lahiri and Paul (2013)	Five successive NSSO rounds between 1983 and 2005	3,500-4,500 households	Coresidence; sample size shaved: estimates based on 3-4 % of original sample		Elasticity of wages for children of SC/STs declined from 0.9 to 0.55: for others it declined from 0.73 to 0.61
	AFRICA					
Educational mobility	Egypt, Ethiopia (rural), Ghana, South Africa (KwaZulu-Natal), Hertz et al (2007)	Egypt Integrated Household Survey Ethiopia: Not clearly reported Ghana: WB LSMS South Africa: KwaZulu Natal Income Dynamics Survey	6,815 3,332 10,735 4,212	Coresidence	IGC using average of father's and mother's educational attainment	Egypt 0.5; Ethiopia (rural) 0.10 – the highest educational mobility among 42 countries; Ghana 0.39; South Africa (KwaZulu-Natal) 0.44

Occupational mobility	Cote d'Ivoire, Ghana, Guinea, Madagascar and Uganda: Bossuroy and Cogneau (2013)	Cote d'Ivoire Living Standard Surveys (four waves) (NR) (85-89) Ghana Living Standards Survey (five waves) (87-06) Guinea Enquête intégrale sur les conditions de vie des ménages (EIBC) (94-95) Madagascar Enquête permanente auprès des ménages (EPM) (93-94) Uganda Nationally Integrated Household Survey (92-93)	3,475 (NR) 13,592 (NR) 4,276 (NR) 3,550 (NR) 6,434 (NR)	Analysis restricted to farm to non-farm mobility	Relative mobility measured by odds-ratios (OR): filter out impact of structural mobility. Structural and relative mobility tables. Logit regressions models on pooled sample discern inter-country variation in relative mobility determinants	Build social mobility into a Harris-Todaro inspired farm-non farm sector model of intergenerational occupational mobility. Reports on structural mobility and its causes (e.g. non-farm job growth) and isolates relative mobility: provides testable predictions about determinants of relative mobility. Find higher relative mobility in Ghana and Uganda; more rigidity in Cote d'Ivoire and Guinea and strong rigidity in Madagascar (attributable to educational persistence).
	LATIN AMERICA					
Educational mobility	Brazil, Colombia, Mexico and Peru: Behrman, Gaviria and Szekely (2001)	PNAD (National Household Survey, Brazil, 1996 Living Standards Survey (Columbia), 1997 National Household Survey, (Peru) , 1985 National Urban Employment Survey, (Mexico) ¹	331,263 (NR) 38,518 (NR) 26,309 (NR) 26,273 (R for urban Mexico)	Years of schooling of the parent with the highest education	IGRC; mobility matrices	0.7 for Brazil and Columbia; 0.5 for (urban) Mexico and Peru. Differences disaggregated by gender and by cohort. Considerably larger upward mobility from bottom than downward mobility from top.
Methodological articles	Shahe Emran, Greene and Shilpi (2016)				IGC, IGRC	Estimate the size of the coresidence bias of IGC or IGRC estimates using data from India and Bangladesh

¹ Behrman et al (2001) also present some comparisons of occupational mobility but acknowledge that this is a much harder task because of the stark variation in the occupational granularity of the data in each country.

¹ <https://en.oxforddictionaries.com/definition/mobility>.

² <https://www.collinsdictionary.com/us/dictionary/english/social-mobility>

³ Black and Devereux's (2011) excellent review of the literature covering mainly research on the West expands on and offers an update of Solon (1999). Research on the UK and the United States has been particularly rich in thematic spread and in comparing present with past (e.g. Long and Ferrie 2013). Blanden (2013) presents useful methodological and international comparisons, while Torche (2014) reviews the literature on Latin America.

⁴ Long-range upward mobility is the sociology equivalent of 'large ascent'.

⁵ Occupational classification has been intensely debated and carries its own perils (Armstrong 1972; Erikson, Goldthorpe and Portocarero 1979; Ganzeboom and Treiman 1996; Blanden 2013), intergenerational occupational data are comparatively easier to collect, also in low income settings (Blanden 2013).

⁶ Consider a developing country where the (entire) income distribution shifts upwards from one generation to the next: this large overall improvement is possible (in theory) without affecting the distributional ranking of households/individuals. Hence, intergenerational structural mobility needs not imply relative status improvement.

⁷ Using 40 million tax records to study social mobility across large commuter zones in the United States, Chetty et al.'s (2014) results are not sensitive to the number of years of income observations.

⁸ As Torche (2014) notes, existing social mobility research on Latin America has relied exclusively on cross-sectional samples of the adult populations with retrospective questions about the education and occupation attainments of the parent generation.

⁹ Comparing parent and child at similar stages in life and continuing to track them for long periods of time, datasets including – Panel Study of Income Dynamics in the US, the Luxembourg Panel, and rich longitudinal data available for Nordic countries have enabled conclusions to be drawn about trends in mobility in these richer countries.

¹⁰ After removing the intercept term, taking deviations from population means (e. g. Black and Devereux 2011).

¹¹ Comparing Canada, the United States and Sweden, Corak, Lindquist and Mazumder (2014) have access to 30 years of earnings data for Swedish and five years of data for Canadian fathers. Note that Chetty et al. (2014) found limited IGE estimate sensitivity to the number of years used to measure income in the United States. Bevis and Barrett's (2015) research are among the exceptions and presents IGE based results for a lower-middle income economy (the Philippines).

¹² While most developing country research has used data on fathers and sons, some studies average parental educational achievements (Hertz et al 2007) or report estimates for both daughters and sons (Shahe Emran and Shilpi 2015). It is customary in (1) to add age controls for lifecycle variations in earnings (Solon 1999) and to estimate (2) separately by birth cohort (e.g. Hertz et al 2007; Azam and Bhatt 2015) to discern changes over time.

¹³ is thus a measure of standardized persistence (Hertz et al 2007; 13). (2) and (3) overlap if achievements dispersions in the parent and offspring generation are identical, which is unlikely.

¹⁴ A compelling example – reported in Clark and Cummins (2014) – see also Iversen, Krishna and Sen (2016) - are the contrasting occupational mobility tables in Miles (1999) and Long (2013) which cover exactly the same time period in Victorian Britain. While Miles based his occupational classifications for sons on their occupation at the time of marriage, this misses out on subsequent career progress of these sons.

¹⁵ Disaggregation can be avoided using parental or household averages: this would work well in nuclear households where parents are the main earners. This is Hertz et al's (2007) strategy for comparing educational mobility across time and globally, including data for seven countries in Latin America and ten countries in Asia.

¹⁶ Other shortfalls distinguish the literature on social mobility from the literatures on inequality and poverty measurement, include the neglect of normative considerations and the properties social mobility measures ought to possess. There is thus a need for a much sharper understanding of how social mobility estimates behave when patterns in data reflect the ground realities in low income settings (Iversen 2017).

¹⁷ Given that daughters leave their native household at the time of marriage in South Asia, Shahe Emran, Greene and Shilpi (2016) demonstrate that intergenerational mobility estimates for daughters, based on coresidency data, are subject to particularly severe biases. While more pronounced in Bangladesh, the magnitudes of the IGRC and IGC biases for coresident father-son pairings in India are estimated to be as low as 9 % and 2 %, respectively.

¹⁸ Azam and Bhatt (2012) report similar results for India. On closer examination, their no change IGC result reflects that while persistence has declined at the lower end of the father's educational distribution, it increased at the upper end (Azam and Bhatt 2015).

¹⁹ SC and ST from now on.

²⁰ ISCO88 is the outcome of a classification exercise that involves nine major groups with three further levels: 28 sub major groups, 116 minor groups and 390 unit groups (Ganzeboom and Treiman 1996:-205). A key occupational category is farming: and compared to their share in the population in Western countries, the share of farm-dependent households is much larger in

poorer countries. At the same time, cultivator heterogeneity is also common, calling for distinctions among small, medium and large farmers and between them and landless agricultural labourers (Armstrong 1972).

²¹ As noted above, simple retrospective questions in nationally representative cross-sectional surveys can easily rectify these fundamental weaknesses.

²² Bevis and Barrett (2015) also find clear gender differences in how parental incomes and endowments affects their children's human capital formation and income using longitudinal data from rural Philippines– they find that mothers transmit human capital equally and significantly to both sons and daughters, father's human capital is less important to children in general.

²³ A study covering 18 Latin American countries which revealed 'how widely separated the various socioeconomic strata are in terms of their expectations of social mobility' (ECLAC 2007: 20). See also Barr and Clark (2007) and Mani, Mullainathan, Shafir and Zhao (2013).

²⁴ In contrast, Genicot and Ray (2017) show that in a model of socially determined aspirations, where aspirations, income and distribution of income evolve jointly, the economy may move to a more equal distribution of income over time if aspirations are moderately above an individual's current standard of living so as to encourage investment. See also Ray (2016).

²⁵ The role of information flows has been explored e.g. by Oster and Millett Steinberg (2013).

²⁶ Chetty et al (2014) interpret a large ascent as a child with parents in the bottom fifth of the national income distribution reaching the top fifth. The probability of such an ascent displays notable spatial variation and is 0.044 in Charlotte, 0.108 in Salt Lake City and 0.129 in San Jose.