

Moving Up and Out of Poverty: Countries, Communities, and Individuals

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Abstract: As one part of the overall *Moving out of Poverty* study, “Ladder of Life” focus groups were conducted in over 450 villages/neighborhoods in 18 study regions in 14 different countries. During the ladder of life exercise the focus groups described the relevant steps or levels of overall well-being of households in their villages and identified those steps on the ladder on which households were in poverty. These focus groups then ranked up to 150 households in their village/neighborhood according to their step on the ladder of life, both now and in the past. The results of this ranking exercise produce a Community Mobility Matrix for each village that can be used to estimate the evolution of prosperity in the village, including the fraction of households that moved out of poverty, the fraction of households that had upward mobility of any kind, and the degree of all mobility (either up or down). Examination of the CMM data reveals three interesting stylized facts. *First*, there are large local effects in prosperity. Even though the study regions had very different overall economic trajectories (in Malawi there was only a net 4.9 percent of the population moving up versus 46 percent in the studied region of Thailand) the variation in net prosperity and upward movement in poverty across villages *within* the study regions accounted for nearly 75 percent of all the variation across villages. This suggests that there are important local factors (economic, social, political) affecting households’ transitions out of poverty over and above economy wide and national determinants. *Second*, upward mobility of the poor and non-poor is tightly linked across villages. Across the 462 villages the estimate of the linear association between upward movement of the non-poor and poor households is .62. *Third*, there is considerable contextual heterogeneity across regions in the extent to which the fortunes of the poor and non-poor are locally linked, as in some study regions the association of upward mobility of rich and poor is one for one while in other regions to co-movement is near zero.

Introduction

This paper presents preliminary findings on the long-run economic mobility of the poor from the World Bank’s multi-region research program, *Moving out of Poverty* (MOP). The study combined quantitative and qualitative research in selected communities of 18 study regions in 14 countries to examine the dynamics of long-run economic mobility. The study uses a range of quantitative and qualitative research instruments to learn from men and women who have managed to move out of poverty over the last decade, about the individual factors, economic and social processes, and the role of the local and community context in supporting or obstructing transitions out of poverty.

The analysis in this technical paper draws on the community mobility matrix constructed through the Ladder of Life focus group discussions¹. Section I provides a brief overview of the focus group discussion that resulted in the community mobility matrix – how it was conducted, who participated, steps involved and data collected. Section II presents a few examples of community mobility matrices and the empirical measures of economic mobility and poverty transitions based on those mobility matrices. This is followed by an analysis of these measures both across villages within study regions and across study regions – and how they resonate or differ from earlier literature on mobility. Section III discusses co-movement among different indices, with some confirmations and surprises. Section IV concludes with implications from this preliminary analysis and a description of how these results will feed into other aspects of the overall *Moving out of Poverty* study.

I. Objectives, Methods, and Data

I.A) Objectives

The literature on poverty in developing countries is massive, and growing. A first generation of poverty studies used multi-module household surveys to estimate poverty lines and provide “poverty profiles” based on the household correlates of poverty status (e.g. education, gender, household size, location, occupation). More recently, panel studies have allowed the examination of income mobility, poverty dynamics² or vulnerability to episodes of poverty³. Most panels cover short periods⁴. The short time frame makes it difficult to distinguish between transient poverty and chronic poverty, whereas the determinants of both are clearly different

¹ This was only one of the research tools used in the MOP study (for a summary of all study methods, please refer to Annex 1).

² These include Grootaert and Kanbur, 1995 (Côte d’Ivoire); Pritchett, Sumarto and Suryahadi (2000), Carter and May, 2001 (South Africa); Baulch and McCulloch, 2002 (Pakistan); Deininger and Okidi, 2002 (Uganda); and Sen, 2003 (Bangladesh)

³ Studies of vulnerability, poverty transitions, and income mobility using short run panels include Sumarto, Suryahadi and Pritchett in Indonesia, Dercon in Ethiopia, and Glewwe and Hall in Peru

⁴ Of particular note are the multi-round surveys which cover long periods with multiple observations on each household (and its splits) such as the Indonesia Family Life Survey (IFLS), the India panel used by Bhide and Mehta (2004) and Munshi and Rosenzweig (2005), the China panel used by Jalan and Ravallion (2002), and a panel data set from Tanzania (Kagera) used by Beegle et al (2005).

(Jalan and Ravallion 2000)⁵ or more generally to disentangle short-run from longer run household income dynamics⁶. With only a short panel it is often impossible to know whether, for instance, the observed increase in a farm household's income is due to a temporary improvement in output prices or caused by an investment in his assets such as farming equipment, which may result in a more structural and permanent move out of poverty. While the usual household poverty profile factors have some success in predicting poverty status, they are much less able to predict *changes* in poverty (Skoufias and Quisumbing 2005).

The objective of the MOP study is to investigate the causal determinants, interactions with local conditions, and sequencing of factors that trigger successful sustained escapes from poverty. In order to do so the study has several features to make it complementary to much of the existing household poverty research. First, the study begins with a broader definition of well-being than a monetary measure of income. Second, the study uses recall data of a focus group in the local community to estimate household's longer-term transitions. Third, the study mixes quantitative and qualitative methods to triangulate on those factors identified in multiple ways as keys to escape from poverty in the given contexts. Fourth, the study uses a variety of instruments to generate information linked between the household and the local conditions, both economically as well as socially (e.g. measures of collective action, exclusion) and politically (e.g. functioning of local democracy, corruption).

I.B) Methods⁷

A community mobility matrix for each study cluster (which we will refer to as a “village” even though in some urban areas it was a neighborhood in an urban context or a smaller unit of a village) is derived from the Focus Group Discussion in each village based on the “Ladder of Life”⁸ research instrument. The Ladder of Life is a study instrument that guides a focus group to explore the cognitive map of how levels of well being are categorized, which levels of well-being are perceived as “poverty”

⁵ Baulch and McCulloch (2002) show that while transient poverty can be addressed through income-smoothing measures, addressing chronic poverty may require more income- growth policies (such as investment in households' productive earning capacity).

⁶ Some of the earliest work on panels, the work on Cote d'Ivoire in the 1980s concluded that measurement error in income in rural settings was so large as to make the estimates of income changes virtually meaningless. Even with a switch to the use of consumption expenditures as a proxy for income the measurement error problem remains serious.

⁷ A more complete discussion of this research instrument and its implementation can be found in the methodological guide for the Moving out of Poverty study (Narayan and Petsch 2005) which was the basis for the research teams in each of the 17 study regions.

⁸ The Ladder of Life discussion was experimented with over a period of a year in different cultural contexts. The instrument builds on previous work and takes it further, with five studies in particular providing inspiration. Participatory poverty assessments conducted in Kenya (Narayan 1996) and Tanzania (Narayan and Pritchett 1997) involved community groups in reaching agreement on multi-dimensional descriptions of categories of well-being, and then sorting households in the village into the different well-being categories and marking them on a community drawn map. The sorting provided a distribution of the households in the different categories based on local people's perceptions, and the household list was used to draw a sub-sample for interviews. An early brainstorming workshop on *Moving out of Poverty* in 2003 discussed Cantril's 10 step Self-Anchoring Ladder (Cantril 1965) as well as the Stages of Progress tool developed by Anirudh Krishna (Krishna 2004 and 2005). The latter engages local groups in examining well-being groups by expenditure patterns and explores changes in household status over a period of 25 years. The design of the tool was also inspired by work in Malawi where community groups sorted households around levels of food security (Barahona and Levy 2003).

I.B.1) Choosing participants for the focus group

Within each village the research team purposively selected people for the focus group discussions, with the objective of groups with between 5 and 10 participants. The discussions were intended to involve people from a range of socio-economic groups, neither exclusively the community leaders or rich nor exclusively the poor. Respondents selected for the focus group were over 30 years (to ensure sufficient life experience—separate focus groups were held with youth) and under 60 years (individuals still economically active and heading households with dependents). Wherever possible, separate focus group discussions were conducted with men and women.

I.B.2) Structure of the Ladder of Life Focus Group Discussion⁹

With each focus group the *Ladder of Life* exercise consisted of four steps¹⁰: (1) identification of the range of factors at the *community* level that help or hinder the overall prosperity of the community; (2) construction of a descriptive ladder of life and discussion of the range of factors that help *households* move up, maintain their status, fall down or stay trapped in chronic poverty; (3) identification of a household's current wellbeing status and the status of that household 10 years ago for up to 150 households in the village and (d) assignment of a poverty status corresponding to the steps on the ladder of life.

Step 1: Community Context and factors associated with prosperity. Ladder of Life opens with the group discussing and providing some indication of the overall trends in prosperity of their community in the past ten years and the factors that affected community prosperity (e.g. droughts, improvements in infrastructure, new investments, etc.). In addition, focus group members are asked to rank the top two events or factors that have most *helped* the prosperity of the community over the past roughly 10-15 years, and the top two events or factors that have most *harmed* the prosperity of the community over the past 10-15 years. While the aim was to provide an estimate for “ten years” ago, at this stage to encourage comparability across villages and hopefully reduce bias from “telescoped” recall in each study region a particular well known event (such as a major policy shift or political transition) was identified and the focus group was instructed to think back to that particular time. This usually resulted in a period roughly ten years ago, with some exceptions such as Sri Lanka where recall was anchored to an episode in the conflict 15 years previously. We refer to results as “ten years” ago throughout for simplicity.

Step 2: Constructing the ladder of life and household level factors. The focus group then describes the number and characteristics of categories of *household well-being*, which is explicitly not presumed to be either simply income or wealth not even economic well-being but rather simply well-being. The discussions are anchored by starting at the bottom—asking the group to describe the characteristics of the worst-off in the community – and the top of the ladder—asking the group to describe the characteristics of the best off in the community. Once the characteristics of those households at the top and bottom of the ranking of well-being have been defined, the respondents are asked to identify the category or step just above the bottom

⁹ This draws on the *Moving out of Poverty* methodology guide (Narayan and Petech 2005) provided as the guidance for each of the research teams.

¹⁰ In larger communities, the focus group discussions were held in smaller neighborhoods where people knew one another, with participants being selected from these neighborhoods and the overall community mobility matrix was built up from the neighborhood focus group rankings.

step, and the key features of households at that step. Then identify each of the additional steps or categories – and their characteristics – until the top step is reached.

At this stage a visual of a “ladder of life” with the categories described by the focus group is created, and the group is given the opportunity to refine the ladder—to add or subtract categories. The exercise results in a ladder of life for each community that has a description of each category and a certain number of categories, both of which differ across communities within study regions.

Table 1 presents selected examples of the categories of well being from four different focus groups, two in Uttar Pradesh, India and two from North Maluku, Indonesia. The category descriptions of the steps on the well-being ladder of life tend to involve descriptions of households in terms of an array of characteristics: (a) consumption (e.g. having sufficient food, clothing), (b) asset ownership (e.g. owns a car, pump, land), (c) educational status of the household and children (e.g. able to educate children to 10th grade, or “in the city” for the rich), and conditions of the house (e.g. permanence, condition of the roof or floor, number of rooms, toilet facilities). For the most part these criteria correspond reasonably closely with poverty descriptions that are captured in the standard consumption expenditure approach (Ravallion 1994) or asset index based (e.g. Filmer and Pritchett 1999) categorization of economic well being.

But the categorization of well-being was not limited to strictly economic criteria and in many villages other characteristics were introduced in categorizing households. Focus groups often used occupational categories to describe various levels—distinguishing between “laborers”, “farmers” and “businessmen.” Having some permanent job with a regular salary was usually a characteristic of the top categories.

In addition, in the focus groups many times non-economic and non-occupational criteria were referred to in describing categories, both positively and negatively. Often better-off households are identified as ‘trustworthy’, ‘respected’, or “having good social links.” At the same time, the bottom category was often associated with negative personal characteristics such as “lazy” (in the Indonesia focus group above) or “drinking heavily.” In addition social categories were occasionally used, as in Uttar Pradesh where, not surprisingly, social identities such as caste or religion (e.g. “mainly harijans” or “most Muslims in this category”) were used in describing the characteristics of households at various levels of well-being.

After the focus group had identified the possible steps on the well-being ladder of life they were asked for the causes of upward or downward movement or stagnation at each step of the ladder. For instance, the focus group was queried how people moved up from the bottom step of the ladder, or how households moved from the middle steps, as opposed to a general question about why households move up.

Table 1: Examples of ladder of life well-being categories, differing in number and description from four focus groups				
	Uttar Pradesh (India)	Uttar Pradesh (India)	Indonesia	Indonesia
Gender	Male	Male	Male	Male
No. of categories	5	6	4	6
Community Name	Bandipatti	Raghnathpur	Gura, North Maluku	Kampung Pisang, North Maluku
Step 6		<u>Big farmers</u> : They are the leaders in our village. They own 40-80 bighas of land, tractors, two wheelers and four wheelers. Their children work as doctors and advocates or are in government jobs. They mostly belong to Brahman (upper caste) families.		<u>“Ahu Jang Pofoi” (Very rich)</u> : They are generally government officials or successful businessmen. They have luxurious houses, cars, maids to serve them, gold jewelry and bank deposits. When they get sick they go to a specialist.
Step 5	<u>Government job holders</u> : They get a fixed salary; have 1-2 bighas of land; and brick houses. They have small families and lend money on interest	<u>Businessmen</u> : They sell clothes or groceries. They have 15-35 bighas of land, but do not depend on agriculture.		<u>“Poha foloi” (Rich people)</u> : They have good houses with cars and bank accounts. They are able to educate their children in Jakarta
Step 4	<u>Farmers</u> : They have 2-6 bighas of land and have 5-6 member families. They grow vegetables, wheat and rice and milk buffaloes. They have brick houses and their children study in towns	<u>Farmers with 15-35 bigha of land</u> : They mainly produce sugarcane and have Kisan (Farmer) Credit cards. They have pucca houses. Their children get education up to High School/12 th grade.	<u>“Haere” (Well off)</u> : They are highly educated, live in permanent houses and have all household facilities. Their houses are usually on the main road. They have servants and travel in cars.	<u>“Poha” (Sufficient people)</u> : Include civil servants in class 3, private workers and small businessmen. They have motorcycles, telephones and television. Their children can go to university.
Step 3	<u>Businessmen</u> : They have shops selling fertilizers, cosmetics, medicines and groceries. They have brick houses and give good education to their children. Their families have 6-7 members and they have good social links	<u>Farmers with 5-15 bigha land</u> : Some of the families sell vegetables. On a part of their land, they produce sugarcane and from it they get more profit. They have thatched houses and their children can get education till 10 th grade	<u>“Imagakunu” (Rather Well-off)</u> : Have motorized becak (bentor) for a livelihood. On average, they are educated to university level. They have permanent houses with bathrooms, cooking stoves and speedboats.	<u>“Sari poha” (Almost sufficient)</u> : This step includes civil servants in class 1 and 2, craftsmen and those with small kiosks. Their houses have ceramic floors, ceilings, and restrooms. All their children can go to school
Step 2	<u>Beedi (cigarette) makers</u> : They have land upto 2 bighas and their women and children make beedis. They mostly have 8-10 members in their families. Most Muslims in the village fall in this category.	<u>Small farmers</u> : They have 1-4 bighas (local unit) of land. But it is not enough to manage grains for the whole year and they have to work as laborers. Their houses are thatched. Some children manage to get education till 8 th grade	<u>“Biaha” (Middle Group)</u> : Their houses are semi-permanent. They cook with firewood and do their own washing. However, their children go to school and they go on outings to the beach. They eat rice with some side dishes	<u>“Poha cabu” (The Poor)</u> : They have permanent jobs and are able to educate their children. They have a permanent house with a restroom and cemented floors. They have skills such as making ovens.
Step 1	<u>Laborers</u> : They have limited land. The main source of their livelihood is labor. They carry concrete, work as farm labor, are street vendors and weave carpets. They have mud houses and have 7-8 members in their family. Their women and children also do labor.	<u>Landless laborers</u> : They do not have land to cultivate. Mainly harijans (lower castes) come in this category. Their children get education only till fifth grade. Their houses are thatched and some have to depend on below poverty line (BPL) cards.	<u>“Huha” (Not well off)</u> : They live in barracks with bamboo walls; roofs made of sago palm; with no toilet. They do not have fixed income and consume rice, sago and banana. They marry young and seek health treatment using a card. Usually their appearance is ordinary	<u>“Poha-ua” (Very poor)</u> : They have no skill and no permanent job. The old, widowed/divorced and lazy fall in this step. They order underage children to work and have simple houses, with roofs made of sago palm and no restroom. They use health cards and traditional healers for medication.

Step 3: Identification of the “the poor” on the ladder of life. After the construction of the categories, the focus group was also asked: “what is the category where people in this region are no longer considered poor?” The community poverty line (CPL) for each village was the line set by the focus group between the categories of “poor” and just “not poor.” This was set based on the *current* steps on the ladder of life and poverty ten years ago is defined by that standard so the poverty line does not change between the two periods¹¹. In addition, the relationship between the step where a household is no longer considered poor and the “official poverty line” was explored.¹² In all subsequent analysis the terms “poor” or “poverty” refer to the households belonging to the well-being categories identified as poor in the focus groups, not the “official” poverty line¹³.

Other issues explored with the focus group included: changes in inequality; whether the factors for upward movement, stagnation or fall have multiple dimensions, and if there is any sequencing and interaction among the factors at the different steps; the most common step or category in the community; the category or step which is considered the resilience line in the community (from where people may fall back but typically not all the way back into poverty); factors that save households from falling back into poverty; the category from which it is most difficult to move up; the category from which it is easiest to move up; what category is considered middle class, and whether it is easy or difficult to reach this step. These qualitative responses are explored in other research based on the focus group responses.

Step 4: Ranking of households. The Ladder of Life exercise concludes by placing households in the community onto their step on the ladder¹⁴. The study teams had a previously prepared list of all households in the village and were instructed to either rank all households if there were less than 150 or stop at 150 households if there were more. About half of the sample villages have 150 (plus/minus 2) households ranked and for the villages with less reported the ranking was presumably the complete list, while for 25 villages many more than 150 are reported¹⁵. For each household the focus group first places the households on a step of the ladder

¹¹ In nearly all villages only one CPL was set. In a few villages however, focus group respondents differed in their placement of the CPL now and 10 years ago. But in all the analysis presented in this paper, the current CPL is used.

¹² The official poverty line is calculated before field work for the monthly/daily income/consumption of a family of four, or a similar variable that is familiar to local people based on the officially determined poverty line. This may be different for urban and rural areas. In introducing this to the community, the field team says something like this: “In xxx (country name), the officials of the Government of (xxx country name) define a poor family of 4 people as having an income/consumption of ** (in local currency) per month or per day. This takes into account the value of what they produce for their own consumption. Where on this ladder would you place this poverty line?”

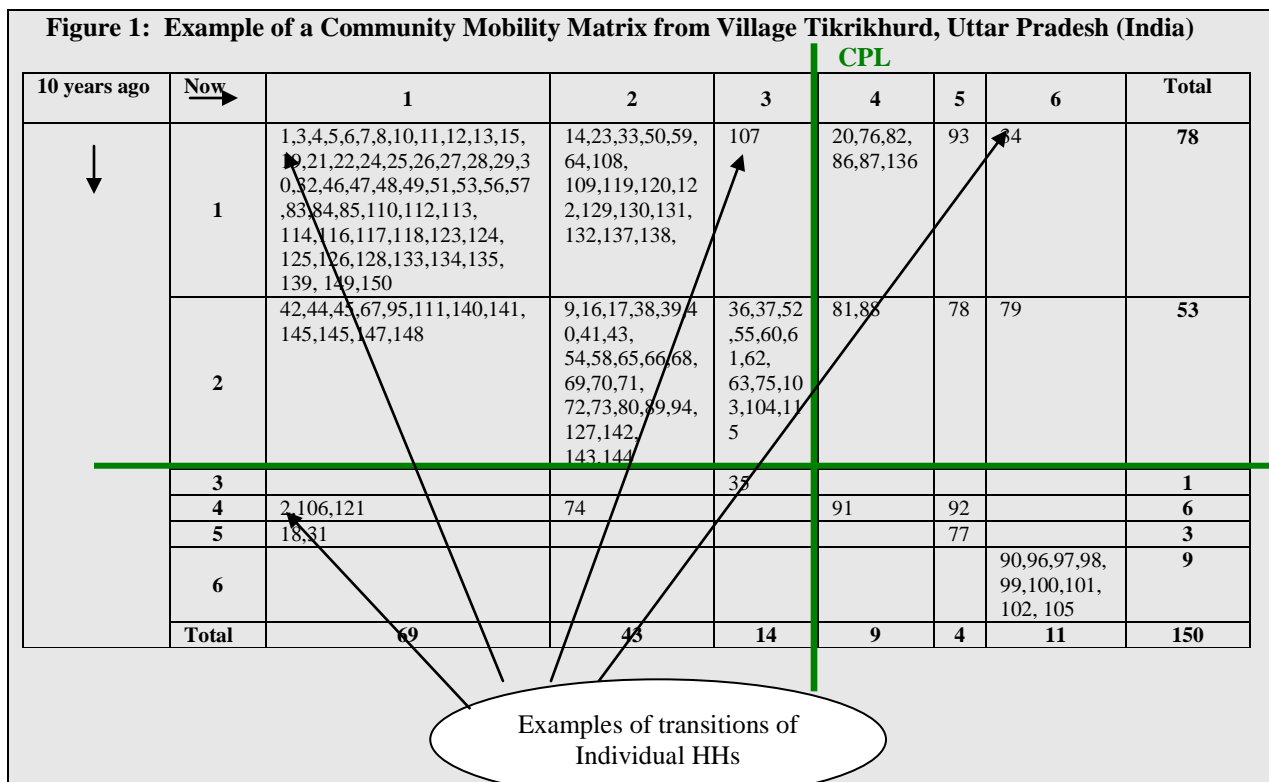
¹³ There are a number of reasons not to use the “official poverty line” super-imposed on these categories. First, since the categories were not constructed based on consumption expenditures strictly speaking they are not commensurate. Second, since the official poverty line was for a household of four, the adjustment for household size (implicit or explicit) in the ranking was not taken into account. Third, the official poverty line reported to the focus groups was not adjusted for regional price differences. Finally, since the categories are quite broad (often only four or five) the statement of where the official line would cut through the categories was at best heuristic.

¹⁴ For larger communities, smaller areas or “neighborhoods” where people generally knew one another were identified and lists were developed for the smaller neighborhood/area (such as a hamlet in a larger administrative village in India).

¹⁵ In some regions the study teams appeared to just complete the total number of households, not stopping at 150. For countries where household panel data was available, panel households were included on the list, marked and identified separately from non-panel households and sorted.

of life according to the present conditions¹⁶ and then according to their status ten years ago¹⁷. As the sorting exercise could be sensitive in some contexts, teams had the flexibility to conduct the sorting with the entire focus group or with three to four members of the focus group.¹⁸

The result of the ranking exercise was, for each of the 462 communities from 18 different study regions across the world, a community mobility matrix like that shown for the Tikrikurd village in Uttar Pradesh (see Figure 1). In this figure each number in a given cell represents a particular household, ranked according to the focus group’s perception of the household’s position on the steps on the well-being ladder of life “now” and “ten years ago.” This reveals both the level and the mobility of households over time. Figure 1’s arrows show the outcomes for particular households: household number 1 remained in the lowest step in both periods while household number 107 moved up from the step to step 3 now, household number 34 made the amazing rise from the poorest category to the best off (category 6) in the preceding ten years while household 2 moved from above poverty (step 4) to the lowest rung.



¹⁶ In addition to problems of sampling, current literature on mobility also faces criticism for focusing excessively on mobility of households – units that may change over time due to attrition of members (see Dercon and Shapiro, forthcoming).

¹⁷ As with nearly all of the literature the ranking of “households” does miss the changing composition of the household as members leave, rejoin, split by marriage etc. (see Dercon and Shapiro, forthcoming).

¹⁸ A smaller group was likely to have less information about the households for carrying out the sorting, and was considered a second-best option.

Next steps in the research design after the Ladder of life focus group. The ranking was used to sample households for two additional instruments carried out with selected individuals: (1) a quantitative household survey and (2) a “Life Stories” exercise. The household questionnaires ask common questions from multi-module household surveys plus an additional set of questions about local government, collective action, etc.

The life stories focus on individual as the subject of interest. How do they perceive their own well-being? How do they rank themselves on a 10-step ladder of well-being? On a ladder of power and rights? On a ladder of happiness? What are their views on concepts such as freedom, power, and the local democracy? What are their aspirations? The life stories gather the individual’s own perceptions of factors and processes behind movements out of poverty, or remaining trapped in poverty or maintaining his/her well-being status. The in-depth interviews literally graph people’s life histories, the ups and downs, the turning or tipping points, along five dimensions: their migration history; occupational history; economic history; social, cultural and psychological history; and education. The graphs allow examination of both the sequencing and interaction of factors, and these are followed in the interview with questions that probe into the hows and whys behind the factors. For example, is migration an important trigger to upward mobility? If so, does it usually occur early or late in the lives of movers? Does it combine with other factors? The life stories with movers, the never poor, the chronic poor and fallers enable exploration of such factors and processes that are difficult to measure with quantitative tools.

I.B.3) Differences of the Ladder of Life Community Mobility matrices from previous research.

Five aspects distinguish the Ladder of Life exercise and the resulting community mobility matrix rankings from most earlier empirical work on economic and income mobility in developing countries. Each of these five aspects has its methodological pluses and minuses.

First, most of the existing research on poverty is based on cross-sectional income or consumption surveys or, short period panels. By using rankings of transitions across well being categories over longer periods we hope to recover better estimates of the long-run dynamics rather than shorter-run volatility of income and vulnerability. At the same time, this requires the use of recall data about past status, which has a number of well known problematic features. However, the rankings are not individual recall data but based on a focus group ranking of households so many of the problems of individually subjective recall bias are not at issue¹⁹.

Second, nearly all of the empirical work on mobility focuses on measures of income and consumption expenditures. The ability of the focus group to provide a characterization of “well-being” at least potentially provides a much broader, subjective and multidimensional examination of well-being compared to the traditional income and consumption measures. This advantage however comes at the price of the comparability of the transitions of households even in the same village but also in different villages as these were not forced onto a common cardinal metric: there is no assumption that “step 4” and “step 5” are the same ‘distance’ apart in a metric of well-being as step 1 and step 2.

¹⁹ This is particularly important when the individual correlates of poverty transitions are studied, as similar subject bias in the dependent and independent variables could induce correlation that merely reflects individual specific features in perception. The use of the focus group ranking of transition as the dependent variable at least reduces that particular bias.

Third, the number of well-being categories and the poverty line are not fixed and can differ across communities. This has the disadvantage that there is no direct comparability of the meaning of a “one step” movement on the ladder across villages. Moreover, the summary statistics given below on numbers of people who are “poor” in a given village is ultimately the subjective perception of the focus group. Allowing different numbers of well being categories across villages in measuring mobility does have the risk of introducing spurious differences in measures of the magnitude of income or poverty mobility simply because of the categorization. However, we show below (section II.C) that this appears not to be as serious a problem as was feared.

Fourth, within each village, the focus group ranked large numbers of households, preferably universal to the village studied (each focus groups was asked to rank all households, usually 100 to 150 households). Most studies of individual income/consumption mobility are based on cluster sampling with small, and non-representative, sampling of a “village.” That is, since interviewing each household with a multi-module survey is time consuming, surveys tend to choose say 15-30 households per primary sampling unit (PSU) or cluster. These PSUs often represent census tracts, which are smaller physical spaces than a “village” so that the 15-30 sampled households do not represent a “village” as either a natural physical agglomeration of households or as an administrative unit. Therefore the even large scale household surveys tend to be large N but if $N=C*H$ (C=clusters, H=Households sampled per cluster) the H tends to be small. Aggregates at the cluster level are often based on H too small for useful precision, and the “cluster” estimates do not correspond to “natural” units. Since the matrix sorts nearly 100-150 households in a village, it hopefully gives a representative and high precision measure of “community-level mobility” which is rare as most stratified samples are not representative of the village, just the sampling cluster, and have extremely high standard errors as H is small.

Fifth, the sampling frame within each country (or state in the case of India) was based on a special focus area of the overall MOP study, and so sub-regions of the country were chosen based on areas “with and without” or “high and low” along certain dimensions to generate discriminating power. Table 2 lists the themes and the countries/states corresponding to each theme. Since we never intended or attempted to generate nationally representative estimates of poverty or its reduction, in the figures and tables below on results we always indicate the country/state and theme, so Thailand(Inequality) or Bangladesh(Empowerment) to remind the reader these are purposive samples of villages within the country.

Table 2: Regions (countries or states of India) and themes for sampling villages for the study	
Study Theme	Country/State
Conflict	Colombia, Sri Lanka, Indonesia, Assam, Afganistán, Philippines
Infrastructure	Malawi, Senegal, Tanzania (Ruvuma)
Empowerment	Bangladesh, Andhra Pradesh (Self Help Groups)
Inequality	Thailand
Villages in previous household panel data	Philippines, Uganda
Rural (representative)	Uttar Pradesh
Land distribution	West Bengal
Migration	Morocco
Ethnicity	Mexico

Although in this particular paper we focus only on the mobility matrices, the focus group discussion is a very rich data source in its own right, both for its descriptions of the different categories of well-being in a community as well as reasons for movement (up or down) and stagnation. In particular, the discussion did not presume that income dynamics were linear but allowed for non-linearity in income processes. By asking focus groups about movements across specific categories it unpacks the correlates for movement up at each category of well-being. These aspects of the *Ladder of Life* focus group discussions are discussed elsewhere.

II. Community characteristics from Mobility Matrices

The mobility matrices from the ladder of life exercise served two purposes in the *Moving out of Poverty* study. First, as noted above, the sampling for individuals for the household surveys and for the individual life histories was based on these rankings. Since the purpose of the MOP study was to study movements out of poverty, the study needed to identify and over sample those who moved out of poverty as a random sample of households of feasible size would in many instances produce too few “movers” to make comparisons between movers and non-movers statistically meaningful.

Second, since the mobility matrices are (relatively) complete rankings of entire communities they can be used to create summary statistics about the processes of income mobility at the community level. Since the matrix is based on the sorting of nearly all households in a village, it becomes fundamental in analyzing movement or changes in well being of the community as a whole. We do this in two ways: one which focuses on mobility into or out of poverty, and another which focuses on all mobility.

II.A) Measures based on the community mobility matrix

There is a large literature on income mobility and Gary Fields (2000) summarizes five concepts often used in measuring income mobility: *Directional income movement*: decomposes aggregate movement in income, into income gain and income losses; *Time dependence*: measures the extent to which an individual household’s economic well-being in the past determines its current well-being; *Positional movement*: measures the individual household’s position (and changes in it) in the overall income distribution; *Share movement*: measures the individual household’s share (and changes in it) in the overall income distribution; *Symmetric income movement*: measures the magnitude of household movement (irrespective of whether the direction of movement is up or down). The measures we compute have some element of each of these features, although given the ordinal nature of the data we cannot compute shares or inequality measures over time.

Mobility by poverty category. Figure 2 uses the example of the community mobility matrix using a four step ladder from the village of Kolumbuthurai in Jaffna, Sri Lanka to illustrate the categories of movement. The line marked CPL represents the poverty line so that households on the bottom two steps are considered poor and those in the top two non-poor²⁰. This categorization divides the mobility matrix into 4 quadrants/ transition groups:

²⁰ The ladder of life exercise did not superimpose a “set number of steps” for now and 10-15 years ago. In the Sri Lanka community for example, step 4, which has 19 households today, did not exist 15 years ago.

- *Movers out of poverty*: those considered poor in the past and are now considered non-poor. These consist of a variety of transitions: household “6” for instance moved from step I to III (a 2 step move) and escaped poverty, household “24” moved out of poverty by moving from step II to step III (a one step move), while household “9” moved from step I to step IV (a three step move). Note that households like “4” moved up from step I to II but is not a “mover out of poverty” as it did not move above the poverty line.
- *Chronic Poor*: Those in categories I or II in both periods, which includes both households in the same step (such as households “1” and “12”), households like “4” who moved up, but not above step II, and households like “18” who actually fell from step II to step I.
- *Always non-poor*: those who were above step II in both periods (again, this consists of households who stagnated (household “25”), rose (household “85”), or fell but not into poverty (there are none in this case).
- *Faller (from above poverty line)*: above step II in the initial period and fell into poverty i.e. below step II (such as household “17”).

Figure 2: Example of a Community Mobility Matrix from Kolumbuthurai, Jaffna (Sri Lanka)

		CPL								
15 years ago	Now →	I		II		III		IV	Total	
↓	I	1	7	30/14	4	21/7	6	10	9	69
		2	6/1	31/1	7	21/6	8	7	89/6	
		3	33	30/8	13		10	85/1	14	
		5	85		17	35	10/1	6/1	85/1	
		9	10		21A	17/1	5	33	30	
		11	14/2		20A	7/1	23	28/2	81/4	
		14	27		23/A		7/1	89/6	9	
		21	1		7/1C	24/4	10/4	11/2	24/1	
		23			10A		10/6	5/2B	Rameen	
		24			19/1				10	
								11		
								23/5		
								29/1		
		<i>Chronic Poor</i>						<i>Movers out of poverty</i>		
	II	18			12	10/1	20/1	11	26	
		20					24	21/6A		
		22			15		54/1	24		
		16			19		5/2A	10		
		9			16		7/5	11		
		12			54		5/3			
		3/2					35/5			
							11/2D			
	III	17					25		5	
	IV	Did not exist 15 years ago								
	Total	30			24		27	19	100	

Income dynamics and mobility. In addition to the four broad transition categories (*movers out of poverty*, *fallers into poverty*, *chronic poor*, *always non-poor*) the mobility matrix also provides an opportunity to differentiate upward and downward changes in well-being

separately for the initially poor and the initially non-poor and to distinguish movement within the poor and non-poor. Some poor households move up, but not out of poverty (such as household 4 who moved up from step I to step II) while many non-poor move down, but not into poverty.

Table 3 presents a few summary statistics that were developed to analyze trends in mobility for different groups within communities and to compare across communities that illustrate many of these underlying concepts. Directional income movement is captured for the whole village, poor and non-poor by the indicators that indicate rises on the ladder (PI, MPI, and MRI), falls on the ladder (FI, FPI, FRI), and the net movements (NPI, NPP, NPR). The Churning Index is a measure of non-directional movement—how many people moved steps.

Table 3: Summary indicators of mobility created for each community/village from the community mobility matrix

Summary Statistic/Index	Definition of the statistic	What it suggests conceptually
Indicators of general changes in well-being in the villages		
Prosperity Index (PI)	Number of HHs moving up at least one step/Total HHs	Overall growth in well-being.
Falling Index (FI)	Number of HHs moving down at least one step/Total HHs	Overall decline in well-being.
Net Prosperity Index (NPI)	(Number of Movers – Number of Fallers)/Total HHs	Net growth in well-being
Indicators of change, distinguished by initial position of the household		
Moving out of Poverty Index (MOP)	(Movers crossing CPL)/Total HHs poor in the initial period	Poverty reduction over time
Upward movement of the Poor Index (MPI)	(Number of HHs initially poor moving up at least one step)/Total HHs poor in the initial period	Extent of upward mobility of the poor
Falling of the Poor Index (FPI)	(Number of HHs initially poor falling by at least one step)/HHs poor in the initial period	Decline in well-being of the poor
Net Prosperity of the Poor Index (NPP)	MPI- FPI	Net growth in well-being of the poor
Upward movement of the rich/non-poor Index (MRI)	(Number of HHs initially non-poor moving up at least one step)/Total HHs non-poor in the initial period	Extent of upward mobility of the non-poor
Falling of the Rich Index (FRI)	(Number of HHs initially non-poor falling by at least one step)/HHs non-poor in the initial period	Decline in well-being of the non-poor
Net Prosperity of the Rich Index (NPR)	MRI - FRI	Net growth in well-being of the non-poor
Falling of the Rich into Poverty Index (FRIP)	(Fallers crossing CPL from above)/HHs non-poor in the initial period	Decline in well-being of the non-poor into poverty
Shared Prosperity Index (SPI)	MPI – MRI	Whether net mobility or growth in community was pro-poor (positive) or pro-rich (negative) or neutral.
Indicator of general mobility (non-directional)		
Churning Index (CI)	(Number of HHs that moved by at least one step, up or down)/Total HHs or also equal.	Measures the degree of movement in the village.

Figure 3 depicts some of these statistics visually using a six step community mobility matrix. In particular, the darker green region is MOP (poor who moved up sufficiently to be out of poverty) while MPI (upward movement of the poor) includes *both* the green shaded regions— MOP plus those who moved up while not crossing the line.

Figure 3:. Example of a Community Mobility Matrix from Village Tikrikhurd, Uttar Pradesh (India)

10 years ago	Now →	1	2	3	CPL			Total
↓	1	1,3,4,5,6,7,8,10,11,12,13,15,19,21,22,24,25,26,27,28,29,30,32,46,47,48,49,51,53,56,57,83,84,85,110,112,113,114,116,117,118,123,124,125,126,128,133,134,135,139,149,150	14,23,33,50,59,64,108,109,119,120,122,129,130,131,132,137,138,	107	20,76,82,86,87,136	9	34	78
	2	42,44,45,67,95,111,140,141,145,145,147,148	9,16,17,38,39,40,41,43,54,58,65,66,68,69,70,71,72,73,80,89,94,127,142,143,144	36,37,52,55,60,61,62,63,75,103,104,115	81,88	7	79	53
	3			35				1
	4	2,106,121	74		91	92		6
	5	18,31				77		3
	6						90,96,97,98,99,100,101,102,105	9
	Total	69	43	14	9	4	11	150

MRI: Only one HH that was initially rich moved up further

The statistics – all calculated as ratios relative to some initial population (either “initially poor” for MPI, all HHs for churning, or “initially non-poor” for FRIP) – summarize the distribution of movement from each community matrix, irrespective of the number of households sorted and the number of steps. Being ratios, the statistics also render themselves easily to comparison and analysis can be conducted around communities with different mobility patterns to understand how and why there may or may not be growth or other community characteristics in later research. However, one important point is that all of these indices use only the *direction* of change and not the number of steps crossed. That is, a move from step II to step III enters into the “prosperity” calculations exactly the same way as a move from step II to step V, even though the latter is, in some sense, a “bigger” change. However, since the steps on the ladder are not calibrated to indicate the “magnitude” of the gaps across the steps, there is no way even in the same village to say how “big” a move from step II to III is compared to a move from step IV to step V even though these are both “one step” moves, or that a move from step II to IV is twice as large as a move from step II to III. Moreover, even if this were possible within a single village, since the focus groups used different numbers of categories there is no way to know whether a “one step” movement even from the same step (e.g. from step I to step II) represents the same magnitude of mobility in one village that might have only five steps versus another that may have used an eight step ladder. Therefore all we are able to compare is the direction of movement (up or down) and the initial classification of the household by step in relation to the community poverty line.

II.b) Measures of mobility within villages across the study regions

Table 4 presents the average across all sampled villages for a few of the statistics from the community mobility matrix for all study regions. One point to stress from this table is that, due to the study design, there are large differences in the number of villages participating in the MOP study across the study regions (since there were a number of research instruments, fieldwork in each village was a substantial exercise). In the states of India there are large numbers of villages (110 in Uttar Pradesh, 80 in West Bengal), but in many study regions there are only ten to a dozen so participating villages (Philippines, Indonesia) and in conflict countries even fewer. This highlights again why we refer to the results per “study region” to emphasize that these estimates are based on large numbers of households per sampled village (intended to be complete rankings of all households) but small(ish) N of villages. Hence the focus is on the variation and co-variation across villages rather than making comparisons across countries.

That said, one fact that does emerge from this table is the distinctiveness of the study regions from Africa in the extent to which the well-being of the non-poor fell. That is, the extent to which those initially poor rose is quite similar, if anything a little higher in Africa, but overall nearly 50-60 percent of the non-poor saw their well-being fall by at least one step.

Table 4: Summary of community mobility matrix statistics across study regions								
Region	Number of villages	NPI	MOP	MPI	MRI	FPI	FRI	FRIP
Asia								
Andhra Pradesh	56	0.190	0.224	0.380	0.223	0.067	0.216	0.140
Bangladesh	16	0.183	0.329	0.475	0.157	0.074	0.421	0.330
Philippines (Bukidnon)	10	0.199	0.187	0.294	0.185	0.013	0.104	0.068
Thailand	32	0.460	0.342	0.513	0.378	0.021	0.118	0.108
Uttar Pradesh	110	0.139	0.213	0.317	0.119	0.057	0.239	0.188
West Bengal	80	0.216	0.308	0.445	0.239	0.079	0.281	0.215
Conflict								
Afghanistan	6	0.287	0.472	0.523	0.250	0.018	0.324	0.284
Assam	50	0.050	0.106	0.200	0.086	0.060	0.244	0.192
Colombia	3	0.600	0.152	0.671	0.651	0.027	0.197	0.172
Indonesia	10	0.397	0.364	0.541	0.207	0.008	0.253	0.199
Philippines (Conflict)	10	0.096	0.213	0.329	0.093	0.064	0.434	0.350
Sri Lanka Conflict	6	0.336	0.342	0.537	0.313	0.095	0.322	0.198
Africa								
Malawi	14	0.049	0.170	0.435	0.210	0.247	0.670	0.537
Senegal	15	0.213	0.254	0.469	0.318	0.159	0.567	0.446
Tanzania - Ruvuma	7	0.237	0.198	0.539	0.187	0.154	0.516	0.361
Uganda	17	0.228	0.381	0.574	0.335	0.163	0.467	0.281
Other								
Mexico	11	0.648	0.550	0.709	0.360	0.023	0.089	0.072
Morocco	9	0.120	0.165	0.346	0.143	0.112	0.368	0.316

The first striking element to emerge from the community mobility matrices is the relatively large variations across villages/sampling clusters in the perceived *changes* in prosperity and poverty. Perhaps due to constraints of household survey sampling that do not produce reliable estimates of “village” level poverty most of the attention in poverty research has gone either to the changes in poverty at the *national* level and its relation to overall economic progress, changes in inequality, and perhaps specific poverty programs or into research of the correlates of poverty at the *household* level (as in the standard poverty profiles). Relatively less attention has gone into the variation of poverty at the *local* level and its potential determinants.

Prosperity. We begin with an examination of the indices of “prosperity.” Figure 4 shows the box-plots to illustrate the central tendency and dispersion of the prosperity across communities in the study. The box plot is a useful graphical device as it shows the median (line in the middle of the box), the 25th percentile (bottom edge of the box) and 75th percentile (top edge of the box) so the variation across villages can be shown alongside the variation across study regions.

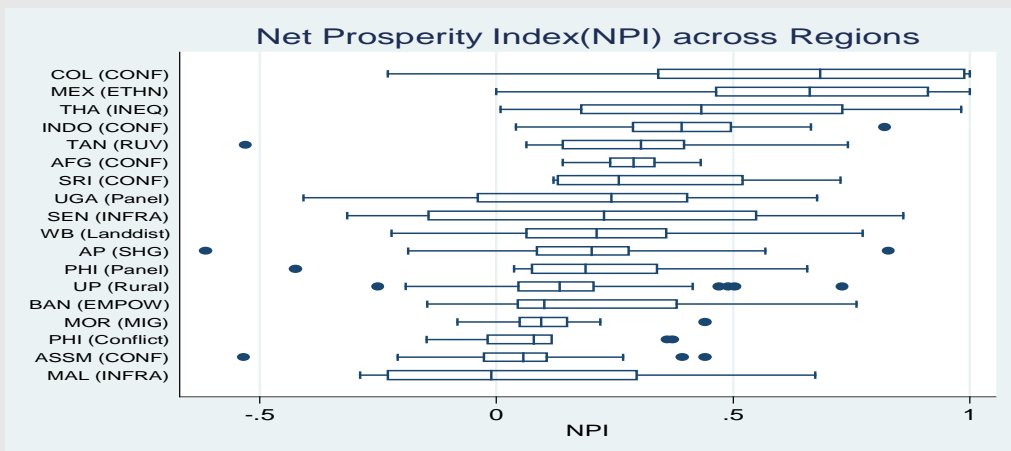
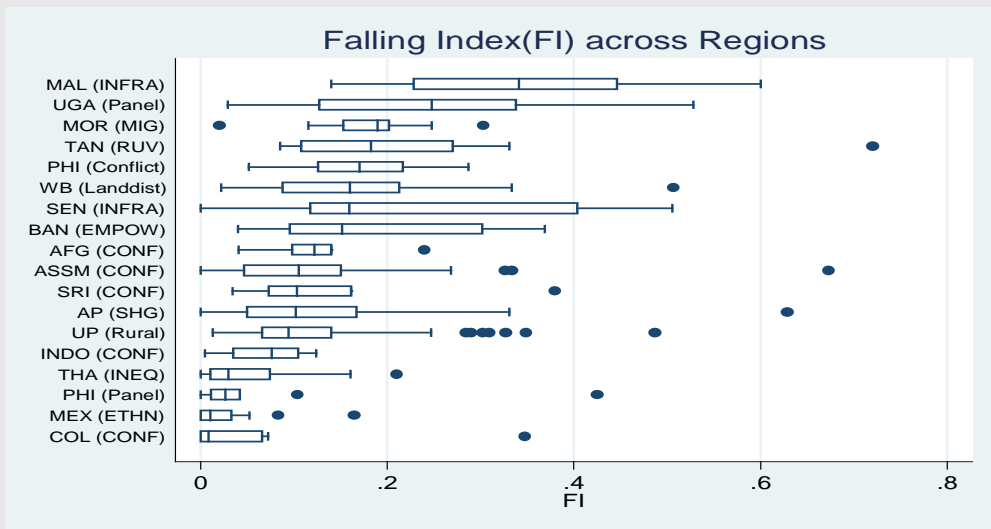
There is a wide range of outcomes across the study regions. Net prosperity over a decade varies from only about 5 percent of households moving up versus moving down in Malawi to over 60 percent in the sampled regions of Mexico²¹. Also interesting is that much of the difference in prosperity is due to the proportion falling not just the proportion rising. So, for instance, in many African regions with low net prosperity, many households moved up—but many more moved down. Comparing Malawi and West Bengal one finds that 43 percent of poor households and 21 percent of non-poor households moved up in Malawi and these figures were similar, 44 percent and 24 percent for West Bengal—but net prosperity is only 4.9 percent in Malawi versus 21.6 percent in West Bengal. The difference is entirely in the falling; in West Bengal 8 percent of poor and 28 percent of non-poor households fell, while in Malawi 25 percent of poor and fully 67 percent of non-poor households fell over this period.

The advantage of having estimates for each community is that we can show the variation in prosperity across sampled villages. The box plots show the enormous variability across communities. That is, the within sample variations across communities in the study regions are nearly as large as the cross region differences. So, for instance, Thailand is one of the countries with highest NPI—but the bottom 25 percent of villages have NPI lower than all but six regional medians. Malawi has the lowest NPI of any country, but the top 75 percent of villages have NPI at the cross-region median.

If one does a simple analysis of variance on NPI (net prosperity) one finds that 73 percent of the variation across village is variation across villages *within* a study region. This suggests that while overall national context is important to poverty reduction, there are also locality specific trajectories that, over a period of a decade make a big difference to the individuals in those places.

²¹ Again, as the samples are not representative of the country, as there are only 12 study villages in Mexico, some of the cross country differences represent sampling phenomenon, not country wide phenomena.

Figure 4: There are large variations in all measures of prosperity (rising, falling, and net) across study regions and across communities within study regions



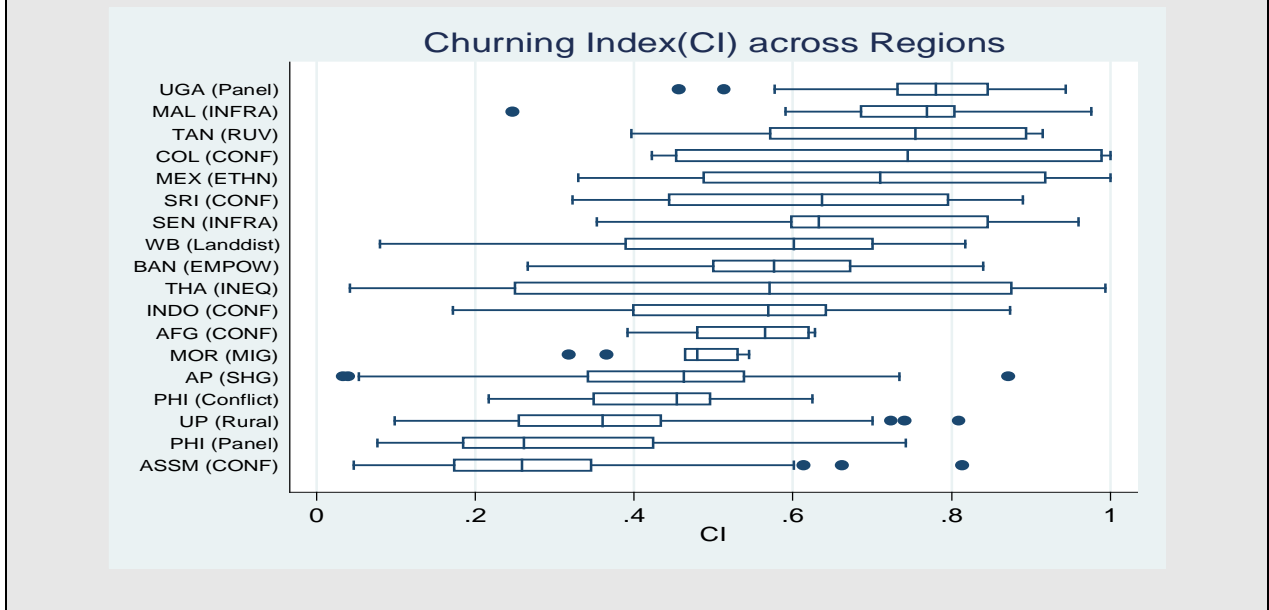
What do we make of these large gaps in the *changes* in well-being across communities? That location matters in *levels* of well-being is not a surprise to anyone. While most of the effort has been to establish the individual or national correlates of poverty reduction, Jalan and Ravallion (2002) use a panel of 5600 farm households over the six-year period 1985–90 for four contiguous provinces in southern China and estimate a micro model of consumption growth which can identify underlying (including time-invariant) geographic effects while at the same time allowing for latent heterogeneity in household-level growth rates. They show that the growth rates at the farm-household level of consumption expenditure are a *decreasing* function of own wealth (consistent with conditional convergence dynamics) but is an *increasing* function of average wealth in the county of residence. Households living in localities that are richer also have higher growth of consumption expenditures.

These large variations are helpful for the MOP study design. The design was to look at “local” impacts on poverty. Were poverty simply individually distributed and a “national” phenomena then the community differences could have been small. Either these were driven by the sampling, in which case some of the initial hypothesis must have been very, very true in order to generate these large differences as a result of the sampling or there are large community specific features to be explained.

Mobility. Figure 5 shows the same box-plot graph for the churning index—which captures all movements, of whatever direction. Not surprisingly, conflict regions like Colombia and Sri Lanka are near the top of the list. Perhaps more surprisingly the study regions in African countries (Uganda, Malawi, Tanzania Ruvuma and Senegal) show higher volatility (upward/downward movement). That is, the economic stagnation in these countries does not seem to be a simple “radial” shrinking of all household’s well-being, rather it has been accompanied by many households moving up and many households moving down. These are amazingly high levels of churning—Malawi has a churning index of almost 80 percent—which means only 20 percent of households remained in the same well-being category over a period of 10 years, which was driven as much by moving down as moving up.

The states of India (except West Bengal) show much more common patterns of considerable stability. Uttar Pradesh shows about 65 percent of households remaining in their same well-being category over a decade.

Figure 5: Higher volatility of distribution in Africa



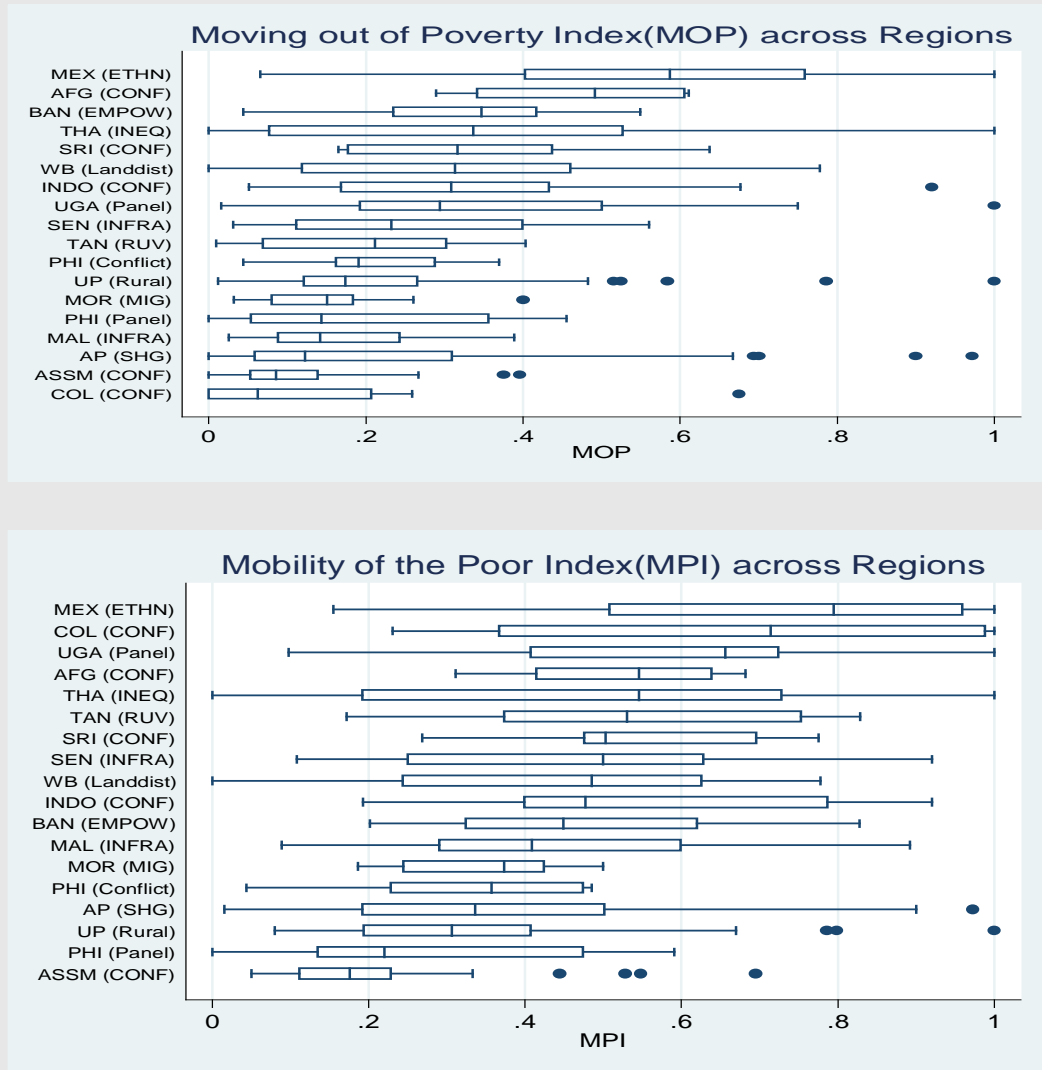
Movement of the poor. What about those who start initially poor in the distribution – the population group of interest to the MOP study? Figure 6 summarizes the MOP (fraction of poor now non-poor) and MPI (fraction of poor who moved up) indices for all study regions. The box plot on MOP shows large differences across study regions – it suggests a lot of movement out of poverty in Mexico, relatively much less in conflict affected Colombia and Assam.

A major point is the large within study region differences across villages in improvements in poverty mobility. The box plots show that the movement up of the poor is not primarily a “study region” phenomena—that is, a household’s likelihood of moving up from poverty is related to what village they were at least as much as the country/study region the village itself was in. The simple analysis of variance as with NPI finds that 75 percent of upward movement of the initially poor (MPI) was variation across villages within study regions, only 25 percent depended on the study region.

Any index constructed for movement out of poverty is subject to the placement of a threshold line that can vary across communities and contexts. Placement of such relative thresholds can seriously affect reporting of changes in income or overall well-being²². Given problems that relative lines like the community poverty line (CPL) pose, a broader index of upward movement of the poor (MPI) is used. Like the MOP index, large variation is observed for mobility of the poor both within and across study regions.

²² This can be seen most dramatically in a country experiencing very rapid increases in incomes and living standards, as Erikson and Nolan (forthcoming) show for Ireland in the period from the mid-1990s. With purely relative income poverty lines, set at 50 percent or 60 percent of equivalised disposable income, the authors report a substantial increase in poverty over this period in Ireland. But if the poverty line is set at 50 percent or 60 percent of the 1994 median and subsequently increased only in line with consumer prices – i.e. the poverty line is “anchored” – then poverty is seen to fall very substantially.

**Figure 6: Movement out of Poverty (MOP) and Mobility of the Poor (MPI):
Large variations both across and within study regions**



The large differences across villages in the *changes* in the overall rankings of perceived well-being of households suggest that potentially there are locality specific elements of poverty experiences to be explained. In this sense, they set up well the stage for qualitative exploration – of processes and interactions among factors that explain mobility or lack thereof in different contexts.

II.C) Impact of number of steps of the ladder on measured indices

One potential problem with the method of allowing each focus group to define the number of steps on the well-being ladder of life is that when the focus groups in the villages create different numbers of steps this will create systematic differences across villages in the

measures derived from the resulting mobility matrices. Imagine if two villages in fact faced exactly the same distribution of a cardinal measure of well being (money metric) and that households in the two villages moved by exactly the same amounts. It is possible that if the focus group divided this same underlying change in money metric distribution shift into more categories that then would appear to be more movement across categories than another village with exactly the same experience but which, through fatigue or indifference of the focus group or whatever, posited fewer categories.

India has 296 communities ranked and we compared the various indices across villages with categories from 5 (the most common value) to 10 (only about 5 percent of villages had 10 steps)²³. Comparing the unweighted average of the indices across states by number of categories reveals, perhaps surprisingly, that the systematic differences are small and far from uniform. The moving up from poverty (MPI) index is almost exactly the same for the 6 step and the 10 step villages (.36 vs. .37). The Net Prosperity Index (NPI) is slightly higher for 10 steps than 5 steps, but this is far from uniform as 7 steps is much higher than 8 steps. All of this is a bit confounded by the fact there were differences across states in the typical number of categories and when the analysis is done state by state the differences in the indicators across number of steps is even less uniform.

Table 5: All four Indian states, unweighted averages across states by number of steps on Ladder of Life								
STEPS	N	MOP_m	MPI_m	NPI_m	PI_m	MRI_m	CI_m	SPI_m
5	97	0.173	0.274	0.124	0.224	0.108	0.325	0.166
6	79	0.236	0.362	0.161	0.291	0.169	0.420	0.193
7	51	0.257	0.383	0.202	0.325	0.220	0.447	0.163
8	30	0.234	0.353	0.134	0.297	0.191	0.460	0.161
9	24	0.294	0.452	0.183	0.365	0.198	0.546	0.254
10	15	0.221	0.371	0.148	0.316	0.230	0.484	0.140
Total	296	0.223	0.344	0.154	0.283	0.166	0.411	0.178

What is most surprising, and even a bit puzzling, is that the Churning Index (CI) which measures movements across steps of the ladder, and which one would suspect of being most susceptible to measurement bias from the number of categories in the ladder or life, did not show any particular propensity to be higher. That is, it did not show more cross step mobility in villages with larger versus smaller numbers of steps on the ladder as the value at 9 steps is almost exactly the same as at 5 steps. Table 6 shows this state by state. While there appear to be some tendencies towards more churning in villages with a greater number of steps, for instance the CI in Uttar Pradesh increases from .28 at 4 steps to .44 at 6 steps and there is large increase in Andhra Pradesh as villages move from 9 to 10 steps, there is no overall pattern. In West Bengal the highest CI was for that (one) village with only 5 steps, in AP the CI is roughly the same for 5 steps and 9 steps. In the end there is just no consistent pattern that would allow any “adjustment” of the various indices for number of steps.

²³ There were some villages in Assam and Uttar Pradesh with four categories but no villages in Andhra Pradesh or West Bengal posited only four steps. A few villages in AP created more than 10 steps—but these were collapsed into 10 steps.

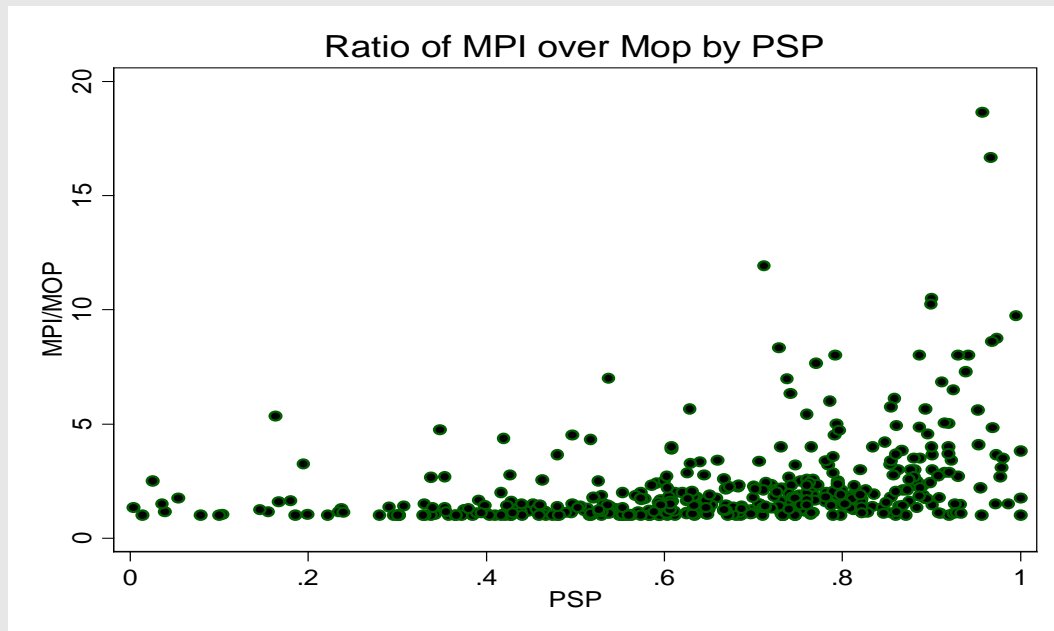
Steps	Uttar Pradesh		West Bengal		Andhra Pradesh		Assam	
	CI	N	CI	N	CI	N	CI	N
4	0.28	12					0.23	5
5	0.32	46	0.73	1	0.43	15	0.27	18
6	0.44	38	0.54	11	0.39	18	0.30	12
7	0.45	7	0.49	27	0.47	10	0.26	7
8	0.35	4	0.53	17	0.42	5	0.33	4
9	0.37	1	0.59	18	0.44	2	0.42	3
10	0.51	1	0.55	6	0.49	6	0.15	1

III. Co-movement of prosperity within villages

How does movement out of poverty relate with net prosperity across study regions and communities? Do the poor and non-poor co-move? Do initial poverty levels matter? This section graphs relationships between some of the indices from the community mobility matrix to address these questions and the policy debates they entail i.e. does growth or net prosperity matter for movement out of poverty or movement of the poor?

One initial point is that, if many people begin in poverty and far below the poverty line, we would expect to see more upward movement of the poor (MPI) compared to movement out of poverty (MOP) simply as a *mechanical* result as there are more people who can move up from poverty without moving out. Figure 7 graphs the ratio of MPI/MOP by proportion of people who started initially poor. Not surprisingly the figure suggests a fairly upward sloping relationship as the higher the proportion of the initially poor, the higher the number of movers among the poor, relative to the number of those who successfully move out of poverty. This does emphasize the subtlety of interpreting the MOP measure: as with any poverty indicator that does not account for “depth” of poverty (e.g. the “headcount” measure) it only counts movement across the poverty line.

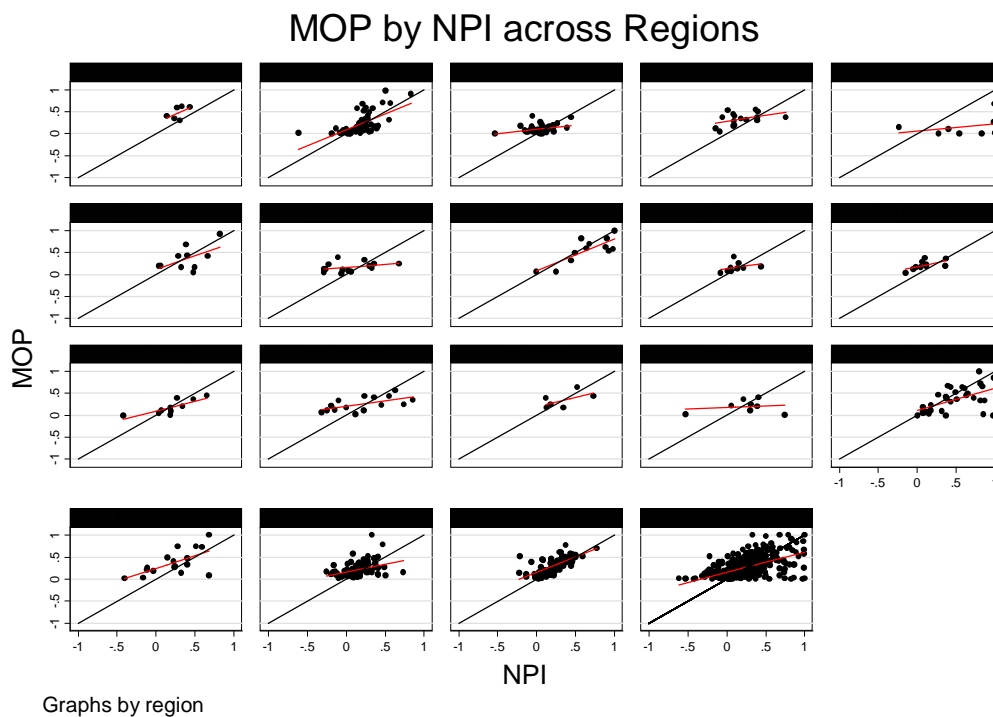
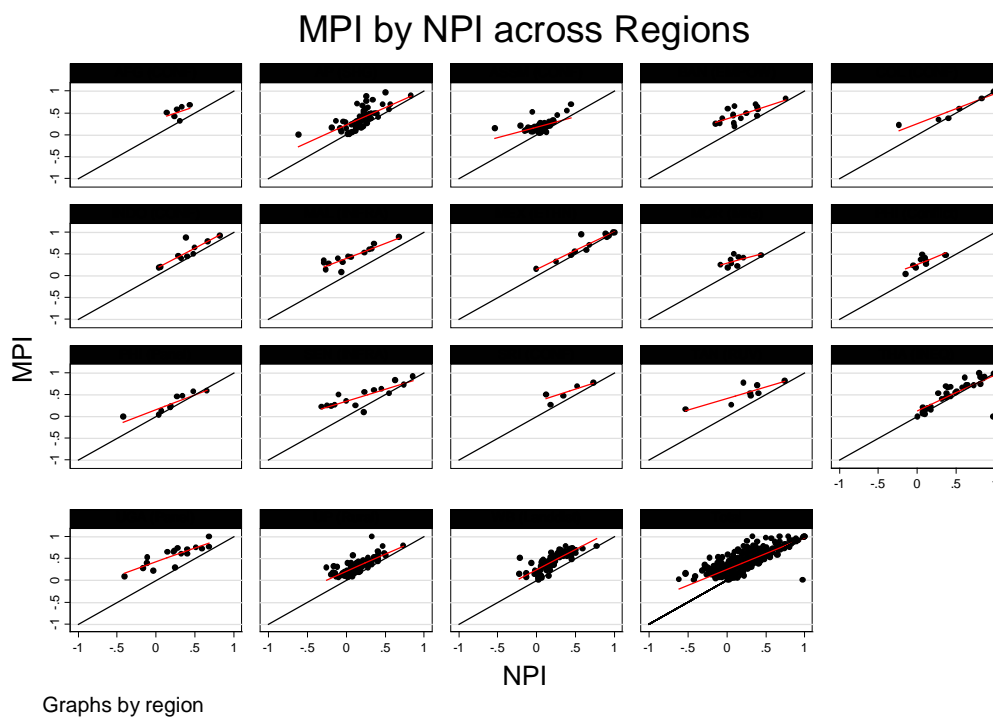
Figure 7: More people moved up while remaining poor (MPI/MOP ratio) the higher the initial poverty



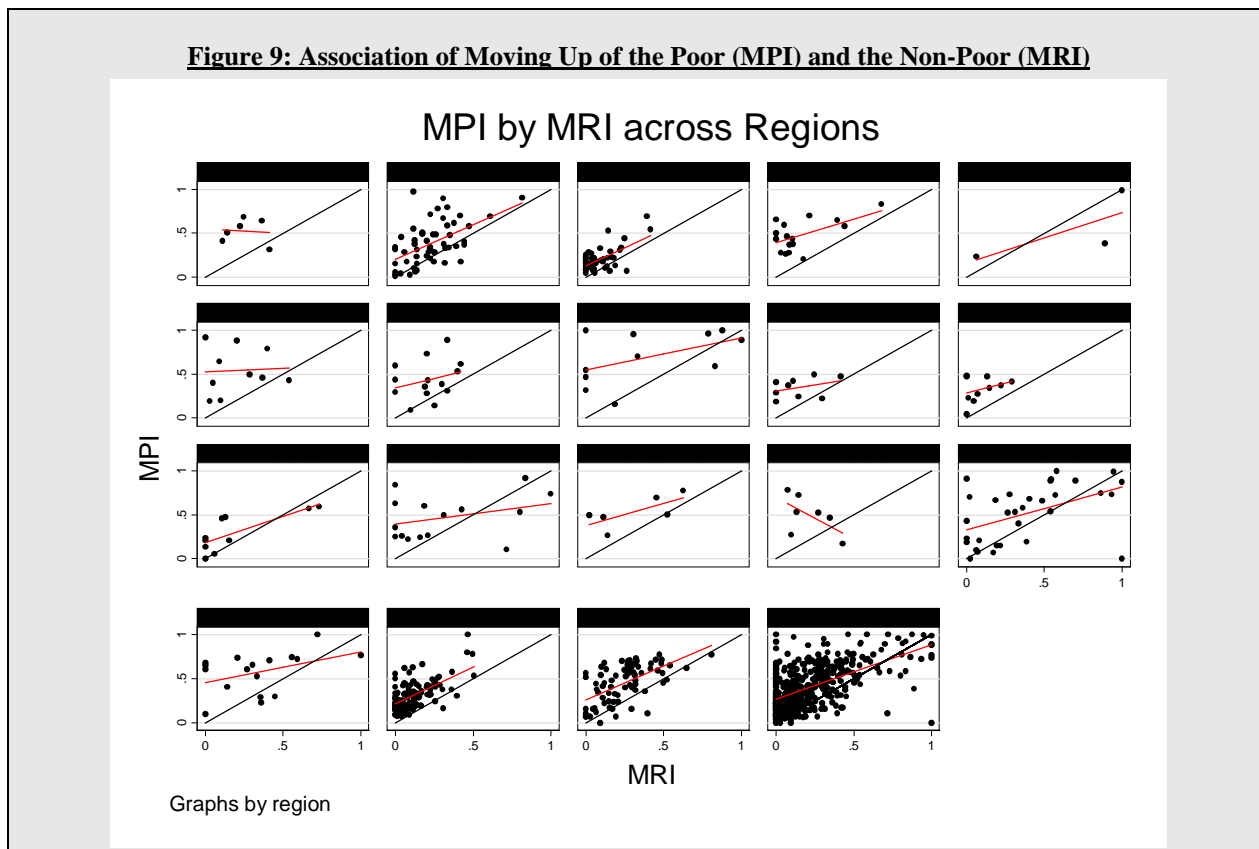
The first obvious question is the relationship between the movement of the poor (MPI) and the overall changes in prosperity in the village. Figure 8 shows the graph, for each study region, of MPI (vertical axis) and NPI (horizontal axis) where each village is a point. Also included in each graph is the regression line and a 45 degree line. If MPI and NPI were perfectly correlated then one would expect to see these points tightly clustered around a regression line with slope 1. In fact, some of the study regions appear to have such a one-to-one and close relationship while in others the relationship is much less tight. The slopes of the graphs are also different across study regions suggesting that there is a lot of contextual variation conditioning out net prosperity.

The graph of MOP and NPI shows a much less tight relationship, but, as discussed above, this is at least in part because villages start at very different levels of initial poverty and hence MOP varies independently of both MPI and NPI. That is, the lack of a tight relationship of MOP to overall village prosperity does not indicate 'the poor' are not sharing in overall growth, as it may simply be that people are moving up while in poverty but not out (as would be indicated by the tighter association between MPI and NPI than MOP and NPI).

Figure 8: Association of MOP/MPI with Net Prosperity



Some of the relationship between MPI and NPI is arithmetic as MPI is one component of NPI ($NPI = MRI - FRI + MPI - FPI$) and so overstates the extent to which the fortunes of the non-poor and poor within villages are linked. Figure 9 shows the association across villages of the MPI (fraction of people who began poor and moved up) and MRI (fraction of people who began non-poor and moved up). In other words, it shows how the fate of the poor and non-poor move together across villages. This figure and the accompanying regressions of MPI on MRI village by village establish three points.



First, we know from the decomposition of variances across villages above that there is a large degree of variation across villages in both overall prosperity (NPI) and in upward movement of the poor (MPI). It appears that, *on average* the poor and non-poor moved up together across study communities and regions. The pooled regression across all villages (with fixed effects for each study region) shows a coefficient of .54 and R² (as a measure of the association) of .32 (not including the fixed effects). This is not to suggest that upward movement of the non-poor “causes” the upward movement of the poorer household but rather the findings suggest that there are large village specific shocks to prosperity and that these affect the movements of the poor and non-poor households, in some cases equally while in other cases the shocks seem to have benefited the non-poor more than proportionately.

Before concluding that there is typically not “shared growth” (and before discussing the heterogeneity of the results across countries) it is well known that measurement error in MRI would bias the regression estimate of the association between MPI and MRI result downwards

(an attenuation bias towards zero). So we tried two simple techniques to address measurement error. One technique in the bivariate case is to simply perform a “reverse regression” (regress MRI on MPI) as the reciprocal of the estimated coefficient is an estimate of the same association, but not biased up (since the coefficient is biased down its reciprocal is biased up) and hence the direct and reverse regressions provide a lower and upper bound on the association. Except for two cases where (perversely) the coefficient is negative (both of which are conflict study regions with very small samples) in each case the upper bound is one or higher.

Table 7: Pooled regression of MPI on MRI and reverse regression suggests that on average the poor and non-poor moved up together across study regions							
Countries	N	OLS Coefficient	Std. Errors	R-squared	1/coeff from reverse regression	t-test H0: $\beta=0$	t-test H0: $\beta=1$
Pooled (with fixed)	471	0.54	0.05	0.32 ^a	2.26	11.93	10.29
Regions that reject zero association and fail to reject one for one							
Uttar Pradesh	111	0.84	0.15	0.36	2.35	5.77	1.13
West Bengal ^b	81	0.76	0.11	0.35	2.20	6.94	2.16
Andhra Pradesh	57	0.79	0.13	0.29	2.72	6.10	1.65
Assam	51	0.83	0.21	0.40	2.06	3.88	0.81
Regions that reject zero association, but reject a one for one association							
Thailand	33	0.49	0.21	0.24	2.08	2.39	2.45
Bangladesh	17	0.50	0.12	0.38	1.31	4.14	4.12
Mexico	13	0.39	0.18	0.27	1.44	2.17	3.42
Philippines	11	0.60	0.08	0.60	1.00	7.55	5.01
Sri Lanka (Conflict)	7	0.50	0.23	0.50	1.02	2.20	2.17
Regions that fail to reject zero association but reject a one for one association							
Uganda	18	0.27	0.18	0.11	2.46	1.55	4.10
Senegal	16	0.32	0.23	0.15	2.20	1.42	2.98
Indonesia	11	-0.18	0.44	0.01	-12.99	-0.41	2.68
Morocco	10	0.29	0.25	0.14	2.11	1.14	2.87
Regions that fail to reject either no association or one to one association							
Malawi	9	0.43	0.37	0.08	5.68	1.17	1.56
Tanzania	7	0.07	0.79	0.00	67.11	0.08	1.18
Afghanistan	7	-0.10	0.65	0.00	-14.71	-0.15	-0.14
Colombia	4	0.57	0.29	0.52	1.11	1.96	1.46
Notes: a) This is the R2 of the bivariate regression of MPI on MRI excluding the study region fixed effects, with fixed effects the R2 increases to .422, b) West Bengal is included in this category on the basis of the IV results in table 8.							

A second technique for addressing measurement error is to use an instrumental variable. Fortunately, in the case of India the male and female focus groups ranked the households independently so we have a classic instrumental variable of repeated measurement. If one performs the same regressions using the estimates of MRI from the female FGD mobility matrices as the instrument for the male estimates of MRI one gets estimates that for each of the

Indian states are very close to one (Table 8) as the estimates are higher by a magnitude that suggests measurement error is 10 to 20 percent of the total observed variation in MRI.

Table 8: Using repeated measurement for instrumental variables estimation to control for measurement error produces higher estimates of the association of MPI and MRI					
States of India (sorted by sample size)	N	Instrumental variables estimation (Using female FGD estimate of MRI)		OLS estimation	
		Coefficient	Std. err	Coefficient	Std err
Uttar Pradesh	111	0.92	0.25	0.84	0.15
West Bengal	81	0.93	0.13	0.76	0.11
Andhra Pradesh	57	0.77	0.31	0.79	0.13
Assam	50	1.01	0.31	0.83	0.21
India (pooled)	299	0.95	0.09		

This co-movement of the poor and non-poor across villages is an important background to the larger *Moving out of Poverty* study. This suggests that there are large “shocks” that impact the prosperity of villages that appear to be not just household and not regional. Moreover, these shocks are not specific to the poor, but affect poor and non-poor alike (though in differing degrees). One important agenda of the broader study is to identify the correlates of local prosperity—is it economic conditions, infrastructure, functioning of local democracy, social conditions?

Second, though the increases in well-being of the poor and non-poor tended to move together across villages, the extent of their co-movement differed across regions. As seen above in the four Indian states the movement was essentially one for one. However, in the other regions other patterns are displayed.

In Table 7 one can see a set of five study regions can reject that the association of MPI and MRI is zero across villages but also estimate the association to be less than one for one. In these villages as the proportion of non-poor households moving up increased the proportion of poor households moving up increased by less, presumably resulting in an increase in inequality.

In other regions the association was even weaker, although all of these regions contain very few villages and hence this “failure to reject” zero association is in part simply low statistical power. For instance, the point estimate for Malawi is .43 but the precision of the estimate is so low that neither zero nor one can be statistically rejected.

In the context of the larger *Moving out of Poverty* study this heterogeneity across regions is also of great interest as it suggests that the determinants of the upward movement of the non-poor and poor are not uniform. One of the explicit hypothesis of the *Moving out of Poverty* study, emerging from earlier research, is that the strategies for the poor may differ from the non-poor and they may be affected differentially.

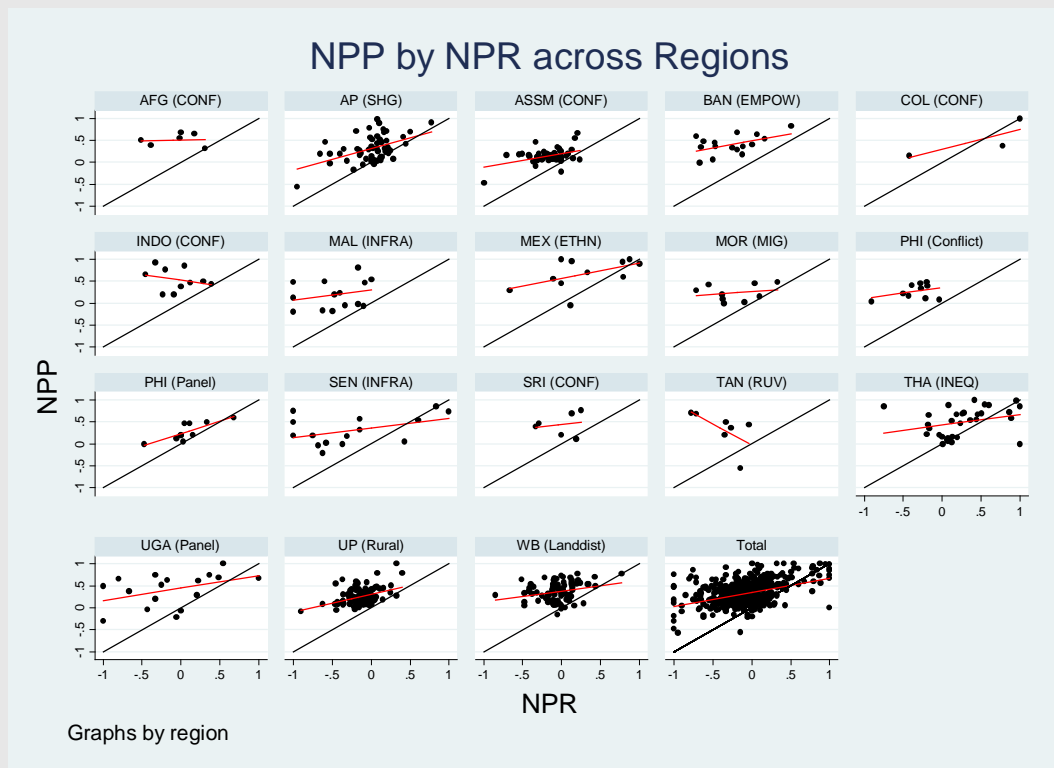
Third, the large variation across villages in the extent of movement of the poor and non-poor is itself of interest. This raises the question of whether these differences across villages in “shared prosperity” are the result of identifiable features about either the political and social structures in the villages or the nature of the positive and negative economic shocks to those

villages. Exploring and perhaps explaining these differences is a huge agenda of the overall MOP study.

So far we have only examined the relationships between upward movements of the poor and non-poor (MPI and MRI) and between movement of the poor (MPI) and the net prosperity of the village (NPI). But it is not a given that positive and negative shocks are symmetric. In fact, the association between falling of the poor (FPI) and falling of the non-poor (FRI) is much weaker than the association between MPI and MRI. Hence, as illustrated in figure 10, the co-movement across villages of *net* prosperity of the poor and non-poor is much less than their co-movement of upward mobility.

This may reveal asymmetries in gains versus losses, but it may also be a mechanical effect of a ladder of life that is “bottom coded.” That is, those on the bottom step of the ladder of life cannot move down—even if their well-being has fallen. Therefore villages with large proportions of the non-poor falling may not see similarly large falls among the poor since many of them began and ended on the bottom most step. For instance, in Table 4 one sees that in Tanzania, Uganda, Senegal the fallers among the initially poor was about 15 percent while the fallers among the non-poor was about 50 percent. Almost certainly the “truncation” effect of the ladder of life approach makes it more difficult to observe common falls than common rises as the “top coding” problem is much less severe given much fewer people were in the top most category in either period.

Figure 10: Much weaker association between ‘net’ movement of the poor (NPP) and rich (NPR)



IV. Conclusions

One of the overall objectives of the *Moving out of Poverty* study is to examine the interaction of households with their local context in devising means of escaping from poverty. This technical paper examines only one outcome (the community mobility matrix) of one research instrument (the focus group discussions on Ladder of Life). It establishes five empirical findings that are relevant for the overall study.

First, using the complete ranking of entire villages allows the estimation of village specific measures of changes in well-being and finds that there is large variation across villages in the reported changes in moving out of poverty (MOP), upward mobility of the poor (MPI) and overall prosperity (NPI). Around three quarters of the observed variation across all villages is across villages within study regions (with therefore only a quarter of the variation associated with the country/state level differences).

Second, there is substantial co-movement of the upward mobility of the poor and non-poor across villages.

Third, the extent of the co-movement varies substantially across study regions—in the states of India (Uttar Pradesh, West Bengal, Andhra Pradesh, Assam) the movement is essentially one for one—consistent with large village specific and distribution neutral shocks. In other study-regions the strength of the co-movement is much smaller.

Fourth, within each study region there is large variation in the upward mobility of the poor and non-poor—some moving similarly, some villages where poor moved up more than non-poor, other villages with greater upward mobility of the non-poor than poor. Understanding the factors behind these differing local experiences is one objective of the study.

Fifth, the co-movement of upward mobility is much stronger than of downward mobility. In particular, the study regions in Africa are marked by larger downward movement of the non-poor than poor. This is perhaps simply a methodological issue from the “bottom coded” nature of the Ladder of Life exercise, in which many people were classified as being on the bottom step on both periods, even though their well-being may have deteriorated.

The *Moving out of Poverty* study is moving ahead in integrating these findings with the information generated by the other instruments (the household surveys, the life histories of movers and non-movers, the other focus groups) to form a coherent picture of the multiplicity of paths out of poverty.

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Annex 1. Overview of Study Tools		
<i>Data Collection Method</i>	<i>Purpose</i>	<i>Informants</i>
<u>Activity 1. Selective Literature Review</u>	<ul style="list-style-type: none"> To provide background to the key growth and poverty puzzles in the country; and To help design the study. 	Secondary sources
<u>Activity 2. Key Informant Interview or a Workshop: National Timeline</u>	<ul style="list-style-type: none"> To identify key policy questions to be addressed by the study, and To develop a national timeline of key events and policies that have helped or hindered people's movements out of poverty. 	Various policy experts from government, civil society, & private sector
<u>Activity 3. Community Profile</u>	<ul style="list-style-type: none"> To identify community level factors that have helped or hindered movement out of poverty and the overall prosperity of the community over the past 10 years; and To quantify and code data emerging from focus discussions based on their ratings of issues ranging from community prosperity to freedom and inequality. 	<ul style="list-style-type: none"> Key informants
<u>Activity 4. Key Informant Interview: Community Timeline</u>	<ul style="list-style-type: none"> To understand <i>community</i> level events or factors that have helped or hindered movement out of poverty and the overall prosperity of the community; and To gain an understanding of the local context. 	2-4 local key informants in a group or separately
<u>Activity 5. Focus Group Discussion: Ladder of Life</u>	<ul style="list-style-type: none"> To identify the range of factors that helps or hinders movement out of poverty or prosperity over time at the <i>community</i> level; To identify the range of factors that helps or hinders movement out of poverty or prosperity over time at the <i>household</i> level; and the reasons for movement at the different levels; To identify the sequencing and interaction among the factors at the household level that enable movement at different steps of the Ladder of Life; and To identify the movement status of specific households in the community. 	<ul style="list-style-type: none"> 1 Focus Group Discussion (FGD) of adult men 1 FGD of adult women
<u>Activity 6. Focus Group Discussion: Livelihoods, Freedom, Power, Democracy and Local Governance</u>	<ul style="list-style-type: none"> To understand trends in economic opportunities for the community; To understand the impact of government rules and regulations and other factors on access to economic opportunities; To explore people's understanding of the concepts of freedom, power, and inequality; and how these concepts relate to economic mobility and wellbeing; and To explore people's understanding of democracy and how democracy is working at the local level. 	<ul style="list-style-type: none"> 1 FGD of adult men 1 FGD of adult women (Depending on the local context, this FGD can be conducted as one discussion; or can be divided into two sections: <ol style="list-style-type: none"> One group undertaking discussion on Section 1: Sources of Economic Opportunities and the Role of Governance; Another group exploring Section 2: Exploration of Freedom, Power, Inequality and Democracy. If divided into 2 sections, a total of 4 FGDs per community will be needed for this activity.

(continues on the following page)

Overview of Study Tools (cont.)		
<i>Data Collection Method</i>	<i>Purpose</i>	<i>Informants</i>
Activity 7. Focus Group Discussion: <u>Aspirations of Youth</u>	<ul style="list-style-type: none"> To explore youth aspirations for earning a living; and steps they are taking to prepare for their future. To explore youth understandings of the concepts of freedom, power, inequality and democracy; and how these concepts relate to economic mobility and wellbeing. 	<ul style="list-style-type: none"> 1 FGD of male youth 1 FGD of female youth
Activity 8. Two Mini Case Studies: <u>Community-Wide Events and Factors Affecting Mobility</u> Focus Group Discussion: <u>Conflict Timeline and Institutional Mapping</u> <i>(For countries affected by conflict)</i>	<ul style="list-style-type: none"> To provide in-depth analysis from a range of perspectives on two important events or factors affecting the overall economic prosperity of the community over the past ten years. To understand public safety conditions and trends over the last ten years, and local mechanisms for ensuring safety and resolving disputes in the community; To understand the major conflicts or disputes in the community over the last ten years; To assess how conflict affects livelihoods in the community; and To examine the functioning of and changes in community institutions in areas affected by conflict. 	<ul style="list-style-type: none"> Key informants and FGDs
Activity 9. <u>Household Questionnaire</u>	<ul style="list-style-type: none"> To identify the range of factors that help or hinder mobility of individuals within the larger context of their households 	<p><u>For countries with panel data:</u> Depending on panel sample size and sampling strategy chosen, the team should revisit panel households and interview an adult member of the household (30-60 years of age). If unable to identify a large enough sample from the panel, individuals may be randomly selected from households identified through the Focus Group Discussion: <u>Ladder of Life</u> that belong to a particular category of movement.</p> <p><u>For countries without panel data:</u> Select informants based on the household sorting exercise undertaken during the Focus Group Discussion: <u>Ladder of Life</u>.</p>

Overview of Study Tools (cont.)		
<i>Data Collection Method</i>	<i>Purpose</i>	<i>Informants</i>
Activity 10. Open-Ended Interview: <u>Individual Life Stories</u>	<ul style="list-style-type: none"> • To understand the life stories of how and why some individuals escape from poverty, and the factors and processes that led to their escape; • To understand the life stories of how and why some individuals manage to maintain their wealth, and the factors and processes that helped in maintenance of their status; • To understand the life stories of how and why some individuals remain trapped in chronic poverty, and the factors and processes that kept them in poverty; • To understand the life stories of how and why some individuals fall into poverty, and the factors and processes that led to their decline into poverty; and • To understand the factors and processes that come together for accumulation or depletion of assets and savings. 	<p>Adults (men or women) who are 30 to 60 years of age. It is important that a Household Questionnaire be completed with each informant with whom the <u>Individual Life Stories</u> tool is conducted.</p> <p>Identification of informants follows a similar process as selection of informants for the questionnaire.</p>

Annex 2: Relationship of Community Poverty Line and Official Poverty Line.

After each focus group had constructed the ladder of life and told which step on the ladder was “above poverty” and hence set the community poverty line, each focus group was informed of the “official poverty line” for a family of four and asked where on the ladder of life a household with that level of the official poverty line would lie.

Table A.1 below summarizes for all study regions the relationship between the step where the discussion group placed the CPL and the step where they placed the OPL. The analysis is based on responses to the question: What is the relationship between the step on the Ladder of Life where households are no longer considered poor and the official poverty line? Is the former above; at the same level; or below the official poverty line?

Table A.1: Comparison of Community Poverty Line (CPL) and Official Poverty Line (OPL) across study regions

Region	Male FGD					Female FGD				
	N	Above	Same	Below	Mean	N	Above	Same	Below	Mean
Afghanistan	5	0.0	80.0	20.0	2.20	6	0.0	83.3	16.7	2.17
Andhra Pradesh	56	46.4	50.0	3.6	1.57	56	48.2	48.2	3.6	1.55
Assam	50	92.0	8.0	0.0	1.08	50	86.0	10.0	4.0	1.18
Bangladesh	16	25.0	37.5	37.5	2.13	16	31.3	43.7	25.0	1.94
Colombia	8	50.0	12.5	37.5	1.89	8	0.0	12.5	87.5	2.88
Indonesia	9	33.3	33.3	33.3	2.00	9	22.2	55.6	22.2	2.00
Malawi	3	0.0	0.0	100.0	3.00	3	33.3	0.0	66.7	2.33
Mexico	10	30.0	0.0	70.0	2.40	10	30.0	20.0	50.0	2.20
Morocco	9	44.4	44.4	11.1	1.67	9	33.3	55.6	11.1	1.78
Philippines - Bukidnon	10	90.0	10.0	0.0	1.10	10	90.0	10.0	0.0	1.10
Senegal	15	53.3	26.7	20.0	1.67	15	46.7	26.7	26.7	1.80
Sri Lanka - Conflict										
Tanzania - Ruvuma	6	83.3	16.7	0.0	1.17					
Thailand	40	50.0	25.0	25.0	1.75					
Uganda	11	36.4	63.6	0.0	2.27	10	50.0	10.0	40.0	1.90
Uttar Pradesh	110	79.1	18.2	2.7	1.24	110	75.4	17.3	7.3	1.32
West Bengal	79	86.1	7.6	6.3	1.20	79	86.1	8.9	5.1	1.19

If most respondents said that the CPL was above the OPL, it suggests that the local people set higher benchmarks of poverty than set by their government. Or that the official line set by governments was insufficient. Five of the study regions – three from India i.e. Assam, Uttar Pradesh and West Bengal, in addition to the Bukidnon region from Philippines and the Ruvuma region from Tanzania– clearly placed their poverty lines above the official line set by the government. Men and women in four other study regions – Morocco, Senegal, Thailand and Uganda – were slightly less pessimistic. A majority of them placed their CPL either above or at the same level as the OPL.

In contrast, a majority of men and women in Afghanistan, Bangladesh, Malawi and Mexico perceived their community poverty line to match with or fall *below* the official poverty line. The OPL was in fact clearly sufficient in Malawi and Mexico; and if not sufficient, mostly matching the CPL in Afghanistan and Bangladesh.

Men in Indonesia were divided in their opinions on whether the CPL was above, at the same level or below the OPL; though a majority of women in Indonesia presented a more optimistic view – they considered their OPL sufficient or at the same level as their CPL. Opinion among the men was also split in Colombia – though women again were more optimistic.

In addition to threshold effects (that can be avoided through aggregate mobility measures such as MPI, MRI etc or through comparison with absolute poverty levels), the Ladder of Life methodology can be critiqued for its reliance on subjective recall. Dercon and Shapiro (forthcoming) using data from the Ethiopian RHS show that individuals may selectively “remember events and circumstances which cohere with their life situation but forget or misreport those past events which conflict with their current circumstances”. In 2004 for instance, when asked if they were rich 10 years ago, 24 percent of the RHS respondents replied in the affirmative. In 1994, only 7 percent of respondents provided this answer. However, the mobility matrix is based on the subjective recall of those who live in the community and know the individual well. That is, it is the focus group’s recollection – not the individual’s own – of his or her mobility status now and 10 years ago and therefore reduces, if not completely eliminates, the problem of selective recall by the individual.

The mobility matrix also cannot measure poverty persistence in time as information is only available for two points in time. However, persistence can be tracked through the in-depth life stories that literally graph across years, key events that affect the individual’s overall-well-being. Persistence in categories can also be calculated by considering the churning index separately for the bottom two and top two categories. One would expect less volatility and more stickiness in these steps than in the middle categories. In that sense, the matrix has advantages compared to the quintile approach as it does not “flatten out” the bottom categories for example, into one-fifth of the population (Erikson and Nolan, forthcoming).