Many Paths to the Same Moon?

Moving out of Poverty in Bukidnon, Philippines

C h o n a   E c h a v e z

E r l i n d a   M o n t i l l o - B u r t o n

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Though there are many paths
At the foot of the mountain
All those who reach the top
See the same moon.

Buddhist saying

1. INTRODUCTION AND POLICY FOCUS

Although poverty in the Philippines declined in the 1990s, it remains relatively high and is concentrated in the rural sector (World Bank, 1997). There are also significant regional disparities in poverty reduction, with two of the five lagging regions in Mindanao, the Philippines' poorest region. While agricultural households account for only 40 percent of the population, they represent over two-thirds of the poor.

What are the possible—and feasible—pathways out of poverty in the Philippines? What factors predict whether an individual or household will become less or more poor over time? Why do some households move ahead and why are others falling behind? The answers to these questions will help policymakers assess the extent to which interventions and policies should focus either on augmenting or on redistributing existing stocks of assets or on increasing returns to existing stocks of assets. Land redistribution and investments in preschooler health and in schooling might affect the assets that households currently have. Likewise, market liberalization or the development and dissemination of new technologies might increase returns to these assets. Policies or interventions induce four pathways out of poverty:

1. *Changes in settings* such as macro policy reform or improvements in natural resource management and the functioning of markets and institutions.

2. *Improvements in access to assets*, such as agricultural or business extension, skills training, literacy programs, land resettlement, land improvement, or credit.

3. *Increase the returns to those assets* through infrastructure and new technologies that increase the return to capital and/or labor.

4. *Interventions*, often implemented as responses to shocks, *that increase incomes or consumption*.

The first and second pathways can manifest themselves in physical asset related changes, such as land reform, and human capital related assets, like expansion of public education or scholarship programs.

This study identifies the major pathways that households in Southern Bukidnon have taken to move out of poverty in the last two decades. While individuals, households, and communities can follow a number of pathways out of poverty, we hypothesize that, in the Philippine context, the second pathway played an important role in moving people out of poverty. In specific, improving access to physical and human capital has been important. In the Philippines, two separate sets of policies implemented since the 1980s aimed to increase access to physical and human capital: the Comprehensive Agrarian Reform Program, promulgated in 1988, and the expansion of public education since the 1980s. Another objective of this study is to find out whether measuring wellbeing with consumption data or perception-based wellbeing indicators affect our conclusions regarding the dynamics of these pathways. While there may indeed be many pathways out of poverty, it is possible that different individuals define improvements in wellbeing differently. In this study, we employ both consumption-based definitions of poverty transitions based on comparisons of consumption expenditures from a longitudinal household survey, and individual and community perceptions of one's location on the ladder of life, with each step corresponding to a self-defined level of wellbeing.

In 1988 the Comprehensive Agrarian Reform Program had the potential to increase access to physical assets by expanding the scope of land reform to crops beyond rice and corn to sugar and coconut plantations. These crops were previously excluded owing both to their importance in the export sector and the political power of sugar and coconut landowners. However, progress under the government's land redistribution program has been slow due to inadequate funding, administrative problems of surveying and land valuation, and opposition of landlords. The ability of the poor and landless to gain access to land through established markets may have also declined over the reform period.

Possibilities for human capital investment, however, seem to have increased. In 1986, free public education was expanded to the secondary level, stimulating the construction of high schools all over the country. Enrollment rates are high for both primary and secondary education and the incidence of public spending on education is progressive, overall. However, many issues remain, including lower access by the poor and those living in rural areas to schools, higher dropout rates among the poor, and perceptions of deteriorating quality.

Finally, creating the environment in which it is possible to take a given pathway out of poverty may be an important, though often underappreciated, area of policy emphasis. The quality of the policy environment is often underemphasized because it is difficult to measure the quality of political participation and governance in standard household surveys. Because quantitative survey instruments are often unable to capture the nuances of social and political processes, the use of qualitative data is of critical importance in understanding the role of local leadership and improved governance in helping people move out of poverty. While this is true in general, it is especially relevant in the Philippines, which devolved public services provision to local units beginning in the 1990s. Philippine evidence on the impact of devolution is still scarce, and there is no consensus as to whether devolution has indeed improved the delivery of services, especially in rural areas.

1.1 Methodology

1.1.1 The Bukidnon Panel Study

The data used for this study draws from the Bukidnon Panel Study, which includes survey rounds in 1984/85, 1992, and 2003/04 of households living in the southern part of Bukidnon province. In the 1984/85 and 1992 surveys, the same core group of households was surveyed by the International Food Policy Research Institute and the Research Institute for Mindanao Culture, Xavier University. Detailed economic and nutrition information was collected for individual household members (e.g. earnings from various employment activities, anthropometry, education, food intakes; see Bouis and Haddad, 1990, and Bouis et al., 1998, for details) and at the household level (e.g. farm production, production and consumption credit, housing, total expenditures).[1] In the 1984/85 data, food consumption data were collected in two forms: (i) a food consumption expenditure module, and (ii) a 24-hour food recall survey of all foods consumed by each household member. In addition, the 1984/85 survey included four rounds of data collection of the entire questionnaire at four-month intervals. In total, 448 households were interviewed in all four rounds in 1984/85. The 1992 survey included only one round of data collection and used a condensed survey instrument. However, anthropometric data were also collected. Of the original 448 households, 352 were interviewed again in 1992.

Originally, the research site was selected to study the effects of agricultural commercialization on consumption and nutrition outcomes. Construction of a sugar mill in the area in 1977 led many households in the region to shift from corn production to sugar production. The original case study (Bouis and Haddad 1990) examined the effects of the shift from subsistence corn production to sugarcane after the construction of a sugar mill. They found that the introduction of export cropping significantly deteriorated access to land, as small corn tenant farms using primarily family labor were consolidated into larger sugar farms using primarily hired labor. Their analysis also reveals an increase in incomes for households that grew sugarcane as well as a decline in women's participation in own-farm production. In addition, they uncovered very little improvement in nutritional status because of increased incomes from sugarcane production, primarily because of the high levels of preschooler sickness in the sugarcane-growing households. The issue of deteriorating land access in the face of increased commercialization is especially important in Mindanao, the Philippines' poorest region, which has a long history of armed conflict. Policymakers have recognized the need to reduce poverty in Mindanao and have invested more heavily in this area in recent years.

1.1.1.1 First phase: Qualitative work

The Bukidnon Panel Study's qualitative work was conducted from February to May 2003. First, an IFPRI and RIMCU team visited the survey sites for a brief reconnaissance visit. This team included the principal investigator of the 1984/85 and 1992 studies and supervisors of

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1 Bouis, Howarth E. and Lawrence J. Haddad. 1990. Agricultural Commercialization, Nutrition, and the Rural Poor: A Study of Philippine Farm Households. Boulder and London: Lynne Rienner; and Bouis, H. E., M. Palabrica-Costello, O. Solon, D. Westbrook, and A. B. Limbo. 1998. Gender Equality and Investments in Adolescents in the Rural Philippines. Research Report 108. Washington DC: International Food Policy Research Institute.

the original survey teams. Next, a rapid assessment/appraisal (RAP) examined local conditions and needs, knowledge, attitudes and behaviors of the community. Then a qualitative survey focused on the respondents' perceptions of changes that have occurred in their communities over time, including the development of different types of financial institutions, poverty, and strategies households use to improve their wellbeing. The qualitative study established a timeline for the development and diffusion of financial markets into the rural villages. The collection of qualitative data for this study employed Focus Group Discussions (FGD) and Key Informant Interviews in ten municipalities. The FGD participants and Key Informant Interview respondents were selected from the 29 sample *barangays* (villages) of the 1984/85 study.[2] The FGD participants selected from different *barangays*, and divided into groups of 6-10 participants so each group has no more than one sugarcane planter, corn grower, farm laborer, landowner, entrepreneur/trader, tenant, renter, landless farmer, or indigenous community member. Respondents in the KI interviews included the governor of the province, mayors of the ten municipalities, ten barangay captains, some line agency officers devolved to Local Government Units, some NGOs, Cooperative and Traders associations.

1.1.1.2 Second phase: Quantitative household survey

The latest survey round (2003/04) was completed in July 2004. The survey instrument closely reflects the one used in 1984/85. The first wave of data collection, from September 2003 to January 2004, interviewed original respondents still living in the same *barangay* and their children who have formed their own households in that same *barangay*. It yielded 311 original respondents (61% of the original 448 respondents) and 261 households formed by their children. The second wave, from April 2004 to July 2004, interviewed households formed by children who no longer live in the survey area. This includes a large group of households in three of the major urban areas in Mindanao, Cagayan de Oro, Valencia, and Malaybalay, as well as many households in rural Bukidnon. About 75%, or 257, of all potential migrant households were interviewed –18 in Malaybalay, 38 in Valencia, 21 in Maramag, 91 in Cagayan de Oro, and 69 in rural areas outside the original survey *barangays*.

1.1.1.3 Third phase: Life histories

Seventeen case studies, conducted from April to June 2004 in each of the research area's nine municipalities, examined how households were affected by, and coped with, changes that occurred in the region from 1984 to 2004. The case studies delved into issues such as the accumulation of assets, access to credit, agriculture and non-farming activities, out-migration of family members, and coping with idiosyncratic (death, illness) and covariate shocks (the El Niño drought). The subjects selected for the case studies were households representing various sectors in the community, for example big landowners, small landowners, renters, laborers, and indigenous people.

The case studies were conducted by five graduate student researchers in the Department of Sociology and Anthropology at Xavier University. The researchers collected life histories of the household head (as the main actor), conducted in-depth interviews of some household

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2 The barangay is the smallest political unit in the Philippines and corresponds roughly to a village.

members, and observed household daily activities while they resided for a week in the *barangay* where the household is located.

1.1.2 Sampling framework for the Moving out of Poverty Study

The Philippines MOP study based its sample frame on the Bukidnon Panel Study, which interviewed households in 1984/85, 1992 and 2003/04. The 1984/85 study interviewed 510 households, which we refer to as original households, over four rounds. Due to attrition, only 448 households were interviewed in each round. The 2003/04 round interviewed the same respondents 19 years later. We were able to interview 311 of the original 510 households. In addition, in the 2003/04 round included some of the households formed after 1984/85 by children of the original households.

Children living in all of Bukidnon and nearby Cagayan de Oro were eligible to be interviewed. We divided these children into two categories. The first, which we call split households, live in the study area in southern Bukidnon. The second category, which we refer to as migrants, includes those who live outside of the study area in northern Bukidnon or Cagayan de Oro. The sample for MOP was drawn only from original and split households, not from among the migrant households.

Up to two split households per original household were selected for sampling, depending on how many split households there are, via the following process.

From among the 572 original and split households, 259 were chosen for the Moving Out of Poverty study. Each household fits into one of the following categories, which are based on 1984 and 2003 consumption quintiles (for split households, we use the 1984 quintile of the parent's household):

- *Movers*: The household is in the first or second quintile in 1984 and had moved up at least one quintile by 2003. That is, the household was *moving out of poverty*.

- *Fallers*: The household is in the first, second or third quintile in 1984 and had moved down at least one quintile by 2003. That is, the household was *falling into poverty*.

- *Chronic poor, or stagnators*: The household is in the first or second quintile in 1984 and was in the same quintile in 2003. That is, the household was *stagnating in poverty*.

Table 1 shows the distribution of households according to mobility classification.

Villages in which ten or more sampled households lived were chosen for the qualitative work. Villages which had fewer than 10 sampled households were not included in the qualitative study; conversely, not all sampled households were in communities were qualitative work was done.

The sampling methodology in the Philippine study differs from the other country case studies. In the other MOP study countries, communities were chosen first and households were selected second. In contrast, the Philippine study first selected households from the Bukidnon Panel Study, which then guided the selection of communities in the qualitative study. That is, we employed data on consumption changes over time from the Bukidnon Panel Study to select our sample households, while other studies classified households based on ladder of life data generated in community focus groups.

We later conducted men's and women's community focus groups to elicit ladder of life data for use in the analysis. Because men's and women's perceptions of where a particular household is on the ladder of life opinions may differ substantially, we considered both men's and women's perceptions separately in our analysis

1.1.3 Qualitative methods

Qualitative methods used in the Philippine MOP study were guided by the protocols devised by the global study team and will not be discussed here. These included field protocols as well as methodologies for analyzing the mobility matrices and mobility indices.

1.1.4 Quantitative methods

Quantitative methods used in the Philippine MOP study are discussed in the quantitative analysis plan by McNiven and Quisumbing (2005).

1.2 Background

1.2.1 Economic growth and poverty reduction policies up to the mid-1990s

Growth-oriented policies

After the overthrow of the Marcos regime in 1986, democratic political institutions were restored during the Aquino administration. However, reforms remained focused on macroeconomic stabilization in an effort to reverse the pattern of economic stagnation and to transform the Philippines into an outward-oriented, export-led economy. Among these were tariff reforms to achieve neutral tariff policy, various tax reforms, accelerated privatization, and more private sector participation in various energy and infrastructure project through the Build-Operate-Transfer (BOT) schemes (Milo 2000).

President Ramos's 1992 inaugural vision was to industrialize the Philippines. Part of this vision was a set of targeted competition-enhancing economic reforms. These new policies reinforced the reforms of the 1980s. In 1993, the economy began to show modest growth rates, which were attributed to improvements in infrastructure (specifically in power generation), continued liberalization measures to increase competitiveness of several sectors and encouraging inflow of foreign investments, stable macroeconomic and political environment boosting investor confidence, and economic recovery of the country's trading partners. The major contributor to the country's strong economic performance was the industrial sector, although there was strong growth in the service sector and financial services.

Thus in the 1990s, the high-growth sector shifted from agricultural export orientation to manufactured goods exports and investments. Manufactured goods constituted the bulk of exports, reducing the traditional dependence on commodity earnings. Moreover, external debt and debt service payments lowered because of debt restructuring and rapid growth of exports (Milo 2000).

The growth performance of the country in the 1990 was reflected in the following key changes.

Decreased unemployment. The unemployment rate fell from 8.6 percent in 1992 to 7.4 in 1996 and the underemployment rate fell from 21.4 percent in 1993 to 19.4 percent in 1996, while gross value added per worker increased between 1991 and 1997 in all sectors except

mining and quarrying. Despite improvements in manufacturing sector efficiency improvements, employment growth did not occur in the manufacturing sector: job creation in the service and construction sectors, not manufacturing, contributed most to the employment gains.

Exchange rate increase. The second trend was the marked increase in the exchange rate. In the 1980s, price intervention policies, interacting with economy-wide policies that defended the unsustainable balance of payments deficit, such as the industrial protection system, caused the peso to be overvalued. This overvaluation in turn created an incentive structure biased against agriculture (David 1983; Bautista 1987; Intal and Power 1991). Trade policy reforms were implemented to remove trade restrictions, reduce the tariff levels, and liberalize foreign exchange markets, among other goals. As a result, between 1991 and 1996 the exchange rate increased sharply (30%), which tended to lower relative prices of tradable agricultural products, an unfavorable trend caused by several factors. First among these factors is that trade liberalization, which should reduce distortions in the exchange rate, was not accompanied by appropriate exchange rate adjustments and other macroeconomic policies (Medalla et al. 1995). Second, the tight monetary regime increased interest rates, which in turn attracted short-term foreign capital inflows. This new investment accommodated an increase in the current account deficit, thereby causing the real exchange rate to appreciate (de Dios et al. 1993; Lamberte 1995). Finally, domestic inflation rates were higher than rates of trading partners, particularly in 1995 when sharp increases in food prices led to double-digit inflation. In late 1997, the devaluation of the peso and the success in controlling inflation led to an improvement in the real exchange rate, such that by early 1998, the real exchange rate had risen more than 40%. This benefited the tradable goods sector in general and exportable goods in particular. Moreover, this benefit may have been extended to import-competing agricultural commodities as their competitive advantage increased (David 1999).

Control of inflation. The fourth trend, control over inflation, was brought about by the tightened monetary policy of the 1990s. In the 1980s, money supply growth led to high inflation, but was brought under control. Inflation reemerged in the early 1990s due to the growth and monetization of the fiscal deficit, a sharp oil price increase owing to the Gulf war, and the supply bottlenecks that resulted from adverse weather conditions (Milo 2000). Eventually, due to tightened monetary policy inflation fell to 4.6 percent in 1997.

Money supply growth. The conduct of monetary policy was complicated by the liberalization of the capital account in 1993. The surge in foreign exchange inflows put strong pressure on the Philippine peso to appreciate. Because of this appreciation's adverse effect on the export sector, monetary authorities sought to minimize currency appreciation by intervening in the foreign exchange market. Moreover, the rapid increase in the Philippine Central bank's net foreign assets accelerated the growth of money supply to an average of 25 percent from 1993 to 1995.

The growth of the non-tradable sector. Higher liquidity led to a decline in interest rates, but also fueled inflation. In order to meet the monetary and inflation targets set by the IMF stabilization program, the Central Bank of the Philippines had to filter the monetary effects of the foreign exchange purchases. While the intervention enabled the Central Bank to build its international reserves, it also proved costly because the Bank incurred huge quasi-fiscal losses on the interest-bearing securities it issued to sterilize excess monetary growth (Cororaton 1995). The appreciation of the peso during the 1990s exacerbated the country's trade deficit.

Peso appreciation, together with high interest rates, favored the growth of the non-tradable sector, with investments going into real estate and stock market and encouraging foreign borrowing (Milo 2000).

Poverty reduction policies

Along with various economic reforms, goals for human development and poverty alleviation were also integrated into the Ramos administration's development plan . Policies were proposed to directly benefit the poor, specifically employment generation, which was seen as the key to increasing incomes and alleviating poverty. Toward this end, in 1994, the government announced plans for the Social Reform Agenda (SRA), a poverty alleviation and safety net program for specific areas and sectors that streamlined all direct anti-poverty programs under one package. It aimed to reduce absolute poverty from 39.9 percent in 1991 to 30 percent in 1998. It centered on three major strategic interventions: (1) access to basic services as imperative for survival; (2) asset reform and access to economic opportunities such as the means for employment and income generation; and (3) people's effective participation in governance toward self-reliance and empowerment.

Disadvantaged groups (for example, marginalized sectors) and nongovernmental organizations (NGOs) played key roles in formulating the SRA's specific goals. Due to the different needs of the marginalized sectors, the SRA comprised nine flagship programs: agricultural development; fisheries and aquatic management; ancestral domain; socialized housing; comprehensive and integrated delivery of social services; workers' welfare and protection; livelihood; credit; and institution-building and effective participation in governance (Reyes and del Valle, 1998). Implementation of the program began in 1996.

However, the main concern of the SRA was not to reduce poverty but rather to focus and synchronize the delivery of programs and resources to priority areas and target groups. It encouraged inter-organization interfaces to facilitate convergence. In 1997, the SRA was budgeted for 85.6 billion pesos or 19.7 percent of the total budget.

The overall economic growth in 1990s was accompanied by improvements in a number of social indicators. The UNDP (1998) reported an improvement in the Philippines Human Development Index from 0.62 in 1992 to 0.677 in 1997. Gains were made in health, nutrition, and education as evidenced by increasing life expectancy and literacy rates, and declining mortality and malnutrition rates. There was also wider access to services in health, nutrition, and family planning. Thus, the general health condition of the population improved, with life expectancy at birth increasing from 66.6 years in 1993 to 68 years in 1997.

Poverty incidence declined from 39.9 percent of families in 1991 to 32.1 percent in 1997, corresponding to a decline in the poverty incidence of the population from 45.3 to 37.5 percent. The decline, however, primarily took place in Metro Manila, while in rural areas, poverty incidence only marginally declined. The subsistence incidence, or the proportion of families who could not meet their food consumption needs, also went down from 20.4 to 16.5 percent of families or from 24.3 to 20.4 percent of the total population from 1991 to 1997. The percentage of families who could not meet food subsistence needs was significantly higher outside Metro Manila and in rural areas. However, the downward trend in the number of poor families from 1991 to 1994 reversed in 1997, increasing from 4.531 million in 1994 to more than 4.553 million in 1997.

In addition, the poverty gap ratio, which measures the proportional shortfall of family income from the poverty threshold, shrunk from 13 per cent in 1991 to 11.2 percent in 1994 and then to 10 percent in 1997. This means that on the average poor families were better off in 1997 compared to the previous years. The decline was more evident in Metro Manila (from 2.9 percent to 1.2 percent) and urban areas (from 10 to 5 percent) than rural areas (from 16 to 15.2 percent). Despite these improvements, income distribution became worse from 1991 to 1997.

Many economists believed the comprehensive and consolidated Ramos administration anti-poverty program both timely and necessary. Some key social indicators improved, although not fast or deep enough because persistent discrepancies within and between geographical areas. Also, as the numbers of the poor continued to increase, it was obvious that a sustained impact on poverty reduction had not been realized. Reyes and del Valle (1998) note that the SRA's impact was limited because (1) the SRA was still in its infancy and it would take some time for its intended effects to be fully realized; (2) funding for specific projects was inadequate and inefficiently used; (3) economy-wide and sectoral policies have greater impact on the situation of the poor.

De Dios's (1993) comprehensive study of poverty in the Philippines cited the following reasons that poverty persists: (1) failure of growth and the lack of employment opportunities; (2) declining productivity; (3) high population growth; (4) inequality of incomes; and (5) inadequate provisions of social services. In short, poverty remained high in the Philippines because of the economy's failure to grow rapidly enough, sustain that growth, and generate employment. These reasons continued to hold in the 1990s and even up to the present.

1.2.2 The impact of the Asian Crisis and policy responses

The Asian financial crisis of 1997-1998 began in Thailand, prompting the withdrawal of foreign investments from the Thai stock market. The combination of contagion effects from Thailand, overvalued currencies, vulnerable capital inflows, and increased uncertainty fomented the regional currency crisis (Magdaluyo, 1998). The immediate response of the Central Bank of the Philippines was to tighten monetary policy to defend the exchange rate, a side effect of which was a sharp increase in domestic interest rates. However, this policy failed to arrest the depreciation of the peso, although the inflation rate was fairly steady during the first 6 months of the crisis. This was attributed to the relative stability of food prices and the local manufacturers chose to defer price increases to be able to compete with cheap imports.

The impact of the Asian crisis on the Philippine financial sector was minimal since it did not cause systemic failure of its financial institutions. Despite the crisis' negative impact, the country's banking sector still fared well. Only one commercial bank, some thrift banks, and a few rural banks closed in 1998. The banks' robust response was attributed to the earlier reforms that weeded out weak banks and instituted stronger and more-prudent regulations.

However, the impact of the crisis on the economy became more evident in 1998, particularly in the construction and manufacturing sectors. This was compounded by the poor performance of agriculture as a result of adverse weather conditions due to the El Niño phenomenon, which likewise contributed to higher inflation rates. The crisis also prevented the creation of new jobs that could have absorbed the new labor force entrants, leading to a decline in average family incomes. The poor performance of the agricultural sector further

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worsened the conditions of the rural poor. Milo (2000) averred that the reduction in average family income was regressive, with the poorest families suffering the highest decline, more than 29 percent. Hence, income distribution deteriorated in 1998. However, Datt and Hoogeveen (2003), using the Annual Poverty Indicators Survey (APIS) data, estimate that the impact of the crisis was modest, leading to a 5% reduction in average living standards and a 9% increase in the incidence of poverty, with higher increases indicated for the depth and severity of poverty. They found that the largest share of the overall impact on poverty appears to be attributable to the El Niño shock as opposed to shocks mediated through the labor market. Datt and Hoogeveen also found some evidence of consumption-smoothing by the crisis-affected households, although the poor amongst them were more constrained in their ability to protect their consumption.

Of the Asian countries involved in the crisis of 1997, the Philippines was among the first to recover, posting a positive growth rate in the first quarter of 1999. Improved weather conditions and government pump-priming drove a recovery in the agricultural sector. The industrial sector, however, showed weak performance because of continued anemic consumer demand, tight credit conditions, and the uncertain economic and political environment under the administration of the deposed president, Joseph Estrada. To avert the economic slowdown, the government shifted to pump-priming in 1999 to take up the slack in private sector spending. To finance both this strategy and the budget deficit, the government resorted to foreign borrowing covering its programmed 1999 budget deficit with US$3 billion in external financing. The new government loans were obtained from ODA facilities as well as bond flotations in the international capital market. By covering its spending using foreign rather than local creditors, the government lowered domestic interest rates and avoided crowding out the private sector. Foreign borrowing also increased the country's gross international reserves, which rose from US$8.5 billion at the onset of 1998 to almost US$14.5 billion as of 1999. Thus, foreign investment inflows resumed, strengthening the peso and the stock market.

The Central Bank of the Philippines also relaxed monetary controls by lowering the overnight borrowing and lending rates in the latter part of 1999. The sustained reduction in interest rates was made possible by the downward trend in inflation, which began to decelerate from 11.5 percent to 5.4 percent. Likewise, bank lending rates declined, which was caused by the weak private sector demand, and the banks' cautious stance.

1.2.3 Social protection in the Philippines[3]

Social protection involves policies and interventions that help the poor and those at risk of becoming poor reduce the risk of shocks, mitigate the impact of shocks, and cope with the aftermath of shocks. In the Philippines, cultural values have traditionally placed the primary responsibility of social protection on family and on community ties—mainly through intra-family, inter-household transfers. About two-fifths of the population receives private transfers, of which remittances from abroad comprise about three-fourths. Private or informal support systems help the poor cope with household-specific risk, but are ineffective in combating severe covariate shocks that affect the entire community. Therefore, the government could strengthen its direct involvement in risk reduction, particularly in disaster prevention and human capital development. While many policies and interventions can

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3 This section draws heavily from Ahmed et al. (2004).

prevent, mitigate, or cope with risk, these policies are generally not classified under "social protection" in the Philippines. This may explain the limited awareness of social protection among agencies that do not work directly on social protection. Thus, in the Philippines, development programs such as irrigation projects that reduce the effects of drought and economic policies that reduce macroeconomic shocks remain outside the scope of social protection.

Social protection in the labor market

The largest and most vulnerable segments of the labor market are the underemployed and those with part time jobs. Most work in agriculture or the informal sector, and, except for public works, are not covered by most formal social protection mechanisms. Preventing asset depletion, increasing the household's risk-bearing ability, and facilitating the use of institutional credit for productive activities, not just for consumption-smoothing, are key elements of risk reduction for this vulnerable segment of the labor market. Training and skills development may also help these persons find better jobs. Retraining, in particular, would help workers adjust to changing demands for different types of skills.

The three major formal social protection mechanisms that mitigate the effect of labor market risks are public works, emergency loan and severance pay, and public savings funds.

Public works. During the last 20 years, several public works programs were launched to increase labor absorption in rural areas. The first was the Community Employment Development Program (CEDP) that operated from 1986-1988. CEDP focused on small infrastructure projects and created almost a million jobs. The program targeted the poor well. The second was the *Kabuhayan* 2000 program that operated from 1994 to 1996. This program was relatively ineffective because it allocated 43% of the resources to the non-poor regions of the National Capital Region, Central Luzon, and Southern Tagalog. Participation in this program was open, duration was limited, and the Department of Labor and Employment (DOLE) and the Local Government Units (LGUs) shared the program's cost.

In general, public works programs provide a quick response to cyclical or structural shocks, employing temporary "surplus" labor at cheap rates. However, such programs often offer higher wages than the market wage, which inhibits self-targeting by attracting non-poor workers. Further, the monsoon season is both the "hungry" season and the period when little public construction can be done. Public works programs have also been criticized for large leakages in non-labor costs.

Emergency loans and severance pay. Salary and emergency loans, and severance pay are provided to labor and displaced workers. For example, the Employees Compensation Commission (ECC) provides loans of up to two months or P12,500 for displaced workers. The Sugar Amelioration Act provides loans to displaced sugar workers. The Government Service Insurance System (GSIS) allows members to borrow against their retirement contribution. GSIS also provides severance compensation equal to at least one month's pay for every year of service in cases of redundancy and a half of a month's pay for every year of service in case of retrenchment to prevent losses or in cases of closure. However, protection coverage is limited to workers in the formal labor market. The amount of loans and severance pay is marginal. Determining the cause of separation is highly contentious and often employees fail to receive severance benefits in cases of firm closures.

Savings schemes. The three mandatory public savings funds that cover both public and private employees are the GSIS), Social Security System (SSS), and ECC. These forced savings mechanisms provide benefits in cases of retirement, sickness, maternity, disability, and death. Most of these benefits, however, accrue to non-poor persons. The SSS recently expanded its program to cover the informal sector at reduced contribution level, an expansion that will benefit poor persons.

Community-based interventions

Community-based interventions of the Department of Social Welfare and Development (DSWD) such as the Community Integrated Development of Social Services (CIDSS) have provided social assistance to poor families in poor communities since 1994. Now being transformed into the KALAHI-CIDSS program, community based interventions could help reduce risk for the poor if the interventions enable communities to build assets that benefit the poor, and have safeguards to prevent the elite from capturing program benefits. Community savings schemes have been largely NGO undertakings for health and death insurance that help families cope with risk, rather than prevent risk itself. NGOs hope that these schemes, often called "people-initiated mutual funds" will eventually expand from risk-coping into saving for asset creation, such as housing. Other NGO initiatives have also helped the urban poor protect their housing and tenure rights, reduce the risk of eviction, and improve access to social services.

Food-based interventions

Currently, the National Food Authority's targeted subsidized rice program is one of the components of social protection. However, there is evidence of both leakages (NFA's rice stocks are not sold only in the most depressed areas) as well as insufficient subsidies for the poor (even P14.00 per kilogram was considered expensive for the ultra poor in 2004). Food stamp programs are a better alternative option for food-based social protection. Food stamps could be used for wage payments in the self-targeted public works programs or could be distributed at schools to prevent dropouts. The major advantage of a food stamp program is that it utilizes the normal food marketing system, eliminating some administrative burdens, including the cost of commodity handling.

Credit-Based Livelihood Programs

As microcredit programs became popular worldwide, both government agencies and NGOs in the Philippines initiated microcredit assistance, livelihood assistance and training programs. Despite the success of programs such as the Grameen Bank that lend at market rates, most government microcredit programs in the Philippines (such as those sponsored by the DSWD and DOLE) lend at subsidized interest rates, often to enterprises that offer very low value-added such as vending and trading. Such programs often offer livelihood assistance and training and include implicit subsidies in the form of staff time. The government has a history of being heavily involved in providing subsidized credit directly to borrowers, but out of 111 government credit programs identified by the National Credit Council in 1995, only 13 were targeted to the ultra poor and only 4 of the 13 had significant outreach. Government subsidized credit programs outside microcredit (e.g. credit programs for farmers) have already been criticized for being uncoordinated, fraught with politics, ineffective and limited in servicing poverty groups, with too many leakages leading to gross inefficiencies, the distortion of the financial market, and weakening of private incentive to innovate. Many

NGOs also provide "microfinance" services, particularly using the Grameen approach. However, very few of these NGOs have particularly large credit programs. In fact, estimates from various studies indicate that NGOs serve only a very small portion of the population in the areas where they operate. Although most NGOs have an avowed objective of targeting poverty groups, many studies have found that few NGOs have effectively reached the poor, and are a long way from operating on a sustainable basis. It is unlikely for NGOs to be self-sustaining not only because they do business mostly with "high risk" groups (e.g. low-income families), but also because they are unwilling or hesitant to charge higher fees and rates owing to their avowed mission of helping these groups. Thus, to keep their operations going, NGOs must continuously depend on grants and other subsidies. Savings mobilization—which could be an instrument for reducing risk as well as increasing sustainability of NGO activities—is less emphasized than microlending.

1.3 Local trends and conditions in Bukidnon

Bukidnon is a landlocked province in Northern Mindanao, comprising 20 municipalities and two cities, Malaybalay (the provincial capital) and Valencia. Bukidnon has a land area of 829,378 hectares, making it the largest province in Northern Mindanao and the eighth largest in the country. Although southern Bukidnon, composed of 10 municipalities, is endowed with vast resources and fertile land, development and progress have been slow in coming. In general, the southern part of Bukidnon province is poorer than northern Bukidnon, because the latter is closer to Cagayan de Oro, the area's major metropolitan center. This section describes the local conditions and trends in southern Bukidnon, presents a brief demographic profile, and discusses poverty statistics for the province and for the sample communities.

1.3.1 Demographic profile

The population of southern Bukidnon in 1975 was 249,247, in 1980 was 283,300, and grew to about 422,824 in 2000. Thus, population increased 11.7% from 1975 to 1980, 22.7% from 1980 to 1990, and 11.2% from 1990 to 2000. The annual population growth rate over these years was 2.15 % and by the year 2010, the population is projected to be 550,212, an increase of 30% from the 2000 population.

In 2000, the ten municipalities of southern Bukidnon had more men (218,001) than women (204,821) with a sex ratio of 100:106. The population was relatively young; almost half (46%) were 14 years and below. The region also has a high dependency ratio of 86.6%, slightly lower than the dependency ratio of Bukidnon province as a whole in 1990 (89.3%) and in 1995 (87%).

Bukidnon province is home to three ethnolinguistic communities and their sub-variants who occupy the uplands and forested areas. The Manobo, southern Bukidnon's main indigenous group, were displaced from their ancestral domain by migrant settlers searching for better opportunities in Mindanao.

Bukidnon province has been a melting pot for immigrants from other regions of the country. Thus, the population composition is multi-ethnic, hence multi-lingual with Cebuano vernacular as the lingua franca. The migrant settlers were able to acquire land through the government resettlement project that started in the 1960s for poor and landless families from other regions.

The majority of the residents in southern Bukidnon are farmers engaged in corn production, rubber tree plantations, and cattle ranching. However, the advent of sugarcane plantations in 1975 began to change the agro-economic profile of the region as farmers shifted to sugar cane and to mono-crops like banana and pineapple.

1.3.2 Poverty incidence in the MOP communities

Poverty is commonly regarded as an indicator of economic wellbeing of an individual or household but it can also indicate broader deficiencies in wellbeing (UNFPA and ANU, 1998:23). As such, poverty is most often measured using income or expenditures, but can also be assessed with the Human Development Index, the Gender-Related Development Index, or other measures.

Poverty is chronic and endemic in Bukidnon. The incidence of poverty is high because Bukidnon is largely dependent on traditional forms of agriculture. In 1991, Bukidnon province had the highest incidence of poverty in northern Mindanao, with 68.3% of families below the poverty line. In 1994, however, this decreased to 58.8%, a 9.5% decrease from 1991. Comparisons of poverty trends are complicated by changes in the definition of the poverty line. In 2000, the annual per capita poverty threshold was P11,580 in rural areas of Region 10 (National Statistics Office., 2000 FIES Preliminary Result). Using the CPI to adjust the poverty threshold to 2003, this translates to P13,583 pesos. The median poverty incidence of our sample households using this poverty line is 28.5%; among the households in the MOP study, the median is higher, about 39.1%.

1.3.3 Important events in the past ten years

Development has come slowly to southern Bukidnon. Before 1975, main roads were unpaved, there were no farm to market roads, the water system was either poor or non-existent, infrastructure in the respective communities was limited, livelihood was restricted to farming, and electricity was confined to the town centers.

In the early 1990s, conditions began to improve. FGD respondents in the ten communities cited three main positive events between 1996 and 2006. First, infrastructure improved dramatically. Farm to market roads, bridges, schools, health and day care centers, solar dryers, were constructed. Second, the installation of the water system (both level 2 and 3) improved life in the communities. Finally, respondents valued the introduction of the PhilHealth, a government-provided health insurance that benefits indigent families. Along with these events, other important programs and projects, such as electrification and livelihood programs, have contributed to the development of the communities. These have been attributed to the incumbent governor and the leadership of the local officials in the municipality and *barangay*. The incumbent governor has initiated programs that distribute animals, seeds or seedlings, and other inputs such as fertilizer and pesticides to needy farmers. In addition, he set up a program that provides loans to women who would like to start small businesses such as the *sari-sari* (neighborhood convenience) store.

On the other hand, negative events occurred in almost all of the communities. Foremost was the "El Niño", a phenomenon associated with intense dry climate causing drought and eventual crop failure. "El Niño" manifested itself as a nine-month dry spell in 1996 and 1997 and devastated corn, rice, coconut, banana, and vegetable harvests. Besides the drought, pests such as locusts, worms, and rodents attack the crops periodically. According to the

respondents, the famine during the El Niño caused some families to move to other areas because of hunger, despite emergency assistance from national agencies like the Department of Agriculture and DSWD.

Another crucial event that injured farmers' livelihoods was the price increase in fertilizer, seeds, and pesticides, for which many farmers took out loans to procure. Many of these farmers, in particular those that faced unusually low output prices, could not repay the loans. Many communities experienced additional deleterious events: peace and order problems, crime, high unemployment, growing population, a shift from corn and rubber to sugarcane production (considered a negative factor in some communities, but not the majority), and a lack of piped-in water. In some communities, drug lords were growing marijuana, leading to significant drug use among high school students.

2. CHARACTERISTICS OF THE STUDY SAMPLE

Tables 3, 4, and 5 present descriptive statistics of the study sample for MOP. Because we are interested in factors that affect movements out of poverty, most variables used in the regressions refer to levels 10 years ago and to exogenous changes over the past 10 years.

Table 3 explores correlates of poverty status now and 10 years ago. Poor households, both now and ten years ago, have significantly lower educational attainment than nonpoor households. Household heads in poor households completed only 3.8 years of schooling, compared to 4.2 years for nonpoor households. Among currently poor households, a higher proportion did not complete primary schooling—0.54 compared to 0.44. A significantly higher proportion of nonpoor households both now and 10 years ago undertook or completed postsecondary schooling. Not surprisingly, mean weekly per capita expenditures are higher for nonpoor households, although this difference is not strong and consistent (the p value on a difference-of-means test is 0.06). While at present household sizes are not significantly different between currently poor and nonpoor households, nonpoor households were significantly smaller than nonpoor households 10 years ago. Nonpoor households cultivate significantly more land than poor households (1.16 hectares versus 0.68 hectares) and also own significantly more titled land both now (0.86 versus 0.39 hectares) and 10 years ago (1.10 hectares versus 0.47 hectares). The decrease in mean land size is consistent with households subdividing land as they bestow it to children. Finally, nonpoor households also had significantly more tropical livestock units 10 years ago than did poor households (1.83 versus 1.39 TLUs).

Among these household characteristics, what are the most important correlates of economic mobility (Table 5)? Among households who were poor 10 years ago, those who successfully moved out of poverty have (as expected) higher weekly per capita expenditures, larger areas cultivated, and more livestock. Surprisingly, poor households that were able to move up have larger household sizes now—although dependency ratios are higher for poor households. Among households that were nonpoor 10 years ago, only past livestock holdings were significantly higher for households that remained nonpoor than those that fell behind. This suggests that divesting or failing to accumulate livestock holdings may be an important correlate of falling into poverty.

These descriptive statistics, however, only present a partial picture, because they do not control for the simultaneous effects of household and community characteristics. We control

for the simultaneous influence of more than one correlate of poverty or economic mobility using regression analysis in the next section. Means and standard deviations of variables used in the regressions are presented in Table 5.

3. EXPLAINING HUSEHOLD MOBILITY USING QUANTITATIVE AND QUALITATIVE DATA

Why and how do some people move and stay out of poverty while others fall and stay trapped in chronic poverty? To answer this question, we first use quantitative analysis to identify the major factors associated with movements into and out of poverty. In addition, we apply quantitative methods to household self-reports of their position on the ladder of life. We follow this with a nuanced discussion using community rankings on the ladder of life.

3.1 Explaining household mobility using quantitative analysis

Analysis of transition matrices

We can analyze the transition matrices formed by comparing poverty status in 1984 to poverty status in 2003 using regression analysis. Our measures of mobility are as follows:

P(household is nonpoor now)=f(household characteristics, household shocks, community characteristics, community shocks) (1)

Among households that were poor 10 years ago, we estimate the probability of the household having moved out of poverty:

P(household is nonpoor now)=f(household characteristics, household shocks, community characteristics, community shocks), <u>for households that were poor 10 years ago</u>. (2)

Similarly, among households that were nonpoor 10 years ago, the probability of the household having remained out of poverty can be estimated:

P(household is nonpoor now)=f(household characteristics, household shocks, community characteristics, community shocks), <u>for households that were nonpoor 10 years ago</u>. (3)

Results from these three regressions are shown in Table 6. Our explanatory variables include household characteristics, household shocks, community characteristics, and community shocks.

We find that household demographic characteristics affect the probability of being poor, movement out of poverty, and changes in well being. Households with a lower dependency ratio ten years ago have a higher probability of being nonpoor now. Controlling for the dependency ratio, households with a larger household size 10 years ago that were nonpoor have a higher probability of remaining in that state. Households with better-educated heads are also more likely to be nonpoor now. Physical capital (assets) also plays an important role. Nonpoor households that had more land 10 years ago are more likely to remain nonpoor. We also test the hypothesis that social capital contributes to movements out of poverty by including the household's social capital index as one of the regressors. Because current levels of social capital are likely to be the product of decisions that are related with the household's

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poverty status now, we use the social capital index 10 years ago as a regressor. Household social capital 10 years ago does not affect the probability of being nonpoor now, of moving out of poverty, or remaining nonpoor. The effects of Cebuano ethnicity are mixed: while it improves chances for moving out of poverty among those who were poor 10 years ago, it weakly reduces the probability of remaining nonpoor.

How important are community characteristics in determining changes in poverty? Unlike individual social capital, which has no effect on moving out of poverty, measures of community social capital and governance appear to have a weak positive effect on the probability of remaining nonpoor. Perhaps it is the community stock of social capital rather than the individual stock that facilitates mobility. Nonpoor households in communities that have a high perception of trust, and with a higher share that believes that the government is being run for the people, are more likely to remain nonpoor. The construction of an upper secondary school in the last 10 years improves the probability of being nonpoor now as well as the probability of moving out of poverty. Implementation of land reform and a favorable credit index 10 years ago also increased the probability of remaining nonpoor. However, the number working outside the community 10 years ago is associated with a lower probability of moving out of poverty. Perhaps what matters to household mobility is the number of migrant kin that one can count on for support, whether regular remittances or transfers in times of need, rather than the proportion of possibly unrelated migrants outside the community. Unrelated migrants would not be reliable sources of support; also, it is possible that they migrated because of a lack of opportunities within the community.

Analysis of steps and movements on the ladder of life

A drawback of the above analysis is that it does not make use of the variation contained in movements in the ladder of life. In the quantitative household survey, households were asked to identify what step they belonged to on a ten-step "Ladder of Life" at present and ten years ago. Different versions of this question asked households to situate themselves on ladders corresponding to wealth, rights, and happiness. In Table 7, we report results from regressions on the value of the change in the rank on the ladder of life of wealth using ordinary least squares, and multinomial logit regressions on whether changes in the ladder ranking are positive, negative, or zero. Because our data show that households that remained on the same step and the households that moved up exactly one step on the ladder looked similar, we chose to use three categories -- taking on the values -1 for a decrease on the ladder; 0 for no change or a one step increase, and +1 for a two or more step increase on the ladder. This is estimated as a multinomial logit with zero change as the base category.

In both OLS and multinomial logit analyses, we find that a high dependency ratio ten years ago leads to downward movement on the ladder of life. We also find that households with more land 10 years ago tend to go up on the LOL (OLS) and are less likely to go down one or more steps. Households with more assets 10 years ago tend to experience greater increases in the LOL and have a higher probability of going up two or more steps. Being Cebuano-Visayan also increases the probability of going up two or more steps.

We considered unemployment, disasters, and health shocks as events that might affect movement out of poverty. Unemployment did not have a significant impact on the poverty measures, but had a negative effect on the level on the ladder of life. For households that were nonpoor 10 years ago, a health shock had a negative impact on remaining nonpoor, and made

it more likely that a household became less happy over time. Among the government programs we considered are land reform and the construction of an upper secondary school in the last 10 years. Both programs have had positive effects on wellbeing. The introduction of a land reform program in the last 10 years in the community improved wellbeing in the OLS regression, as well as reduced the probability that households would experience a decline in wellbeing in the multinomial logit regression. The construction of an upper secondary school also had beneficial effects in general: it increased the probability of being nonpoor, and the probability that households experienced increases in wellbeing in the multinomial logit regression, as well as contributed to positive changes to well being (in the OLS regression).

How well do these models predict movement out of poverty and movement into poverty? To begin to answer this question, we look at the fraction of observations whose movements with respect to poverty are correctly characterized by these models. Among those who were poor ten years ago, 85 percent of those that move up are correctly predicted, while only 46 percent of those that remained poor were correctly predicted by model (2). Among those who were nonpoor ten years ago, 89 percent of those that remained nonpoor are correctly predicted and 95 percent of those that fell behind were correctly predicted by model (3). These results suggest that the predictors, discussed above, of moving up (85%), remaining nonpoor (89%), and falling behind (95%) are quite strong. In contrast, the model predicting the probability of being nonpoor, model (1), 68 percent of the poor and 58 percent of the nonpoor are correctly predicted. Our models thus do better in predicting movement with respect to poverty, rather than poverty status at a given time.

3.2 Characterizing the ladder of life at the community level

Although households were asked where they were on the ladder of life, the quantitative survey did not delve into the attributes of each step of the ladder. Moreover, the ladder in the quantitative survey was predefined as a 10-step ladder. Both of these aspects of the quantitative survey were relaxed in focus group discussions, conducted separately for males and females at the community level.

Each of the focus groups was asked to come up with a ladder of life for the community, with each group determining the number of steps in the ladder. The focus groups typically categorized the community using a five- or six-step ladder, with the Ladder of Life starting from either step 0 or step 1. Focus groups described the first two steps of the ladder—0 or 1— as the step corresponding to chronic poverty. It is difficult, if not impossible, for households on steps 0 or 1 to move up to the next step. Although households on the next step up from the lowest step were better off, their positions were precarious: they could easily slide back to the lowest step. Families on these steps:

- Have no land and other assets (are homeless and jobless)

- Are daily wage earners with very low incomes since the daily wage is fixed at 80 pesos per day. Income is hardly enough for consumption;

- Are seasonal workers with unstable incomes;

- Are working as farm laborers and have at least two and sometimes six or more children;

- Lack education or have low levels of education; and

- Have vices (smoking, drinking and gambling).

In San Roque, Maramag, a 40-year old female participant of FGD-LOL said that having children in school is an additional expense:

> "No matter how hard we worked, we still remained [at this particular level]. It's because we still have children who are still in school, thus an …additional expense."

According to a 44-year old participant, "It is difficult to move up because they are only farm laborers. Their income is only enough for their consumption, it is really impossible for them to climb up."

Those who belong to the upper steps (namely, steps 3, 4 or 5) have a higher likelihood of remaining at this level and have the greatest chance of moving to a higher level. According to FGD LOL participants, characteristics of households who belong to the topmost steps are:

- Large land owners engaged in farming such as sugarcane, rice, corn, rubber, coconut, etc.; or have expanded farming operations by renting land and accepting mortgage;

- Major business persons (engaged in buying and selling of agricultural products);

- Owning or capable of hiring vehicles such as motorcycles, truck-haulers, cars, vans, and multicabs;

- Operate rice and/or corn mill and other post-harvest facilities;

- Regular source of income (government employees – teachers, police officers, elementary and high school teachers and other professionals);

- Own concrete and beautiful houses with home furniture and appliances;

- Have one or more family members working overseas with investments;

- Diversified income sources (crop, livestock and fruit tree plantation);

- Two or fewer children, so a small proportion of the family's income goes to schooling expenses;

- More than five children who are grown-ups, have finished school and are gainfully employed;

- Local elected officials with vast lands; and

- Family members are industrious and hardworking.

Most FGD participants believe that Step 4 (in a five- or six-step ladder) offers the most opportunity for upward movement. Households on step 4:

- Own resources necessary for moving up because they have income from diverse sources, such as income from livestock, convenience store, vehicles for hire and farm equipment for rent;

- Are professionals with regular income, such as teachers, engineers and government employees;

- Own large tracks of productive land; and

- Set aside money for saving; and are frugal and prudent in spending money

The particular step from which it is easy to fall back is Step 3 (in a five- or six-step ladder) with the following reasons:

- While more than one member is earning a living, they are daily wage earners. During the off-peak season, they have difficulty surviving because there is no work available.

- Income sources are not yet diversified. They are dependent on farming related activities as their source of livelihood.

- They do not have savings or their savings are insufficient to maintain them on step 3 if there are emergencies.

- They lack the drive to work hard or they are lazy.

In relation to the last reason, a 37-year old female FGD-LOL participant from Manuto, Quezon explained:

> "If people are too lazy to work [hard] then, there's no doubt for them to fall down. If it is only the husband who earns for the family income then the household is in great danger of falling back…"

Families on Steps 4 and 5 (for ladders starting from Steps 0 or 1) are less likely to fall back. These families tend to:

- Have diversified or alternative sources of income.

- Have a family member who has a stable job with the government.

- Be engaged in stable businesses (*sari-sari* or convenience stores) and have investments.

- Be hardworking and industrious;

- Be land owners or cultivators;

- Have two or more members of the family earning a living.

- Have properties (trucks, vast land area, farm equipment, etc.) and other assets.

- Have properties to sell during emergencies.

3.3 Demographic and economic factors affecting mobility

The FGDs also discussed factors that enable households to move up the ladder of life. FGD participants identified the following factors that enable households/individuals to move up:

- Access to land – households that moved up owned, rented, or were given the chance to till the land for free

- Accumulated capital or savings to invest in farming operations or non-farming related enterprises

- Accumulated savings that can be used to acquire more land or other assets.

- Diversification of income sources, such as combination of farm and off-farm business operations. Examples of farm income sources were livestock and crops; off-farm sources mentioned were a convenience store and income from employment.

- Having children in elementary school who do not require much outlay in terms of daily subsistence and education (public education in the Philippines is free at the elementary and secondary levels)

- Having children who have completed their studies, or who are working and contributing to the family's expenses, even if they have not finished with their studies

- Family members who work outside the community (and give regular remittances to the household)

- Positive attitude and traits (being industrious, frugal, and prudent in spending money)

- Retirement from government service (receipt of lump sum or monthly pension)

- Inheritance (land and other assets)

Most of the factors mentioned above are supported by direct statements from the informants and participants in the study areas. In Calao-calao, a 31-year old FGD-LOL male participant aired his views regarding ownership of productive assets as a factor to moving up of households: "[People] who have lots of properties. They have trucks, large land areas... [are the ones who are most likely to move up],"

Income diversification is another factor contributing to upward mobility. According to a 35-year old FGD-LOL female participant from Kiara: "If we would have our livestock, we would raise cows and water buffalos. That could also help us to have a bigger income."

Moving up is also attributed to stable income from government service and business operations:

> "Because they are government employees and their husbands have businesses. Hence, it means they have regular income. So, if the business will grow, it is possible that it would be easy to move up," (49-year old male FGD participant of LOL from Natulongan, Kibawe).

The factors that hinder mobility are as follow:

- Low education/no access to training or non-formal education

- No access to Credit

- Large families (with so many dependents) with children are in school

- Death of major income earner in the household

- Illness of a major income earner or another household member

- Loss of land (due to shocks- illness, paying for schooling of children, accident, etc)

- Negative traits – alcoholism, gambling, extravagance and deficit spending, laziness

- Lack of skills or education/training

- Crop failure due to pest and disease infestations or weather disturbances such as draught or flooding.

The effect of the number of dependents on the household's mobility is not clear-cut. Although some claimed that having more dependents makes it more difficult to move up, others opined that it depends on the household's life cycle stage. Infants and children require higher maintenance when it comes to food and medicine in case they get sick but as they reach primary or elementary level and if public education is available in the area, the cost is not that high. Thus, participants/informants often say that their wellbeing deteriorates when children proceed to high school or college compared to the time when the kids were still in the primary or elementary level. But as children complete their education or begin working, even if they have not completed college, they contribute to the family upkeep. This could be a reason why households move up in the ladder of life. A 42-year old female informant from Talahiron recounted how her children help her with household expenses:

> "It became better now compared to1995 because my children are already working. They can already help, unlike before, they were still small and they didn't work. They could not stand the heat when they were still small. They didn't have regular work before. They will wait for the time when the sugar cane would grow. When they eventually found work, they gave to me half of their income. I did not have the heart to get all of their money; I still have to leave them certain amount to buy their own clothes and whatever they need to buy for themselves out of their income.

While children can help their parents once they start working, the benefits are even greater if they are able to find work outside the village—and then send remittances home. All respondents recognized that the living condition of households with members working outside the community is better because of remittances. Having a remitting family member living outside the community is a major reason given for upward mobility in the household sorting. This is especially true if the household member is an overseas contract worker

> "Has a family member who work as a DH (domestic helper) abroad [and is sending money to the family]." (44 year old in female FGD in Cebole, Quezon)

> "Some have their family members work abroad…." (51 year old in female FGD in Calao-calao, Don Carlos)

The high returns to migration have affected the aspirations of youth. Young people, especially women, aspire to work outside the community. The female youth had higher aspirations in life compared to their male counterparts. This has implications for the labor force that will be left behind in the community. With the exception of a few males, most of the youth (either male or female) wanted a job that does not deal with the land.

Both positive and negative traits of household members were seen as factors in moving up or down the ladder of life. A 31-year old male FGD participant from Calao-calao interjected that the issue is hard work and not the availability of jobs. He said:

> "If you're lazy and if you're just contented with "sitting pretty" in your house, no one will offer you opportunities if that is so. If you will work, you will get paid after. ..It also depends on how industrious you are. It is easier to find a job if you are industrious. But of course more difficult if a person is lazy."

In Old Damulog, the male participants in the FGD-LOL, highlighted are the following traits: hard work and frugality. These are the exact words of the participants:

"If they work hard. Let's say, if they worked hard in the past years consequently they will already improve in the present. They should also be thrifty in spending their money in order for them to move up." (Male participant, 54 years old)

"Hard work hand-in-hand with trust in God for He is the one who wills everything that will happen to us." (Male participant, 49 years old)

3.4 Other factors that help/hinder mobility

Ethnic differences have been a source of conflict because of the discriminatory and ethnocentric attitude of some ethnic groups towards other ethnic communities. Hence, it can hinder the mobility of people in the social, political, and economic spheres. Ethnicity is judged by the people's ethnic origin including language and culture. But there are ethnic groups who believe that they are superior to the other ethnic groups based on economic and social standing. Groups lacking those qualities usually become marginalized and have difficulty moving up the socio-economic scale.

Even in pre-colonial times, Mindanao had diverse ethnic groups that were distributed in the different regions with different languages and cultures. The descendants of these groups are collectively known as the *Lumad* (indigene or native). They still live in their remaining domains and continue to practice their cultural traditions. On the other hand, they are also the most deprived and neglected sector of the country. Upon the advent of the migrant settlers to Bukidnon who came from different ethnic origins, some of the indigenous groups were encouraged to move out, while others remained and intermixed/intermarried with the settlers.

In southern Bukidnon, most of the municipalities have *barangays* (villages) that still are inhabited by a *Lumad* group, the Manobo, who live in outlying settlements located further from the village centers. Because of the distance, they could not avail of the social and health services extended by the *Barangay* Health Stations. However, ethnicity is also a barrier to obtaining access to social services; the *Lumad* are perceived to be people who are illiterate, unsanitary, and superstitious or pagan.

Ethnic barriers also limit school progression. Many of the indigenous children refuse to continue their education because of the discriminatory attitude of the lowland teachers and students, who belong to the ethnic group of Bisayan migrant settlers, towards them. This is also true among the adult *Lumads* who claimed that they are unable to avail of loans from informal and formal lending institutions, even if they have collateral, because they are perceived to be unable to repay the loan.

In terms of social and economic mobility, the *Lumads* face difficulties in moving out of poverty because of their ethnicity. They stay in the lowest rung of the ladder of life. There are cases of indigenous people in southern Bukidnon who have obtained college education but attempted to hide their ethnicity (e.g. Manobo or Higaonon) and passed themselves off as Bisayans in order to get a job or avail of loans from the banks. Nonetheless, some *Lumads* have moved out of poverty, but not many.

The majority of the Bisayan ethnic groups were poor migrant settlers who came to southern Bukidnon in the 1950s. With the help of the government, they were able to obtain farmland

and have accumulated assets and other properties in the long run. Consequently, some became wealthy, entered politics, and maintained their own political bailiwick until the present. Some became big landowners and became richer when sugarcane production entered southern Bukidnon; they are the ones who occupy the topmost rung of the ladder of life. Unfortunately for other Bisayans who came later to the area when most of the lands were already owned by the earlier migrants, the opportunities were elusive and they had difficulty eking out a living except to work as farm laborers in the sugarcane farms. However, some were able to gradually move out step by step through hard work and perseverance, while the others remained still in the lower rung of the ladder of life.

In the final analysis, however, compared to the *Lumad* ethnic groups, even the poor Bisayan migrants have more chances to move up the ladder and out of poverty than their *Lumad* counterparts because of the ethnic bias against the former, which has persisted to the present.

3.5 Assets, credit, and schooling as pathways from poverty

Results from the FGDs give additional evidence in support of the important role that physical capital (assets, especially land), credit, and schooling play in helping households move out of poverty.

Land, assets, and credit

In the study area, many people with access to land till the land themselves or supervise farming operations. Respondents point out that landowners and cultivators, even those who do not own land but rent land or cultivate land mortgaged to them, are the most likely to move out of poverty. A 39-year old participant of male FGD in Cebole, Quezon, Bukidnon states:

> "The industrious people are the ones who will succeed. [They] are hard working. They help in cultivating their lands."

Most participants claim that landownership is a dream of every farmer; it is the very first factor identified as requisite in moving up the ladder of life. These claims are very consistent with the regression results presented above. According to a 30-year old male FGD participant of the ladder of life in Kiara, Don Carlos:

> "The land owners have the great possibility of moving up. The value of the land has increased, that's why there is a difference between the landowners and those who are only working as farm laborers."

However, to make the land productive, participants and informants in all communities state that access to capital is essential. Those that own or have access to land but lack capital are less upwardly mobile:

> "It is still a hard step to climb because we lack the money, which could serve as our capital in putting up a business; we are still compelled to borrow/loan for money to be able to do that." (44 year old Female-FGD from Kiara, Don Carlos).

> "It is easy [to climb out of poverty] as long as you have the necessary capital" (34-year old, Male-FGD participant from Pay-as, Kadingilan, Bukidnon).

Access to capital, even in the form of a loan (access to credit), was seen by some participants as much better than having no access to capital at all. Some farmers were cautious in

borrowing money simply because some farmers, due to crop failure, defaulted on their loans and lost their land.

Since one can earn income from land, frugal farming families can generate savings. From savings they can acquire more capital to diversify farming operations or invest in off-farm enterprises. By diversifying sources of income, the likelihood of moving up in the ladder of life becomes greater. Having diversified income source, such as income from sugarcane plantation, hauler truck, or mini-variety stores, is a key characteristic of households that move out of poverty.

Human capital pathway

Participants and informants claimed that skill and education enable households to move out of poverty. Educated and skilled people have better chances of getting well-paying jobs. For example, the *barangay* local government hires staff, including teachers, who are high school graduates up to the college level.. However, employment for college graduates and those with college level education remains very limited within the *barangay*.

In Calao-calao, a 37-year old male FGD participant highlighted the effects of a lack of education. He was unable to complete his high school education and had therefore suffered from unemployment:

> "It would be very difficult for people like me, I didn't finish any degree, the only employment I can be accepted is just a mere farm laborer. If would be advantageous for those who have their degrees because they can have greater employment opportunities and they can go to places to find work."

4. COMMUNITY CHARCTRISTICS AND MOBILITY

The above discussion has focused on individual and household factors that contribute to movements out of poverty. In this section, we turn to the role of the community in providing the environment in which movements out of poverty can take place. What community characteristics are conducive to movements out of poverty? What is the role of governance, infrastructure, and community organizations?

We begin by listing the factors that male and female focus groups mentioned as affecting community prosperity, linking these to the community-level determinants that emerged as significant in the regression analysis. We then discuss how findings differ across community types. Finally, we correlate mobility indices derived from the male and female focus group mobility matrices with various community characteristics to identify factors associated with both upward and downward mobility.

4.1 Positive and negative factors affecting mobility

Table 8 presents the top two positive and negative factors that affected community wellbeing in the last 10 years, as obtained from male and female focus groups. The number of responses do not always sum to 20 because we broke down composite answers into their respective components (for example, if one reason was: high prices of inputs and low selling prices of farm produce, this reason was listed under the two categories of high input prices and low output prices). Aggregating across categories, infrastructure improvements were the most

important positive factor mentioned by men (accounting for 38% of the positive responses), followed by the quality of governance (19%) and agriculture-related events (19%). For women, events related to agriculture accounted for 41% of positive events, followed by the quality of governance (29%), and infrastructure improvement (23%). Within the infrastructure category, water system construction was consistently mentioned by both men and women as the most important positive development. Within the category of governance, the quality of local government officials (especially those at the *barangay* level) made a big difference. Finally, among agriculture-related events, the introduction of sugarcane was the most important positive factor leading to community prosperity. It is interesting to note, however, that opinions regarding sugarcane are not universal. The shift from corn to sugarcane was also listed as a negative factor affecting community wellbeing, although for a small proportion of the respondents.

Economic factors comprise the major negative factors that affect wellbeing. Eighty percent of male focus group responses and 56% of female focus group responses revolved around a variety of economic factors that impacted negatively on wellbeing, namely the high cost of basic commodities, high input costs, and low product prices. Next to economic factors, agriculture related factors were the second most important for both male and female focus groups—the El Niño-related drought, and pest infestation. While both male and female focus groups mentioned dissatisfaction with government officials (corruption) and the quality of community life (uncooperative residents or crime), governance and community cohesion were relatively unimportant compared to economic factors and agriculture-related shocks.

We now discuss the three major categories of factors contributing to community prosperity in greater detail, drawing on statements from focus group participants themselves.

Infrastructure and mobility

Infrastructure was seen by informants and FGD participants in all the ten communities as a major factor behind community prosperity. The types of infrastructure that they specifically mentioned were the water system (common to communities with high poverty incidence) and road network (specifically, farm to market road). The installation of water system in the community contributes to lower incidence of water-borne diseases, which could have a greater adverse impact on the finances of poorer households. Because women and children typically fetch water from the well, the women noted that access to a water system freed them to do productive work. Instead of spending so much time fetching water, they can now devote the time to gardening and other income-earning activities. Below are statements from participants in the study:

"It really made life easier for us women since we are the ones most affected at home if there is no water available; our time is spent fetching water for washing clothes…" (54-year old female informant, Talahiron)

"Water is really necessary in any place. So we were really thankful that we already have our own water system now because we don't have to walk that far anymore just to be able to fetch drinking water.… Water is life, so we considered our water system as the most important factor that has helped   our community to prosper" (28-year old and 40-year old female participants, San Roque)

"[The water system] greatly helped the people. …The people could already maximize their time because they no longer need to fetch water from afar. Before, they used to fetch water 1 kilometer away from here and they had to fall in line before they could finally take their turn. Now, the consumers are only required to pay P30 a month (for water usage)," (Key Informant Interview, 44 years old of Community Timeline in Cebole, Quezon, Bukidnon).

"The people here in the community no longer get delayed in their work because they do not have to fetch water in the nearby *barangays*. Water is already available in their homes anytime they want to use it." (Male, 40 years old of FGD of Kauyunan, Kitaotao, Bukidnon).

"If you have to fetch water from far areas, it could waste so much of your time when you could have spent it working in the farm" (Male, 59 years old of Ladder of Life – Men of Natulongan, Kibawe).

A farm-to-market road, regardless of community typology was mentioned by almost all of the communities covered in the study as a factor behind community mobility. Without the roads, people used horses and water buffalos in transporting their goods and this usually takes hours. Right now, the informants in the community timeline said that with a road connecting the community, it will not even take one hour (it used to take more than three hours) since jeepneys can now ply from the area to the center of Talahiron and the municipality proper.

A 35- year old male informant in one of the mini-case studies in Talahiron said:

"Due to bad roads, farm produce could not be brought to the market right away and sometimes it will take weeks before people can transport their goods to the market. They have to have their produce scheduled to be taken by a horse or carabao to be brought to the market."

According to a 25-year old male informant from Natulongan (who obtained a nod of agreement from the rest of the participants):

"The road, then, was very rough and it was difficult to transport products from the place to the market. Horse was the means of transportation for both people and products. The travel will take three hours with a fee of P5.00 per sack of corn from the place of origin to the center of Natulongan and P10.00 per person. However, for those areas that are much farther, the fee is no longer by sack but rather by kilo. He mentioned far-flung sitios, around 8 kilometers away from Natulongan, such as Kalasag, Bukangliwayway, and Kagawasan. For a 150-kilo of corn, the charge is 30 centavos per kilo if coming from those outlying sitios mentioned. If the distance is more than 8 kilometers per kilo charge is already one peso."

In Damulog, a 54-year old informant commented: "If the road is passable then the people can now enter our areas. The people here have dreams of planting sugarcane if the road is passable; since then some residents had planted sugarcane because the hauling trucks can now enter. The *barangay* also earns from these roads because the planter has to pay a toll fee of Php 25.00 for every truck."

All communities in the study had access to communication and information thru radio and television but only a few have access to national dailies. Landline telephone system is not available but some households in these communities own mobile phones.

The presence of schools in or near the community that offer various grade levels also affects community prosperity. The community is assured of an educated populace. However, some respondents cautioned that the community has to be ready to absorb graduates for employment. A counterpoint was raised that even if the community cannot absorb the graduates, they are ready to apply for jobs outside the community. In fact, the opening of an elementary school in a particular area in a *barangay* assures the place of transferees (within the *barangay* and outside). Even those who find it difficult to send their children to school due to meager income put a premium on education. There was an unspoken belief that if one is educated s/he is assured of a well-paying job and will be spared from the hard work of tilling the land. A well-paying job is equated to white-collar work; thus, one is spared from the burning heat of the sun when one is working in the field. This thinking has been absorbed by the young people as they aspired for off-farm work while the older ones (especially the men) have ambivalent feelings. They have a close relationship with the land and they want their children to follow their footsteps. At the same time, they also want them to be successful in performing jobs outside the farm. This sentiment is stronger among the parents (especially fathers) with big landholdings.

Infrastructure also improves access to markets—whether through the construction of markets, or improving transportation. Respondents viewed a thriving local market as a factor behind community prosperity as well as household and individual prosperity. The women specifically noted access to *tabo* (market day) within the community as a means of earning a living and diversifying income. While the men identified land as their major source of livelihood, the women could identify other means of earning a living (e.g. livestock raising, tending *sari-sari* store, selling foodstuff, gardening, buy and sell goods and other crops at the *tabo*).

In Natulungan, almost all male participants noted that the holding of a regular market day every Saturday of each week is a good idea for the community and the neighboring communities. Traders and buyers converge and transact business. The community earns money from this activity because the vendors were asked to pay for the spaces they occupy. People can earn income as they trade any form of goods during market day. A 54-year old male informant from the FGI for Community Timeline said that the market

"Became more active and alive and the market became more spacious. It invited traders from neighboring *barangays* like Talahiron, Bukang Liwayway and other places. Their items sold were organized according to types of goods. The allocation of different sections and spaces did not create jealousy among vendors, those reservation for spaces were arranged already."

A 44-year old female participant also reasoned out why she felt things are better now:

"I can say that the improvements now helped a lot. …we only depended on the market day. …I am better off in the present compared before since there are many buyers now. There are many who came from other places and it [the number] was just few before. . There are many who came here now. . There are many who will be buying and be participating in the market day, which means greater income for us."

Agricultural changes and mobility

The shift in land use from corn or rubber to sugarcane was seen as both an advantage and a disadvantage, although more respondents mentioned it as a positive factor. For big

landowners who had the capital, it resulted in higher income, but for small landowners who cannot afford the necessary inputs to invest in sugarcane production, it meant losses. For the landless, it meant employment opportunities, thus, they see the advent of sugarcane plantation as a means of earning a living (even though it is just a "hand-to-mouth" existence, still it was earning a living). For the small landowners, it meant a decrease in income. So for the community, the introduction of sugarcane is double-edged—it increases incomes, but not equally for everyone.

In San Roque, a community with high incidence of poverty, the men agreed that the coming of sugarcane into the area created livelihood opportunities for the people. A 64-year old male FGD participant claimed:

> "Since the start of the sugarcane plantation here in our community, there were already a lot of working opportunities."

A 33-year old male FGD participant from the same place added:

> "Since then, we had another source of income, which is sugarcane harvesting. If we are not busy in our corn and rice farm, we can work in the sugarcane plantation."

Another 39-year old male participant from the focus group discussion expressed that ever since the advent of sugarcane, their place became livelier because of the number of people arrived in the area to work in the plantations. He said, "Our place has become merrier because there are already a lot of people who would come here to work in the sugarcane plantation."

In a low poverty incidence area, the informants and participants gave examples of acquiring things of bigger value as an outcome of the shift from corn to sugarcane.

A 58-year old female informant of the case study attested to this when she said:

> "…I will tell you my experience with sugarcane. I have 7 children. If I hadn't planted sugarcane, if I stick with corn they might have only finished until high school. Planting sugarcane helped me a lot. If not because of sugarcane, many planters here would have not been able to purchase cars. Even in my case, if I hadn't planted sugarcane I would've not been able to afford a car."

Another 28-year old male FGI participant from Calao-calao noted that many people from his *barangay* are capable of purchasing home appliances now that they have shifted from corn to sugarcane.

With all the advantages mentioned, people from other communities (e.g. Talahiron, a high poverty incidence *barangay*) pointed out the negative effects of the shift to sugarcane. The advent of sugarcane also brought workers from neighboring provinces to the place and for some this as a disadvantage. A 55-year old male FGD participant said:

> "Today, one could not harvest corn if he/she did not join during the planting of the crop. This is because there is already an increasing number of workers [available at the place] while there is only limited number of crops to be harvested."

The Talahiron FGD participants also attributed hard times nowadays to land conversion (from rubber trees to sugarcane in 2000), agreeing that life was better when people tilled their own land and they could harvest every three months.

"As people converted farm lands devoted to corn and rubber to sugarcane and when they rented out their lands to sugarcane cultivators life became difficult…. Nowadays, people work as laborers and work is seasonal and not available the whole year round." (35-year old male case study and Community Timeline key informant)

The female FGD LOL participants also expressed that when the lands were devoted to corn and rice, even the non-land owners as well as laborer can get something out of the land during harvest time. The landless, both young and old, can gather what is left from the field after the owners and laborers have gathered the produce. Nowadays, the work is seasonal and the landless could not get anything during harvest time.

Governance and community life post-decentralization

Many of the responses regarding local governance need to be taken in the context of changes in the political climate in the Philippines since the devolution of political authority and functions to Local Government Units (LGUs) in 1991. This gave the LGUs more freedom to come up with policies that would enhance the development of their respective community. Under this new system, the people are given the opportunity to participate in community assemblies to tackle issues and problems concerning the welfare of their community.

The respondents of the communities asserted that, since they elected the local officials, they have the right to interact and influence them. Participation in governance indicates democratic functioning because people are consulted and can express their views and criticize the government. In general, local governance is more transparent now than ten years ago.

Compared to ten years ago, there are more local organizations within the communities, formed by the people themselves or with the encouragement of the government, for the delivery of social and economic services. The small farmers (corn and sugarcane planters) have their associations or cooperatives, which give out loans to members in the form of inputs (fertilizer, seeds, and pesticides). Some communities have organizations for women and mothers such as the Rural Improvement Club (RIC) and Mother's Class; these help the women in livelihood projects like animal dispersal or training women in certain skills like sewing/tailoring. In the community of Kauyonan the senior citizens or elderly also have their own association, which extends loans to members to start a livelihood project. Moreover, a multi-purpose cooperative known as "Samahang Nayon" is active in giving credit loans to members for livelihood projects. Unfortunately, in some communities, this particular type of cooperative failed due to mismanagement by the officers.

During the post-Marcos regime, the communist insurgency was active in southern Bukidnon and the local government units were not properly functioning. The unstable peace and order situation was detrimental to business investors and the marketing of produce was impossible because of the farm to market roads and other infrastructure did not exist. With the settling of peace and order in Mindanao and the passage of the Local Government Code in 1991, local government units have taken the initiative to introduce social and economic measures to develop their communities. Moreover, as local officials are replaced with younger pro–development officials, local governments became more functional and gained their constituents' trust.

The LGUs also have programs that extend loans to women for small entrepreneurial activities such as starting a *sari-sari* store (neighborhood convenience store) and other livelihood

opportunities. The small farmers also have benefited from the program of the Department of Agriculture wherein assistance was extended in terms of inputs like seeds and fertilizers; their agricultural extension program had benefited many farmers in southern Bukidnon. The *barangay* (village) government in some communities had come up with policies that offer economic opportunities through micro-credit lending and use the loan for whatever small enterprise they go into like putting up a store or shop, livestock raising, and other agri-business enterprise.

Given the increased importance of local government, it is no surprise that the quality of governance at the local level emerged as one of the most important factors behind community prosperity. Effective local leaders are able to implement infrastructure projects that benefit the community (see discussion on infrastructure, above). Respondents further noted that an effective local leader brings projects into the community. Aside from bringing in projects, the *barangay* chair's attitude and ability to interact with the constituents are factors bring about effective project implementation. The following quotes substantiate this claim:

> "Without the respect of the community residents in Talahiron to their *barangay* chair, they will never respond to the call for help (bayanihan or cooperation manifested by rendering voluntary work) to undertake *barangay* projects," a 35-year old informant in Talahiron

> "He [referring to the *barangay* chair] is very helpful on individual concerns that the time he will ask for support from the people, they usually respond positively to his call," 38-year old female participant of the LOL-FGD in Talahiron.

"Our place has changed so much. Our local officials have prepared many projects for the *barangay*. …There were changes in our community because of the effort made by our local officials. They are the people behind the progress."" 30-year and 35-year old female FGD participants, Old Damulog.

4.2 Differences across types of communities

To facilitate comparison of factors affecting mobility across types of communities, we constructed community typologies by ranking the communities according to a number of characteristics, and dividing the communities into two groups using the median value of the characteristic in the ten communities. We focus on three aspects in this typology: poverty incidence, asset heterogeneity, and economic opportunities. Since the typology somewhat artificially divides the communities into two groups, this analysis is only indicative, and will be triangulated using analysis of the mobility matrices.

4.2.1 Higher poverty communities

A ranking of the ten communities according to poverty incidence is presented in Table 9. The communities with higher poverty incidence are: San Roque, Kauyonan, Kiara, Talahiron, and Natulongan, while those with lower poverty incidence are Calao-calao, Pay-as, Manuto, Cebole, and Old Damulog.

The women's and men's groups in the five communities with high poverty incidence, expect for the men's group in Kiara, indicated that their community is more prosperous now compared to ten years ago.

The common factors identified for community prosperity are infrastructure projects and water systems. Infrastructure projects such as farm-to-market roads, solar dryers, irrigation systems, and electricity installation provided a positive environment for farming operations, facilitating transport of farm products to markets and transport of production inputs to the farm. The installation of a water system installation enabled the people to have access to a water source near their houses. It has reduced the time spent in fetching water, freeing this time for other productive tasks.

The prosperity in San Roque was attributed to responsive local governance, infrastructure projects (such as elementary school, *barangay* hall, electricity installation and irrigation system), the local government's PhilHealth Program for indigent families and livelihood projects. Another factor that contributed to prosperity is the sugarcane industry which gave more work opportunities as farm laborers.

Similar to San Roque, Kauyunan attributed its increased prosperity to the governor's livelihood projects (providing additional capital to convenience stores), acquisition of a *barangay* site which allowed residents to own houselots, increased working opportunities in the sugarcane industry, PhilHealth Program, and infrastructure projects such as multipurpose building, new *barangay* hall, construction/maintenance of road networks especially leading to markets.

In Talahiron, the factors that affected community prosperity are infrastructure projects (roads and bridges, solar dryers, and PhilHealth Program for indigent families).

Respondents in San Roque, Kauyunan and Talahiron indicated that PhilHealth, the local government's health insurance program for indigent families, was able to improve health status of poor families. At the same time, the program enabled the poor to pay for heath care costs without spending from their meager income or disposing of their productive assets.

Natulongan attributed community prosperity to livelihood projects, farm to market roads, market day and mini-dump truck for the community.

4.2.2 Lower poverty communities

The lower poverty communities had incidence are Calao-calao, Old Damulog, Pay-as, Cebole and Manuto. Women and men's groups in Cebole, Manuto and Pay-as indicated that their community is more prosperous now than 10 years ago.

The factors affecting community prosperity in Cebole are government projects, job opportunities for laborers, sugarcane income for landowners and copra production. For Manuto, these factors are leadership style of the new local, provincial and national government officials and cooperation among community residents. The prosperity in Pay-as was attributed to water systems, PhilHealth and the active leadership of the *barangay* chairperson.

Both women and men's groups in Calao-calao indicated that their community is now less prosperous. Factors that buoy the community's prosperity include infrastructure and livelihood projects, the introduction of a service vehicle to the *barangay* and the active leadership of the *barangay* council.

In Old Damulog the men's group suggested the prosperity has not changed, while the women's group saw increased prosperity. The factors affecting prosperity include leadership style of local officials, PhilHealth and infrastructure and livelihood projects.

4.2.3 Communities with high and low asset heterogeneity

Table 10 presents communities' asset heterogeneity rankings, one of the many village-level heterogeneity measures discussed later. The measure of asset heterogeneity uses the standard deviations of the 1984 total value of assets (land and nonland assets). We find that all the men's and women's groups from communities with low asset heterogeneity (San Roque, Kauyunan, Natulongan, Pay-as and Manuto) indicated that their communities are more prosperous now compared to ten years ago.

4.2.4 Communities with high and low economic opportunities

Table 10 also presents rankings of the communities with respect to the growth rate of per capita consumption. More women than men indicated that more economic opportunities have increased over the decade. Women relative optimism was also reflected in how the households were sorted.

The reason for the gender difference could be that men are identified as the farmers (even if women do help in the farm activities). Men in almost all the study areas note that the input costs are increasing while the prices of farm produce remain the same or are decreasing. They saw a bleak future for farming but could not see any way out – they choose to push on with farming. In contrast, women have more farm and off-farm activities. They engage in buying and selling of farm produce in the *tabo* (market) or do house-to-house selling of various goods. They tend a *sari-sari* (convenience) store. They are engaged in raising livestock or a vegetable garden. They are even into networking marketing.

4.2.5 Other Factors

Participants and informants also mentioned that population growth and high dependency ratios contribute to the stagnation of communities. This is consistent with the regression results, where we find that households with a lower dependency ratio ten years ago have a higher probability of being nonpoor now. However, participants in the Community Timeline exercise in Calao-calao specifically mentioned the role of population in community prosperity. One thing they have agreed was that, overpopulation might cause the people to suffer. A 53-year old male FGI participant said: "They have no house of their own and they have no source of income. These reasons made life miserable, all the more if there is no birth control."

Participants in the discussion concurred that the most serious effect of overpopulation in the community was unemployment. A 28-year old male participant expressed his views regarding population and unemployment:

"As an after effect of overpopulation, we have problems on unemployment. It even started in 1995. Even if we have lots of graduates but they cannot find stable job, some resorted to entrepreneurship, others don't have jobs at all."

The absence of peace is a factor why a community does not progress. In Manuto, the participants of the male FGD spoke of a more peaceful and dynamic environment now

compared to ten years ago. They noted that their *barangay* used to be the haven of the New Peoples' Army (NPA), a rebel group that is working against the government.

4.3 Mobility and community characteristics

How does mobility within the community correlate with characteristics of the community where households live? This section relates mobility indices of households, as obtained from focus groups, to community characteristics. Because the Philippine study did not use community focus groups to determine a community poverty line, but rather conducted separate male and female focus groups to do so, we analyze mobility indices separately for the male and female FGDs. We decided to analyze male and female FGD results separately rather than choose one of them to represent the community because men and women may have different perceptions or interpretations of the factors that allow households to move out of poverty. This is consistent with the growing recognition that households do not make decisions as one, and that household members may have different preferences (see Haddad, Hoddinott and Alderman 1997 and Quisumbing 2003 for reviews and empirical evidence). Assuming that both perceptions are equally valid, there is no clear criterion for choosing one over the other. Indeed, we find that male and female focus group rankings of different households' positions on the ladder of life now and 10 years ago differ systematically. Before we discuss the results, we offer two words of caution. First, while we examine a range of past and present characteristics, these relationships should be interpreted as associations, not causal relationships. Second, the number of statistically significant correlation coefficients probably understates the number of important interactions, owing to our small sample size of 10 communities.

How do these differences translate to the summary measures of mobility and their correlations with community characteristics? Summary statistics, transition groups and mobility indices derived from the male and female FGDs are presented in Tables 11a and b. A household is classified as poor if it is deemed to be below the community poverty line (CPL), while a household is classified as rich if it is above the CPL. Note that since we analyze male and female FGDs separately, a household can be classified as poor in one FGD and rich in another. "Initially" and "starting" refers to a household's status 10 years ago. Risers are households that moved up on the ladder of life, while fallers are households that moved down on the ladder of life. With respect to the transition groups, movers are households that moved up and across the CPL, fallers are households that fell across the CPL;[4] the chronic poor are households that remained poor, and the chronic rich are households that remained rich. The mobility indices are described more fully in World Bank (2006).

Community characteristics are of three types: (1) average current community characteristics; (2) heterogeneity measures at the community level; and (3) average community characteristics in 1984. With the exception of the social capital index, which was computed from the quantitative MOP survey, the average community characteristics were obtained from 2003 round of the Bukidnon Panel Survey, owing to its larger sample size (572 households vs. 259 in the MOP quantitative survey) and more comprehensive set of information collected. Most of these characteristics focus on physical and human capital endowments of the community (average years of schooling of the household head, community average of the maximum

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4 Note that the definition of "faller" varies in the context of summary statistics and transition groups.

education in the household, average size of owned land, the proportion of households with land more than 0.5 hectares, the average size of cultivated land, and the average total value of land and nonland assets). Because accumulation of social capital may be one pathway leading out of poverty, we also include the community average of the social capital index (from the MOP study) and the average size of trust-based social networks (from the Bukidnon Panel Survey). We also include characteristics of the community with respect to two types of infrastructure mentioned in the focus groups: water supply and roads. Access to water is measured using the percentage of households in the *barangay* living 50 meters or less to its primary drinking water source. We use a number of indicators of road access: (1) the duration the *barangay* has been linked to a main road; (2) the distance to the municipality seat (*poblacion*) in kilometers; and (3) travel time to the *poblacion* in minutes. Because social inequality and ethnic differences may create barriers to social capital accumulation—and possibly movement out of poverty—we also investigate the role of village-level heterogeneity.[5] We employ a number of measures of village-level heterogeneity, following Alesina and La Ferrara (2000) and Haddad and Maluccio (2003). Our measures of heterogeneity are: (1) heterogeneity with respect to region of origin, henceforth origin heterogeneity; (2) asset heterogeneity; (3) heterogeneity with respect to ethnicity of the household head, henceforth ethnic heterogeneity; and (4) educational heterogeneity (based on the education of the household head).[6] Finally, we examine the role of past community characteristics—community averages of the education of the household head in 1984, owned land in 1984, the percentage owning land larger than 0.5 hectares in 1984, cultivated land in 1094, total value of land and nonland assets in 1984, and social capital 10 years ago.

Tables 12a, 12b, 13a, and 13b present selected correlation coefficients among transition groups (movers, fallers, chronic poor, and chronic nonpoor), the mobility indices, and community characteristics, using the classification of households on the ladder of life from the male and female focus groups, respectively. For ease of presentation, we only present those correlation coefficients that are significant at the 10% level or better. In the tables from the male focus groups (Tables 12a and 12b), none of the community characteristics is systematically associated with the percentage of movers. However, the percentage of fallers is negatively associated with the size of trust-based networks and the degree of ethnic heterogeneity. Greater educational heterogeneity—having household heads of varied levels of schooling within a community—increases the proportion of fallers. The percentage that is chronically poor is negatively associated with the average farm size in the community, the percentage owning more than 0.5 hectares in 1984, and positively associated with ethnic heterogeneity. Conversely, the percentage of chronic rich is positively associated with the

5 For example, Alesina and La Ferrara (2000) demonstrate, using data from the United States, that after controlling for individual characteristics, participation in social activities is significantly lower in more unequal and in more racially or ethnically fragmented localities.

6 The first and third measures are based on categorical variables and are computed as follows:

Heterogeneity measure $i = 1 - \sum s2ki$

where i represents a village and k the different regions of origin or ethnic groups, depending on whether origin heterogeneity or ethnic heterogeneity is being measured. The second and fourth heterogeneity measures use the standard deviations of the 1984 value of assets and years of schooling of the household head as proxies for asset and educational heterogeneity, respectively.

average farm size and negatively associated with ethnic heterogeneity.

We now examine indices computed from the mobility matrices. "Fallers" are defined as households that fell across the CPL. The Falling index is negatively correlated with the size of social networks but positively associated with the heterogeneity of the household head's education. Similarly, both the "Falling of the Poor Index" and the "Falling of the Rich Index" are negatively correlated with the size of social networks, and positively with educational heterogeneity. This suggests that inequality in educational attainment could be a barrier to movements out of poverty, but that larger trust-based social networks facilitate it. Quite surprisingly, only the social capital index (now and 10 years ago) is significantly correlated with the Moving out of Poverty index—and then, it is negative. This counterintuitive result may be due to program placement effects, to which we turn subsequently.

In contrast to the results from the male focus groups, the results from the female focus groups (Tables 13a and 13b) show strong correlations between transition groups, mobility indices, and community characteristics. The annual growth rate of per capita consumption between 1984 and 2003 correlates positively with the percentage of movers and all the indices indicating upward mobility (PI, NPI, MOP, MPI, NPP, NPR), and negatively with the FRI index. Education of the household head in 1984 also contributes to upward mobility, being positively correlated with the percentage of movers, negatively correlated with the proportion of fallers and positively correlated with the upward mobility indices (PI, NPI, MPI, MRI, NPP, and NPR). While ethnic heterogeneity is positively correlated with the shared prosperity index, it is positively correlated with downward mobility of the poor and the rich (FPR and FPI). Surprisingly, social capital now is associated with downward mobility—showing strong positively correlations with FI, FPI and FRI, and negative correlation with NPP—and heterogeneity of social capital is also associated with poverty and the inability to move out of poverty.

It is interesting that infrastructure provision that saves time—one of the most valuable resources of the poor—is significantly related to mobility indices computed from the women's, but not the men's, focus groups. The proportion of households living fifty meters or less from their primary source of drinking water is negatively associated with the falling index and the falling of the poor index. The FGDs have already pointed out that access to water not only saves time, but also is associated with a lower incidence of illness. Illness has already been identified as an important shock that prevents moving out of poverty. Among the indicators of road access, longer travel times to the municipality seat are negatively associated with the Moving out of Poverty Index as well as the Mobility of the Poor Index. With the exception of a few far-flung communities, most of the communities in our sample have been linked to the main road for almost thirty years (the median duration of being linked to the main road is 29.5 years). Improvements in road infrastructure (improvements in road quality, more regular forms of public transportation) are thus better reflected in reductions in travel time than in the other indices.

The paradoxical relationship between the mobility indices and social capital deserves further exploration. If social capital really were "capital" then it would be associated with an ability to move out of poverty. Why is social capital negatively associated with upward mobility? To investigate this issue more closely, we disaggregated the social capital index, which is mostly based on group membership, into its various components (different types of groups), and examine correlations among social capital now, social capital 10 years ago, and the change in

social capital in Tables 14a and 14b. What is striking is the high positive correlation between some components of social capital and indicators of chronic poverty and downward mobility: finance, credit, and savings groups, and health and education groups (both levels and changes thereof) are highly correlated with the percent that are chronic poor, the downward mobility indices, and the percent starting poor. As governments and NGOs increasingly use groups to deliver social services and other outreach programs (such as microfinance), such programs may be selectively targeted towards poor communities. Unless one is able to account for the factors that guide the policymakers' and civil society's choice of communities in which to implement programs, one could erroneously conclude that social capital contributes to chronic poverty, when in fact, it is responsiveness to people's needs (which could be more pressing because of poverty) that guides their location in poor communities. In contrast to types of groups that could be used to deliver social services to the poor, membership in political groups and associations appear to be positively correlated with prosperity—the PI, NPI, and MPI are all positively correlated with the average number of political groups within a community.

Ideally, then, we should analyze a measure of social capital that is not contaminated by program placement effects. Thus, we use an alternative indicator of social capital based on the number of persons in one's trust based network. Aside from information on groups to which the household belongs, the Bukidnon Panel Survey also asked the household about the number of persons it can run to for help on specific occasions (Godquin and Quisumbing 2005). Conceptually, these different events mobilize different aspects of social capital, such as trust, mutual insurance, information pooling or copying. Unlike groups, whose formation can be initiated by an external entity (the government or an NGO), trust-based networks are more likely to be self-organized. Trust-related questions deal with care of the house, care of children, and family problems.[7] Questions related to mutual insurance, information pooling or copying, and those pertaining to economic networks deal with economic loss, price and technology.[8] Of course, all of these questions are hypothetical and it is likely that households that have already experienced similar situations will provide more-accurate responses. To reduce problems of response bias, we restricted the analysis of these questions to a subsample of households that are more likely to have confronted the corresponding problem. For example, the network for price comprises households engaged in agricultural or non-agricultural production; the network for technology is formed by households engaged in agricultural production.[9] We also included two indicators of familial networks outside the

7 The wording of these questions is as follows. Care of the house: If you had to leave for a week with all your household members, how many persons would you ask to look after your house for you? Family problem: If you had a family problem (like early pregnancy in the family), how many persons could you confide in and discuss with?

8 They are worded as follows: Economic loss: How many persons do you think would help you if you suffered an important economic loss (like a fire, severe illness of an household member or loss of harvest)? Price: How many persons can you consult when you need information on prices or on a place to sell your products...? Technology: How many persons would you follow if they had adopted a new production technology?

9 We also had a question on the network for childcare but we did not include it in the present analysis because we are pooling observations of older and younger households; older households are less likely to have young children.

village: the proportion of children above 15 years of age who have migrated to urban areas, and the proportion of all migrant children above 15 years of age, regardless of destination.

Correlations among the transition groups, mobility indices, and community averages of different types of trust-based networks are found in Tables 15a and 15b. The results from male focus groups strongly indicate the importance of trust-based networks in preventing *falling* into poverty—particularly the networks in which one can discuss work and family problems. Networks for price information, on the other hand, did not have a protective effect. In contrast, none of these networks is significantly correlated to the indicators derived from the female focus groups. Instead, indicators of familial networks outside the village are more important correlates of the rankings from the female focus groups.

Results from the male focus groups show that the proportion of children who have migrated to urban areas is highly correlated with a lower proportion of fallers and is negatively correlated with indices of downward mobility—having migrant children is a protective factor. Results from the female focus groups highlight the role of migrant children in helping families move out of poverty—the proportion of migrant children to urban areas is positively associated with the proportion of movers, the moving out of poverty index, and the mobility of the poor index. The proportion of migrant children, regardless of destination, is positively correlated with the proportion of movers, the prosperity index, the NPI, CI, MOP, and NPI computed from the female focus groups. The results from male focus groups therefore highlight the social protection element of migrant children—perhaps, remittances help origin households cope with unfavorable shocks—while the results from female focus groups identify the role of migrants in helping households move out of poverty.

5. CONCLUDING REMARKS

The objective of this study was to explore the possible pathways that households can take to move out of poverty in Bukidnon, Philippines. An initial hypothesis was that land (physical assets) and schooling (human capital) were important predictors of households' ability to move out of poverty in the longer run. We explored this hypothesis using both qualitative and quantitative techniques; findings using both techniques are remarkably consistent and reinforce each other. Quantitative techniques helped identify key factors behind economic mobility at the household level, while qualitative methods provided more insight into the institutional and political factors contributing to movement out of poverty at the community level. Since initial qualitative work informed the quantitative survey and the qualitative work's sample was drawn using quantitative comparisons we were not surprised that the qualitative and quantitative findings were consistent. But the difference in correlates of mobility emerging from the male and female focus groups was unexpected. Consistent with the literature on collective models of household behavior, men and women had different perceptions regarding the wellbeing of the same households in their communities and ranked them differently, leading to mobility matrices and correlations with community characteristics that differed between men and women. This suggests that, even in a relatively egalitarian society like the Philippines, it may be important to obtain the views of men and women separately. If the focus groups are not disaggregated, researchers will impose a unitary view of the community's progress, potentially obfuscating key factors that affect the community.

Not surprisingly, both initial assets (especially land), and human capital were important in helping households move out of poverty and stay out of poverty. While both assets and human capital have been important over the past ten years, their relative importance now and into the future will depend on the livelihood and occupational strategy that families choose. This choice of strategy will itself be informed by changes in the communities and policies, such as the strong support for education the Philippines saw starting in the 1990s.

Owning or, at the minimum, having access to land is essential to making a living in agriculture. Being successful in agriculture also requires access to working capital, markets, and good support infrastructure such as farm to market roads. However, it is also clear that remaining in agriculture alone will not be a successful strategy for moving out of poverty. Even if men (especially older men) value the cultural tradition of farming, they are also pessimistic about their future. In contrast, women, whose activities are more diversified, were more optimistic about their own futures since their incomes were not completely tied to the land.

As more opportunities are created outside agriculture, we expect that the human capital pathway out of poverty will become more important. Findings from the youth focus groups indicate that, even among young males, who would traditionally look forward to life on the farm, very few want to have jobs that are tied to the land. The probability of holding a nonfarm job increases with educational attainment. Increasing educational attainment is also linked to a higher probability of migration (Quisumbing and McNiven 2005). Migration is increasingly one of the more important ways by which families diversify their incomes. Indeed, we find that communities with a larger percentage of migrant children have fewer fallers and have better upward mobility indices.

Nevertheless, the path out of poverty is still precarious. A major shock such as drought, illness of a family member, or unemployment can easily derail a family's upward progress. In the absence of effective formal social protection schemes, most families rely on social capital—trust based networks—to cushion them in times of shock. Thus, the entry of publicly provided health insurance (PhilHealth) into Bukidnon was welcome.

While land and education provide households and individuals two pathways out of poverty, mobility cannot be studied in isolation from the institutional environment. Focus groups identified important factors at the community level that contributed to movements out of poverty: infrastructure, the quality of governance, and the general economic health of the agricultural sector. The relative importance of these three factors was the same in both male and female focus groups. The provision of infrastructure—roads, water supply, schools—was heralded by focus group participants as the most important factor underlying community prosperity, followed by good local leadership. Consistent with the importance of patron-client relationships in Filipino society, respondents often associated the effects of an infrastructure project with the official that spearheaded the project. It is not coincidental that greater local control over the type and quality of infrastructure went hand in hand with the devolution of service provision and financing to local governments. The importance of economic policy, especially policy towards the agricultural sector, is highlighted by the role that positive developments in agriculture play in community prosperity, as well as the heavy weight that respondents attach to unfavorable trends in agricultural input and output prices.

Analysis of mobility matrices and their correlation with community characteristics helped to identify additional factors that affect mobility at the community level, particularly factors related to general economic prosperity, community heterogeneity and social capital. How important is growth in economic wellbeing, as a whole, and improvements in infrastructure? How easy is it to move up in communities where there are larger disparities with respect to the key determinants of moving out of poverty, education and assets? Does an ethnically diverse community contribute to upward mobility, or do ethnic differences pull people down? How important is social capital—groups and networks—in helping people move out of poverty?

We found that a healthy economic environment—high growth rates of per capita consumption and improved infrastructure—contributes significantly to economic mobility. While we did not find that asset heterogeneity was significantly correlated with any of the mobility indices, we found that it is more difficult to move out of poverty in communities marked by larger differences in terms of education and ethnicity. Higher educational heterogeneity within communities increases the proportion of fallers, and is associated with downward movements both for the poor and the originally nonpoor. Neither is ethnic heterogeneity conducive to upward mobility: higher ethnic heterogeneity is associated with a larger proportion of the chronic poor, and a lower proportion of those who remain nonpoor. The policy implication to address educational inequality is clear—equalize educational opportunities, especially for the poor—but solving the problem of ethnic inequality is less straightforward. Indigenous groups in Bukidnon have suffered a long history of displacement and marginalization as ancestral lands have been settled by migrants. Recent policy efforts to award secure land rights to indigenous groups are still fragile. The finding that local group membership was associated with downward mobility was initially surprising—but can be explained by the increasing tendency for government services to be delivered through groups and targeted to poorer communities. Unless these program placement issues are taken into account, one could erroneously conclude that social capital is bad for upward mobility. Indeed, any analysis of social capital would do well to take the endogeneity of social capital into account. Preliminary findings (Godquin and Quisumbing 2006) show that, when endogeneity of group and network membership is taken into account, neither the total number of groups nor a larger network membership increases per capita consumption. But belonging to a civic group has a positive impact on consumption, as does a larger family network. It is also possible that local trust-based networks perform more of an insurance function than an income-increasing function. Analysis of the mobility matrices shows that local trust-based networks perform a protective role in preventing downward mobility. Spatially-diverse networks are important in the Philippine context: networks composed of migrant children both protect against downward mobility and promote upward mobility. This is also consistent with our other work (Quisumbing and McNiven 2006) that shows that remittances from migrant children respond positively to cumulative shocks experienced by parent households, and contribute significantly to asset accumulation and educational expenditures by parent households. Moving out of poverty in Bukidnon has also meant, literally, moving out. Because migration is associated with higher educational attainment, policy initiatives to reinforce the beneficial effects of migration on sending communities should include both policies to increase educational investments as well as policies to reduce the costs of developing and maintaining family networks.

This study has yielded valuable lessons regarding the determinants of mobility at the household and community levels. However, one must not forget that many of the factors affecting prosperity—or causing declines into poverty—originate from the macro environment. Economic factors—high costs of basic commodities, high input prices, low product prices, and low wages--accounted for the major reasons for declines in community prosperity. While smallholders in rural areas can take decisions that affect their individual welfare—to send a child to school, to save in order to accumulate assets, to take a loan to start a business—they cannot hope to affect the prices at which output is marketed or inputs bought. A healthy policy environment for the rural sector, shaped by sound macroeconomic policy, continues to be an important part of the landscape through which households and individuals make that long, slow trek out of poverty. The second major reason for declines in community prosperity was agriculture- and weather-related shocks. Local networks can only do so much to help individuals cope with these covariate shocks. While households could turn to migrant networks, which are more effective in coping with covariate shocks, or borrow from the credit market, poorer households are typically less able to resort to such consumption-smoothing mechanisms (Skoufias and Quisumbing 2005). Public policy can also play an important role in helping poor households cope with covariate shocks through safety net and emergency assistance programs.

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Table 1. Classification of households in MOP Philippines study

	Movers In bottom 40% in 1984, moved up in 2003	Fallers In bottom 60% in 1984, moved down in 2003	Chronic poor In bottom 40% in 1984, same quintile in 2003	Total
Original	62	48	37	147
Split	55	35	32	122
Total	117	83	69	269

Table 2. Distribution of households by change in consumption expenditure quintile, 1984 to 2003

Change in Quintile, 1984 to 2003

	Original Households							Split Households					
	Increasing Wealth, 1984-->							Increasing Wealth-->					
	1	2	3	4	5	Total		1	2	3	4	5	Total
Down 2+			9	14	14	37	Down 2+			8	12	21	41
Down 1		23	16	18	9	66	Down 1		16	11	11	11	49
Zero	22	15	13	15	38	103	Zero	22	10	9	14	19	74
Up 1	17	11	18	14		60	Up 1	14	8	13	14		49
Up 2+	22	12	5			39	Up 2+	16	17	11			44
Total	61	61	61	61	61	305	Total	52	51	52	51	51	257

* The "Movers" sample suggested in Methodology Note 1 consists of households from 1984 quintiles 1 and 2 that moved up two or more quintiles. For original (split) households this count is 12+19=31 (16+14=30)

Table 3. Correlates of poverty status now and 10 years ago

	Poverty Status Now			Poverty Status 10 yrs ago		
	Poor	Nonpoor	p	Poor	Nonpoor	p
Household Head						
Share that are male	0.92	0.93	0.80	0.93	0.93	0.96
Mean age	46.21	44.85	0.43	46.00	44.69	0.47
Mean years of schooling	**3.80**	**4.21**	**0.02**	**3.88**	**4.21**	**0.08**
Highest Grade Completed						
Did not complete primary	**0.54**	**0.44**	**0.09**	0.52	0.45	0.29
Completed primary, no secondary	0.24	0.22	0.63	0.23	0.22	0.90
Did not complete secondary	0.13	0.15	0.61	0.15	0.14	0.87
Completed secondary, no postsecondary	0.06	0.12	0.13	0.08	0.11	0.45
Complete or incomplete postsecondary	**0.02**	**0.08**	**0.05**	**0.03**	**0.09**	**0.05**
Household Characteristics						
Weekly PC Expenditures	**1281.78**	**1505.69**	**0.06**	1362.05	1450.53	0.48
Dependency Ratio	0.89	0.76	0.21	0.87	0.74	0.20
Now	0.93	0.80	0.16	0.92	0.77	0.12
10 years ago	1.07	0.92	0.14	1.01	0.96	0.61
Household Size						
Now	5.22	4.92	0.26	**5.27**	**4.72**	**0.04**
10 years ago	6.24	6.58	0.42	6.41	6.38	0.93
Household Assets						
Hectares Cultivated, Now	**0.68**	**1.16**	**0.01**	0.92	0.93	0.94
Hectares of land owned						
Now	**0.39**	**0.86**	**0.02**	0.53	0.79	0.21
10 years ago	**0.47**	**1.10**	**0.00**	**0.65**	**1.03**	**0.07**
Asset Index						
Now	-25.17	24.98	0.29	3.36	-5.91	0.85
10 years ago	-28.99	28.77	0.35	5.26	-9.23	0.82
Tropical Livestock Units						
Now	0.75	0.96	0.12	0.91	0.76	0.29
10 years ago	**1.39**	**1.82**	**0.05**	1.51	1.76	0.27

Table 4. Correlates of poverty transitions, by poverty status 10 years ago

	Poor 10 years ago			Nonpoor 10 years ago		
	Moved Up	Still Poor	p	Still Nonpoor	Fell Behind	p
Household Head						
Share that are male	0.94	0.93	0.80	0.92	0.93	0.94
Mean age	46.63	43.16	0.16	45.61	48.48	0.33
Mean years of schooling	4.02	3.80	0.30	4.39	3.78	0.12
Highest Grade Completed						
Did not complete primary	0.49	0.39	0.24	0.53	0.59	0.56
Completed primary, no secondary	0.22	0.21	0.86	0.24	0.26	0.80
Did not complete secondary	0.13	0.18	0.41	0.16	0.04	0.10
Completed secondary, no postsecondary	0.11	0.12	0.88	0.06	0.07	0.77
Complete or incomplete postsecondary	0.05	0.10	0.23	0.02	0.04	0.60
Household Characteristics						
Weekly PC Expenditures	**1548**	**1247**	**0.00**	1466	1412	0.86
Dependency Ratio	0.75	0.95	0.12	0.77	0.64	0.47
Now	0.94	0.92	0.72	0.93	0.93	0.99
10 years ago	0.82	0.98	0.20	0.78	0.74	0.79
Household Size	0.92	1.07	0.22	0.92	1.05	0.51
Now	**5.41**	**4.46**	**0.01**	5.18	5.37	0.68
10 years ago	7.00	6.13	0.15	6.07	6.88	0.28
Productive Assets						
Hectares Cultivated, Now	**1.24**	**0.72**	**0.04**	1.10	0.53	0.12
Hectares of land owned						
Now	0.74	0.97	0.49	0.40	0.35	0.87
10 years ago	0.86	1.33	0.14	0.52	0.27	0.35
Asset Index						
Now	49.08	-24.87	0.29	2.32	-26.31	0.63
10 years ago	43.45	-18.32	0.51	14.97	-69.30	0.17
Tropical Livestock Units						
Now	**1.10**	**0.79**	**0.10**	0.83	0.60	0.26
10 years ago	1.64	1.43	0.45	**1.99**	**1.21**	**0.06**

Table 5. Means and standard deviations of variables used in regressions

	Mean	Std Dev
Household level variables		
Age of household head	45.53	13.84
Age of household head squared	2263	1269
Education of household head	5.70	6.04
Male-headed household	0.93	0.26
Household size 10 years ago	7.01	3.06
Dependency ratio 10 years ago	0.99	0.79
Land 10 years ago	0.74	1.53
Livestock 10 years ago (TLUs)	1.60	1.75
Assets 10 years ago (Index)	0.00	492.63
Whether Cebuano-Visayan	0.72	0.45
Health shock in past 10 years	0.39	0.49
Social capital 10 years ago	0.80	0.98
Municipality-level variables		
HH perception of trust in community	0.00	0.32
HH perception of cohesion in community	0.00	0.41
Share believing government run for people, 10 years ago	1.89	0.23
% of households with unemployed member last year	0.34	0.48
Number of disasters in last 10 years	2.28	1.45
Number of projects in last 10 years	5.32	1.48
Number of positive economic shocks in last 10 years	0.53	0.79
Wage for male laborers 10 years ago	60.52	7.64
Share of temporary inmigrants 10 years ago	49.88	57.91
Number working outside community, 10 years ago	0.16	0.17
Government land reform program in last 10 years	0.38	0.49
Cooperatives in community 10 years ago	0.91	0.29
Credit index 10 years ago	0.00	2.02
Whether upper secondary school constructed in last 10 years	0.08	0.27
Community without a doctor gained a doctor in the last 10 years	0.10	0.30

Table 6. Probability of not being poor, of moving out of poverty, and of remaining nonpoor, Bukidnon, Philippines

Logit regressions with robust standard errors, marginal effects reported

Determinants	Probability of being non-poor now (all households)		Probability of moving out of poverty (poor 10 years ago)		Probability of remaining nonpoor (nonpoor 10 years ago)	
	dy/dx	z	dy/dx	z	dy/dx	z
Household level variables						
Age of household head	0.007	0.31	0.023	0.88	-0.024	-1.32
Age of household head squared	0.000	-0.48	0.000	-0.92	0.000	0.67
Education of household head	0.087	**2.85**	0.069	1.59	0.034	0.96
Male-headed household	0.122	0.91	0.115	0.84	-0.082	-0.97
Household size 10 years ago	-0.001	-0.04	0.009	0.45	0.026	**2.12**
Dependency ratio 10 years ago	-0.110	**-2.26**	-0.089	-1.47	-0.041	-1.24
Land 10 years ago	0.081	1.36	0.028	0.62	0.094	**1.86**
Livestock 10 years ago (TLUs)	0.016	0.61	-0.010	-0.35	0.031	1.00
Assets 10 years ago	0.000	0.19	0.000	0.89	0.000	-0.71
Whether Cebuano-Visayan	0.081	0.96	0.259	**2.63**	-0.197	**-1.80**
Health shock in past 10 years	-0.087	-1.18	0.009	0.09	-0.414	**-2.62**
Social capital 10 years ago	0.056	1.33	0.044	0.89	0.036	1.00
Municipality-level variables						
HH perception of trust in community	0.030	0.15	-0.289	-1.02	0.406	**1.75**
HH perception of cohesion in community	0.090	0.52	-0.089	-0.44	0.567	1.62
Share believing government run for people, 10 years ago	-0.147	-0.50	-0.630	-1.49	0.522	**1.79**
% of households with unemployed member last year	-0.070	-0.95	-0.069	-0.72	-0.111	-1.25
Number of disasters in last 10 years	-0.042	-0.80	-0.034	-0.49	-0.025	-0.83
Number of projects in last 10 years	-0.017	-0.50	-0.001	-0.02	0.000	0.00
Number of positive economic shocks in last 10 years	-0.050	-0.78	0.029	0.29	-0.036	-1.07

Wage for male laborers 10 years ago	-0.002	-0.30	-0.006	-0.63	0.002	0.43
Share of temporary inmigrants 10 years ago	0.000	0.15	-0.001	-0.59	0.001	1.03
Number working outside community, 10 years ago	-0.352	-1.04	-0.840	**-1.75**	0.153	0.78
Government land reform program in last 10 years	0.092	0.78	0.119	0.73	0.137	**1.93**
Cooperatives in community 10 years ago	-0.097	-0.59	-0.187	-0.75	0.280	0.80
Credit index 10 years ago	0.072	1.40	-0.002	-0.02	0.144	**1.76**
Whether upper secondary school constructed in last 10 years	0.436	**3.31**	0.584	**2.95**	*	
Community without a doctor gained a doctor in the last 10 years	0.009	0.05	0.304	1.30	-0.302	-1.02
Number of obs	259		165		87	
Wald chi2(27)	30.42		25.32		31.21	
Prob > chi2	0.2957		0.56		0.22	
Pseudo R2	0.1132		0.12		0.55	

z-statistics in bold indicate significance at 10% or better

* Perfectly predicted nonpoor status; 7 observations dropped

Table 7. Changes in the step on the ladder of well-being, Bukidnon, Philippines

Regressions with robust standard errors, marginal effects reported

	OLS: Change in step		Multinomial logit: Relative to going up zero or one steps, the probability of			
			Going down one or more steps		Going up two or more steps	
Determinants	Coeff	t	dy/dx	z	dy/dx	z
Household level variables						
Age of household head	0.121	**2.34**	-0.048	**-2.90**	0.024	1.45
Age of household head squared	-0.001	**-2.41**	0.001	**3.04**	0.000	-1.34
Education of household head	-0.008	-0.10	0.023	0.89	0.031	1.46
Male-headed household	0.645	1.42	-0.294	**-2.25**	0.072	1.03
Household size 10 years ago	-0.007	-0.17	-0.004	-0.32	-0.007	-0.50
Dependency ratio 10 years ago	-0.295	**-2.30**	0.096	**2.76**	-0.083	**-2.48**
Land 10 years ago	0.113	**1.84**	-0.071	**-2.01**	0.021	1.17
Livestock 10 years ago (TLUs)	-0.074	-1.15	0.022	1.39	-0.019	-0.93
Assets 10 years ago	0.000	**2.27**	0.000	0.65	0.000	**2.17**
Whether Cebuano-Visayan	0.196	0.87	-0.011	-0.17	0.156	**3.16**
Health shock in past 10 years	-0.108	-0.57	0.083	1.39	0.034	0.61
Social capital 10 years ago	0.100	0.92	0.028	0.82	0.020	0.64
Municipality-level variables						
HH perception of trust in community	-0.378	-0.69	0.227	1.38	0.014	0.08
HH perception of cohesion in community	0.016	0.03	-0.106	-0.78	0.037	0.24
Share believing government run for people, 10 years ago	0.152	0.21	-0.099	-0.43	-0.570	**-2.52**
% of households with unemployed member last year	-0.311	-1.59	0.180	**2.72**	-0.048	-0.93

Number of disasters in last 10 years	-0.278	**-1.78**	0.047	1.09	-0.063	-1.56
Number of projects in last 10 years	-0.065	-0.74	0.009	0.33	-0.027	-0.93
Number of positive economic shocks in last 10 years	-0.305	-1.42	0.126	**2.58**	-0.035	-0.54
Wage for male laborers 10 years ago	0.012	0.66	-0.004	-0.81	-0.002	-0.42
Share of temporary inmigrants 10 years ago	0.001	0.32	0.000	-0.58	-0.001	-1.05
Number working outside community, 10 years ago	-0.759	-0.70	-0.040	-0.15	-0.491	**-1.77**
Government land reform program in last 10 years	0.612	**1.99**	-0.198	**-2.52**	0.163	1.50
Cooperatives in community 10 years ago	-0.202	-0.49	0.159	**2.31**	0.013	0.09
Credit index 10 years ago	0.127	0.84	-0.021	-0.50	0.086	**2.01**
Whether upper secondary school constructed in last 10 years	1.640	**2.19**	-0.235	**-5.21**	0.835	**13.18**
Community without a doctor gained a doctor in the last 10 years	0.299	0.65	-0.021	-0.16	0.231	1.21
Constant	-2.352	-0.94				
Number of obs		259				259
Wald chi2(27)		2.15				83.95
Prob > chi2		0.00				0.01
Pseudo R2		0.15				0.15

z-statistics in bold indicate significance at 10% or better

Table 8. Positive and negative factors affecting community prosperity
Male and female focus groups, Bukidnon

Community events in the last 10 years	Male		Female	
	Frequency	Percent	Frequency	Percent
Positive factors				
Infrastructure construction or improvement				
Roads	2	9.5	1	5.9
Electricity			1	5.9
Water system	4	19.0	2	11.8
Irrigation	1	4.8		
Construction of bus terminal	1	4.8		
Government and community projects	3	14.3	3	17.6
Government health insurance (PhilHealth)	2	9.5	2	11.8
Quality of leadership				
Local (barangay) officials	3	14.3	4	23.5
Higher government officials	1	4.8	1	5.9
Events related to agriculture				
Entry of sugarcane	4	19.0	3	17.6
Production of copra			1	5.9
Livestock/root crop growing			1	5.9
Fertilizer loans			1	5.9
Grants to fishpond owners			1	5.9
General increase in barangay income			1	5.9
Total	21	100.0	17	100.0
Negative factors				
Infrastructure				
Incomplete construction of water system	1	5.0	1	4.0
Economic factors				
Economic crisis (general)	2	10.0		
High cost of basic commodities	4	20.0	6	24.0
Low salary of workers	2	10.0	2	8.0
High input costs	2	10.0	2	8.0
Low product prices	3	15.0	3	12.0
Lack of capital	1	5.0		
High indebtedness (to government and others)	1	5.0	1	4.0
Lack of markets for products	1	5.0		
Quality of leadership				
Corruption			1	4.0
Quality of community life				
Uncooperative residents	1	5.0		
Crime			2	8.0
Events related to agriculture				
Drought	1	5.0	4	16.0
Shift from corn to sugarcane	1	5.0	2	8.0
Pest infestation				
Demographic factors				
Many children, low income			1	4.0
Total	20	100.0	25	100.0

Table 9. Poverty incidence in the MOP study communities, 2003

Name of community	Poverty incidence (%)
San Roque	62.5
Kauyonan	61.3
Kiara	55.6
Talahiron	42.4
Natulongan	40.0
Calao-calao	38.3
Pay-as	31.6
Manuto	29.7
Cebole	26.7
Old Damulog	11.8

Note: Poverty incidence is defined in reference to an annual per capita poverty threshold of P13,583. See text for the computation of the poverty threshold.

Table 10. Community ranking according to asset heterogeneity and growth rate of per capita consumption

Name of community	Asset heterogeneity index	Rank	Annual growth rate of per capita consumption, 1984-2003	Rank
Calao-calao	492.5	3	165.0	7
Cebole	359.2	4	226.0	2
Kauyonan	136.2	8	120.6	10
Kiara	318.4	5	182.2	6
Manuto	248.9	6	156.0	8
Natulongan	223.7	7	183.3	5
Old Damulog	1628.3	1	219.9	4
Pay-as	125.6	9	225.9	3
San Roque	51.6	10	155.0	9
Talahiron	595.7	2	326.6	1

Notes: 1. The asset heterogeneity index is equivalent to the standard deviation of the total value of land and nonland assets in 1984; 2. The indices are ranked from highest to lowest.

Table 11a. Transition groups and mobility indices by community, male and female focus groups, part 1

Community	Total HH	% Movers	% Fallers	% Chronic Poor	% Chronic Rich	PI	FI	NPI	CI
Male focus groups									
Cebole	82	14.6	2.4	57.3	25.6	0.38	0.04	0.34	0.42
Calao	52	1.9	0.0	34.6	63.5	0.06	0.02	0.04	0.08
Kauyonan	92	1.1	0.0	94.6	4.3	0.20	0.01	0.19	0.21
Kiara	40	0.0	12.5	35.0	52.5	0.00	0.43	-0.43	0.43
Manuto	53	7.5	1.9	62.3	28.3	0.09	0.02	0.08	0.11
Natulongan	93	10.8	4.3	12.9	72.0	0.70	0.04	0.66	0.74
Old Damulog	65	10.8	0.0	49.2	40.0	0.19	0.00	0.19	0.19
Pay-as	89	10.1	0.0	85.4	4.5	0.23	0.03	0.19	0.26
San Roque	48	31.2	4.2	56.2	8.3	0.58	0.10	0.48	0.69
Talahiron	98	17.3	0.0	26.5	56.1	0.27	0.00	0.27	0.27
Female focus groups									
Cebole	85	11.8	0.0	83.5	4.7	0.58	0.01	0.57	0.59
Calao	70	0.0	25.7	28.6	45.7	0.07	0.26	-0.19	0.33
Kauyonan	93	5.4	4.3	82.8	7.5	0.12	0.07	0.05	0.18
Kiara	78	1.3	11.5	60.3	26.9	0.42	0.31	0.12	0.73
Manuto	81	0.0	33.3	34.6	32.1	0.15	0.69	-0.54	0.84
Natulongan	92	12.0	0.0	75.0	13.0	0.65	0.03	0.62	0.69
Old Damulog	57	14.0	1.8	33.3	50.9	0.28	0.07	0.21	0.35
Pay-as	84	61.9	4.8	7.1	26.2	0.89	0.10	0.80	0.99
San Roque	50	28.0	8.0	22.0	42.0	0.42	0.10	0.32	0.52
Talahiron	71	74.6	0.0	8.5	16.9	0.89	0.00	0.89	0.89

Index to abbreviations

PI: Prosperity Index

FI: Falling index

NPI: Net prosperity index

CI: Churning index

Table 11b. Transition groups and mobility indices by community, male and female focus groups, part 2

Community	MOP	MPI	MRI	SPI	FPI	FRI	NPP	NPR	PSP
Male focus groups									
Cebole	0.20	0.48	0.13	0.34	0.02	0.09	0.46	0.04	0.72
Calao	0.05	0.05	0.06	-0.01	0.00	0.03	0.05	0.03	0.37
Kauyonan	0.01	0.21	0.00	0.21	0.01	0.00	0.19	0.00	0.96
Kiara	0.00	0.00	0.00	0.00	0.21	0.54	-0.21	-0.54	0.35
Manuto	0.11	0.14	0.00	0.14	0.00	0.06	0.14	-0.06	0.70
Natulongan	0.46	0.59	0.73	-0.14	0.00	0.06	0.59	0.68	0.24
Old Damulog	0.18	0.21	0.15	0.05	0.00	0.00	0.21	0.15	0.60
Pay-as	0.11	0.24	0.00	0.24	0.04	0.00	0.20	0.00	0.96
San Roque	0.36	0.57	0.67	-0.10	0.07	0.33	0.50	0.33	0.88
Talahiron	0.40	0.47	0.11	0.36	0.00	0.00	0.47	0.11	0.44
Female focus groups									
Cebole	0.12	0.56	1.00	-0.44	0.01	0.00	0.54	1.00	0.95
Calao	0.00	0.05	0.08	-0.03	0.00	0.36	0.05	-0.28	0.29
Kauyonan	0.06	0.11	0.18	-0.07	0.01	0.46	0.10	-0.27	0.88
Kiara	0.02	0.29	0.63	-0.34	0.31	0.30	-0.02	0.33	0.62
Manuto	0.00	0.32	0.06	0.27	0.57	0.76	-0.25	-0.70	0.35
Natulongan	0.14	0.63	0.83	-0.21	0.04	0.00	0.59	0.83	0.87
Old Damulog	0.30	0.37	0.20	0.17	0.04	0.10	0.33	0.10	0.47
Pay-as	0.90	0.98	0.69	0.29	0.00	0.31	0.98	0.39	0.69
San Roque	0.56	0.56	0.28	0.28	0.00	0.20	0.56	0.08	0.50
Talahiron	0.90	0.90	0.83	0.07	0.00	0.00	0.90	0.83	0.83

Index to abbreviations:

MOP: Moving out of poverty index

MPI: Mobility of the poor index

MRI: Mobility of the rich index

SPI: Shared prosperity index

FPI: Falling of the poor index

FRI: Falling of the rich index

NPP: Net prosperity of the poor index

NPR: Net prosperity of the rich index

PSP: Percent starting poor

Table 12a. Selected correlation coefficients between mobility indices and community characteristics, male focus groups, part 1

Pairwise correlation coefficients reported are those that are significant at 10% or better

	Movers	Fallers	Chronic poor	Chronic rich	PI	FI	NPI	CI
	%	%	%	%				
Community characteristics								
Current characteristics								
Poverty incidence								
Annual growth rate								
Education of household head								
Maximum education in household								
Owned land in 2003 (ha)								
Pct owning more than 0.5 ha								
Cultivated land in 2003 (ha)			-0.63*	0.69**				
Total value of assets in 2003								
Social capital now								
Size of social networks		-0.67**				-0.66**		
Pct households living 50 meters or less from primary water source								
No. of years linked to main road								
Distance to municipality seat								
Travel time to municipality seat								
Heterogeneity measures (current)								
Education of household head		0.70**				0.74**	-0.58*	
Assets								
Origin								
Ethnicity		-0.62*	0.78***	-0.64**				-0.61**
Social capital now								
Social capital 10 years ago								
Past characteristics								
Education of household head in 1984								
Owned land in 1984 (ha)			-0.61*					
Pct owning more than 0.5 ha in 1984								
Cultivated land in 1984 (ha)								
Total value of assets in 1984								
Social capital 10 years ago								

Significance of pairwise correlation coefficients: ***--1%, **--5%, *--10%

Index to abbreviations:

PI: Prosperity Index

FI: Falling index

NPI: Net prosperity index

CI: Churning index

Table 12b. Selected correlation coefficients between mobility indices and community characteristics, male focus groups, part 2

Pairwise correlation coefficients reported are those that are significant at 10% or better

	MOP	MPI	MRI	SPI	FPI	FR	NPP	NPR	PSP
Community characteristics									
Current characteristics									
Poverty incidence									
Annual growth rate				0.55*					
Education of household head									
Maximum education in household									
Owned land in 2003 (ha)									
Pct owning more than 0.5 ha					-0.60*				
Cultivated land in 2003 (ha)									-0.64**
Total value of assets in 2003									
Social capital now		-0.60*							
Size of social networks					-0.68**	-0.8***			
Pct households living 50 meters or less from primary water source									
No. of years linked to main road									
Distance to municipality seat									
Travel time to municipality seat									
Heterogeneity measures (current)									
Education of household head					0.73**	0.78***			
Assets									
Origin									
Ethnicity									0.71**
Social capital now									
Social capital 10 years ago									
Past characteristics									
Education of household head in 1984									
Owned land in 1984 (ha)									
Pct owning more than 0.5 ha in 1984									
Cultivated land in 1984 (ha)									
Total value of assets in 1984									
Social capital 10 years ago	-0.57 *								

Significance of pairwise correlation coefficients: ***--1%, **--5%, *--10%

Index to abbreviations:

MOP: Moving out of poverty index

MPI: Mobility of the poor index

NPI: Net prosperity index

CI: Churning index

MRI: Mobility of the rich index

SPI: Shared prosperity index

FPI: Falling of the poor index

FRI: Falling of the rich index

NPP: Net prosperity of the poor index

NPR: Net prosperity of the rich index

PSP: Percent starting poor

Table 13a. Selected correlation coefficients between mobility indices, and community characteristics, female focus groups,

part 1

Pairwise correlation coefficients reported are those that are significant at 10% or better

	Movers %	Fallers %	Chronic poor %	Chronic rich %	PI	FI	NPI	CI
Community characteristics								
Current characteristics								
Poverty incidence								
Annual growth rate	0.77***				0.75**		0.70**	0.68**
Education of household head								
Maximum education in household								
Owned land in 2003 (ha)								
Pct owning more than 0.5 hectare								
Cultivated land in 2003 (ha)								
Total value of assets in 2003								
Social capital now						0.67**		
Size of social networks								
Pct households living 50 meters or less from primary water source						-0.59*		
No. of years linked to main road								
Distance to municipality seat								
Travel time to municipality seat								
Heterogeneity measures								
Education of household head								
Assets								
Origin								
Ethnicity								
Social capital now								
Social capital 10 years ago	-0.61**		0.56*			0.58*	-0.56*	
Past characteristics								
	0.58*	-0.66**			0.74**	-0.55*	0.76**	
Owned land in 1984 (ha)								
Pct owning more than 0.5 ha in 1984								
Cultivated land in 1984 (ha)								
Total value of assets in 1984								
Social capital 10 years ago								

Significance of pairwise correlation coefficients: ***--1%, **--5%, *--10%

Index to abbreviations:

PI: Prosperity Index

FI: Falling index

NPI: Net prosperity index

CI: Churning index

Table 13b. Selected correlation coefficients between mobility indices, and community characteristics, female focus groups, part 2

Pairwise correlation coefficients reported are those that are significant at 10% or better

	MOP	MPI	MRI	SPI	FPI	FRI	NPP	NPR	PSP
Community characteristics									
Current characteristics									
Poverty incidence									
Annual growth rate	0.72**	0.63**				-0.61**	0.67**	0.67**	
Education of household head									
Maximum education in household									
Owned land in 2003 (ha)									
Pct owning more than 0.5 hectare									
Cultivated land in 2003 (ha)									
Total value of assets in 2003									
Social capital now					0.71**	0.55*	-0.56*		
Size of social networks									
Pct households living 50 meters or less from primary water source					-0.65**				
No. of years linked to main road									
Distance to municipality seat									
Travel time to municipality seat	-0.58*	-0.61*							
Heterogeneity measures									
Education of household head									
Assets									
Origin									
Ethnicity				0.59*	0.75**	0.67*		-0.65**	
Social capital now	-0.62*								
Social capital 10 years ago							-0.66**		
Past characteristics									
Education of household head in 1984		0.67**	0.69**			-0.74**	0.68**	0.77***	
Owned land in 1984 (ha)				-0.65**		-0.55*		0.61*	
Pct owning more than 0.5 ha in 1984									
Cultivated land in 1984 (ha)									
Total value of assets in 1984									
Social capital 10 years ago									

Significance of pairwise correlation coefficients: ***--1%, **--5%, *--10%

Index to abbreviations:

MOP: Moving out of poverty index
MPI: Mobility of the poor index
MRI: Mobility of the rich index
SPI: Shared prosperity index
FPI: Falling of the poor index

FRI: Falling of the rich index
NPP: Net prosperity of the poor index
NPR: Net prosperity of the rich index
PSP: Percent starting poor

Table 14a. Selected correlation coefficients between mobility indices and group membership, male and female focus groups, part 1

Pairwise correlation coefficients reported are those that are significant at 10% or better

	Movers %	Fallers %	Chronic poor %	Chronic rich %	PI	FI	NPI	CI
MALE FOCUS GROUPS								
Economic groups now		0.81***				0.77***		
Economic groups 10 years ago						0.61*		
Change in economic groups		0.84***						0.76**
Finance groups now			0.72**					
Finance groups 10 years ago								
Change in finance groups			0.65*	-0.65*				
Health/education groups now							-0.72**	
Health/education groups 10 years ago		0.68 **					-0.62**	
Change in health and ed groups			0.60*					
Political groups now					0.64**		0.55*	0.56*
Political groups 10 years ago					0.64**		0.55*	0.56*
Change in political groups								
Religious groups now								
Religious groups 10 years ago			0.68**	-0.64**				
Change in religious groups								
FEMALE FOCUS GROUPS								
Economic groups now								
Economic groups 10 years ago								
Change in economic groups								
Finance groups now								
Finance groups 10 years ago			0.57*	-0.8***				
Change in finance groups							-0.65**	
Health/education groups now						0.67**		
Health/education groups 10 years ago		0.71**				0.78***	-0.69**	
Change in health and ed groups								
Political groups now			0.64**	-0.58*				
Political groups 10 years ago			0.64**	-0.58*				
Change in political groups								
Religious groups now								
Religious groups 10 years ago				-0.56*				
Change in religious groups			-0.71**	0.63*				

Significance of pairwise correlation coefficients: ***--1%, **--5%, *--10%

Index to abbreviations:

PI: Prosperity Index

FI: Falling index

NPI: Net prosperity index

CI: Churning index

Table 14b. Selected correlation coefficients between mobility indices and group membership, male and female focus groups, part 2

Pairwise correlation coefficients reported are those that are significant at 10% or better

	MOP	MPI	MRI	SPI	FPI	FRI	NPP	NPR	PSP
MALE FOCUS GROUPS									
Economic groups now					0.77***	0.8 ***			
Economic groups 10 years ago					0.65**	0.55 *			
Change in economic groups			0.56*	-0.6*	0.63*	0.81 ***			
Finance groups now									0.58*
Finance groups 10 years ago									
Change in finance groups									0.64**
Health/education groups now	-0.77***	-0.77**	-0.6*						
Health/education groups 10 years ago					0.6*	0.68**			
Change in health and ed groups	-0.62*		-0.63**						
Political groups now		0.59*							
Political groups 10 years ago		0.59*							
Change in political groups									
Religious groups now									
Religious groups 10 years ago									0.59*
Change in religious groups									
FEMALE FOCUS GROUPS									
Economic groups now									
Economic groups 10 years ago									
Change in economic groups									
Finance groups now						0.7**			
Finance groups 10 years ago									0.63**
Change in finance groups						0.77***		-0.72**	
Health/education groups now					0.68**	0.72**			
Health/education groups 10 years ago	-0.56*				0.77***	0.6*	-0.76**		
Change in health and ed groups									
Political groups now			0.65**	-0.64**				0.65**	0.59*
Political groups 10 years ago			0.65**	-0.64**				0.65**	0.59
Change in political groups									
Religious groups now									
Religious groups 10 years ago									
Change in religious groups									-0.56*

Significance of pairwise correlation coefficients: ***--1%, **--5%, *--10%

Index to abbreviations:

MOP: Moving out of poverty index

MPI: Mobility of the poor index

MRI: Mobility of the rich index

SPI: Shared prosperity index

FPI: Falling of the poor index

FRI: Falling of the rich index

NPP: Net prosperity of the poor index

NPR: Net prosperity of the rich index

PSP: Percent starting poor

Table 15a. Selected correlation coefficients between mobility indices and social networks, male and female focus groups, part 1

Pairwise correlation coefficients reported are those that are significant at 10% or better

	Movers	Fallers	Chronic poor	Chronic rich	PI	FI	NPI	CI
	%	%	%	%				
MALE FOCUS GROUPS								
Type of social network								
Care of house when away						-0.70**		
Can confide work problems		-0.77***				-0.73**		
Can confide family problems		-0.72**				-0.75**		
Help if suffer an economic loss								
Price information	-0.62*				-0.6*			-0.77***
Information on new technologies								
Percent with migrant children								
Migrants to urban areas		-0.62*				-0.64**		
Migrants to rural and urban areas						-0.57*		
FEMALE FOCUS GROUPS								
Type of social network								
Care of house when away								
Can confide work problems								
Can confide family problems								
Help if suffer an economic loss								
Price information								
Information on new technologies								
Percent with migrant children								
Migrants to urban areas	0.70**	-0.55*						0.61*
Migrants to rural and urban areas	0.61*				0.67**		0.58*	0.55*

Significance of pairwise correlation coefficients: ***--1%, **--5%, *--10%

Index to abbreviations:

PI: Prosperity Index

FI: Falling index

NPI: Net prosperity index

CI: Churning index

Table 15b. Selected correlation coefficients between mobility indices and social networks, male and female focus groups, part 2

Pairwise correlation coefficients reported are those that are significant at 10% or better

	MOP	MPI	MRI	SPI	FPI	FRI	NPP	NPR	PSP
MALE FOCUS GROUPS									
Type of social network									
Care of house when away					-0.76**	-0.8***		0.55*	
Can confide work problems					-0.71**	-0.73**			
Can confide family problems					-0.79***	-0.86***			
Help if suffer an economic loss					-0.56*	-0.64*			
Price information			-0.64**						
Information on									
new technologies									
Percent with migrant children									
Migrants to urban areas					-0.62**	-0.68**			
Migrants to rural					-0.56*	-0.59*	0.58*		
and urban areas									
FEMALE FOCUS GROUPS									
Type of social network									
Care of house when away									
Can confide work problems									
Can confide family problems									
Help if suffer an economic loss									0.57*
Price information									
Information on									
new technologies									
Percent with migrant children									
Migrants to urban areas	0.63*	0.68**							
Migrants to rural	0.57*	0.77***							
and urban areas									

Significance of pairwise correlation coefficients: ***--1%, **--5%, *--10%

Index to abbreviations

MOP: Moving out of poverty index

MPI: Mobility of the poor index

MRI: Mobility of the rich index

SPI: Shared prosperity index

FPI: Falling of the poor index

FRI: Falling of the rich index

NPP: Net prosperity of the poor index

NPR: Net prosperity of the rich index

PSP: Percent starting poor