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# ENSURING ESCAPES FROM POVERTY ARE SUSTAINED IN RURAL ETHIOPIA

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Opportunities

**LEO REPORT #36**



Photo Credit: Chiara Mariotti, ODI

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# EXECUTIVE SUMMARY

Ethiopia has experienced significant recent reductions in poverty, with the proportion of the population living below the national poverty line declining from 56 percent in 2000 to 31 percent in 2011. Economic growth, and particularly growth in the agricultural sector, has occurred alongside large public investments in social programs (including the Productive Safety Net Programme, health and education) and rural roads. However, more recently economic growth has been less inclusive: between 2005 and 2011, the consumption of the bottom 40 percent grew slower than that of the top 60 percent, while the consumption of the bottom 10 percent did not increase at all (WB, 2015).

The specific focus of this report is on “*transitory poverty escapes*”: a term referring to households that successfully escape from poverty only to return to living in it once again, i.e. they become re-impooverished. Analysis of the Ethiopia Rural Household Survey (ERHS) for this case study reveals that transitory poverty escapes are a significant phenomenon in rural Ethiopia. In particular, between 1997 and 2000, 15 percent of all households experienced a transitory poverty escape. Of those households that escaped poverty between 1997 and 2004, around 65 percent were again living in poverty by 2009. At the macro-level, reasons for transitory escapes include the slow pace of structural transformation in the country; food price inflation and an increase in the vulnerability of farming conditions, the result of increased land pressures and enhanced climate variability. In fact, one of the general lessons of this case study is that drivers of poverty dynamics are systemic as much as related to individual and household characteristics such as assets and dependency ratios.

This report combines analysis from four rounds of the ERHS with qualitative research approaches; in particular, key informant interviews, life histories, and participatory wealth ranking to further investigate the drivers of transitory poverty escapes. Specifically, it examines why some households are able to escape poverty and remain out of it—that is, they experience sustained escapes from poverty—while others escape poverty only to return to living in it again – that is, they experience transitory escapes. The report investigates the resources (land, livestock, and value of assets), attributes (household composition and education level), and activities (including jobs, engagement in non-farm activities and migration) of households that enable them to escape poverty sustainably and minimize the likelihood of returning to living in poverty again.

What matters? Specific findings include the following:

- High fertility, combined with a shrinking resource base, increases the likelihood of transitory escapes and impoverishment relative to experiencing a sustained escape. In particular, an increase in household size is associated with a higher and statistically significant risk of transitory escapes. Population pressures put more stress on an already limited land base, accelerates fragmentation of landholdings and can contribute to a deterioration in the quantity and quality of production.
- Female-headed households are less at risk of transitory poverty escapes and impoverishment relative to sustained poverty escapes in comparison to male-headed households. This could be the result of female-targeted development interventions or because of different attitudes towards risk by male- and female-headed households.
- Households containing a person with a disability are more likely to experience a transitory escape or become impoverished.
- Increases in per capita expenditure and asset values are associated with a reduced risk of transitory escapes relative to sustained escapes.
- Those households where the head member has completed primary education have a reduced risk of experiencing transitory poverty escapes. Interestingly, all household heads in the sample which achieved this level of schooling were male.

- Livestock is an important asset which reduces the likelihood of transitory escapes. Livestock act as liquid assets which can be sold in times of crisis or to pay for life events.
- Ownership of more cultivable land is not, in itself, associated with an increase in the likelihood of experiencing a sustained escape. Poverty dynamics are not driven by land ownership itself but rather by the factors which underpin the conditions of production including environmental conditions and the availability and cost of inputs (seeds and fertilisers).
- A working household head, engaged either as a labourer or self-employed, increases the likelihood of sustained escapes. If this is a non-agricultural activity then this reduces the likelihood of transitory escapes even further.
- Participation in *iddir*, an informal risk sharing arrangement where members receive a pay-out in the face of specific adversities, increases the likelihood of transitory escapes and impoverishment. However, it is difficult to untangle whether the negative poverty trajectory was caused by the loan itself, or by other associated factors, including those which drove the household to take out a loan.
- Households which experience several shocks in sequence are more likely either to become impoverished or to experience a transitory escape than a sustained escape.
- Remittances are associated with a reduced likelihood of impoverishment, yet an increased likelihood of transitory escapes. Remittances are still relatively uncommon in rural Ethiopia, however. The contrasting results in terms of impoverishment and transitory escapes could be an indication of the varied motivations behind migration and remittance sending; either being with the objective of accumulation or as a coping response to a shock or adverse event.

What can be done? Recommendations include the following:

- Improving poverty dynamics in Ethiopia demands a stronger focus on *family planning*.
- Supporting sustained poverty escapes requires *endowing women with more skills* as well as providing avenues to put the acquired skills to use. Education has made great progress in recent decades, but going forward needs to also be complemented by interventions targeted to working-age women. To this end, there is greater scope to combine interventions to support livelihoods with those to support family planning and child care services.
- Support to *smallholder farming* remains critical. An area of focus should be on improving access to agricultural inputs and ensuring that this access is sustained over time.
- For large numbers of households though, farming is not sufficiently remunerative to lift them sustainably from poverty. Helping households accumulate *livestock* and promoting livestock-related businesses can support sustained escapes from poverty.
- The *PSNP* has played, and can continue to play, an important role in enhancing the ability of poor households to cope with shocks and smooth consumption in the face of negative circumstances. However, if it is systematically to enable households to experience sustained poverty escapes then it needs to be accompanied by complementary interventions.
- Access to *suitable credit*, with flexible repayment terms and low interest rates, should be expanded for rural households. Especially critical is to increase the amount of *capital available to MFIs* to provide loans to farmers and micro entrepreneurs.
- More widespread and substantial interventions to *support the rural non-farm sector* in the most vulnerable regions are essential. *Support to migration* should be one component of the strategy.
- Given Ethiopia's context, *early warning systems*, accompanied by prompt emergency interventions, are essential to decrease rates of impoverishment and transitory escapes.

# I. INTRODUCTION

Analysis of two-wave panel data to examine poverty dynamics reveals a disturbing trend in terms of the numbers of households descending into poverty. Across 14 countries,<sup>1</sup> while some households successfully escape poverty, other households are falling into poverty over the same period. For instance, in Nepal between 2003/04 and 2010/11, 13 percent of households escaped poverty while 9 percent of households fell into poverty (Mascie-Taylor 2013). Meanwhile, in South Africa between 2008 and 2012, 20 percent of households escaped from poverty while 10 percent fell into poverty (Finn and Leibbrandt 2013). In some other contexts and over particular periods of time, more households actually fell into poverty than escaped from it. This includes Tanzania where between 2008/09 and 2010/11, 12 percent of households fell into poverty while 7 percent escaped from poverty (Tanzania National Bureau of Statistics 2011).

Analysis of three-wave panel data by the Chronic Poverty Advisory Network (CPAN) reveals further the incidence of “transitory poverty escapes,” or households that escape poverty subsequently returning to living in it. For instance, in Vietnam, while 14 percent of households escaped poverty between 2002 and 2004, 20 percent of those households had once again returned to living in poverty by 2006. In rural Kenya, 12 percent of households escaped poverty between 2004 and 2007; by 2010, just over 40 percent of these families had returned to living in poverty again (Scott et al. 2014).

Qualitative life histories conducted by the CPAN and hosted at the Overseas Development Institute (ODI) complement the panel data analysis referred to above (see Annex D for information on characteristics of the villages surveyed). The life histories point to the inability of poor and insecure, non-poor households to mitigate, adapt to, and recover from shocks and stresses as key drivers of transitory escapes and impoverishment. To investigate further, and to articulate the role of risk and the importance of risk management in relation to Feed the Future’s (FTF) top-line poverty reduction goals and USAID’s ending extreme poverty agenda, the Bureau for Food Security contracted ODI through the Leveraging Economic Opportunities (LEO) activity to examine the observed variance (at the household and national levels) in transitory escapes in three FTF focus countries: Bangladesh, Ethiopia, and Uganda. Box 1, below, clarifies how the terms “transitory escapes” and “impoverishment” are used in this work, and how they relate to USAID’s resilience agenda<sup>2</sup>.

## **BOX 1: TRANSITORY POVERTY ESCAPES AND IMPOVERISHMENT**

**Impoverishment** refers to the process whereby a poor person or household becomes poorer, or where somebody who is non-poor slips into poverty. **Transitory poverty escapes** refer to individuals or households that used to live in poverty, succeeded in escaping poverty, and then subsequently fell back into poverty i.e. they became re-impoverished. For the purposes of this work, we view **resilience** as a set of capacities enabling households to remain out of poverty over the long term, even in the face of shocks and stresses. In other words, the capacity to be resilient means an individual or household is ultimately able to avoid becoming impoverished or to experience a transitory poverty escape.

<sup>1</sup> Panel data sets from the following 14 countries were analyzed in the third Chronic Poverty Report (2014): Burkina Faso, Ethiopia, India, Indonesia, Mexico, Nepal, Pakistan, Philippines, Kenya, Senegal, South Africa, Tanzania, Uganda, and Vietnam. All findings use national poverty lines.

<sup>2</sup> USAID (2012) defines resilience as the ability of people, households, communities, systems and countries to mitigate, adapt to and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth.

## II. THE CASE STUDY OF RURAL ETHIOPIA

The objectives of this Ethiopia case study are (i) to highlight the importance of a poverty dynamics perspective for an agenda to end extreme poverty, ensuring that escapes from poverty are sustained, i.e., that ‘transitory escapes’ are prevented; (ii) to investigate the drivers of transitory escapes, or the reasons why some households are able to escape poverty and remain out of it while others escape poverty only to fall back into it; and (iii) to draw-out implications for USAID’s ending extreme poverty agenda, and programmatic approaches in Ethiopia.

This study asks: what can be learned from the Ethiopia case study about the drivers of poverty dynamics, especially of sustained escapes, impoverishment and transitory escapes? Which combinations of resources, activities and attributes (i.e. which strategies) help protect households from being impoverished or falling back into poverty, in the face of specific external interventions and shocks?

This study brings together:

- *Analysis of the Ethiopia Rural Household Survey (ERHS).*<sup>3</sup> The ERHS spans seven rounds of data collection from 1989-2009. Supervised by Addis Ababa University, the Centre for the Study of African Economies, University of Oxford and the International Food Policy Research Institute, the survey covers individual, household, and community level data. While the original 1989 round spanned seven peasant associations in three regions, subsequent rounds expanded this coverage to 15 villages chosen largely for their diversity of farming systems (Dercon and Hoddinot, 2004).<sup>4</sup> *This small community sample means that generalizations of our findings to the rural Ethiopian context at large should be made with caution.*

The current analysis makes use of 834 households for which poverty data was available across four survey years from 1997 to 2009.<sup>5</sup> Use of four rounds in the panel allows a more thorough examination of transitory escapes and a way to ensure robustness of findings that help distinguish between transitory escapers and churners.<sup>6</sup>

- *Information from focus groups* conducted in two kebelles (villages): Turufe Ketcheme (in Shashemene woreda, Oromia region; 15 participants) and Aze Deboa (in Kedida Gamela woreda, SNNPR region; 20 participants) concerning: participatory and village-specific definition of wellbeing and historical wealth ranking for three points in time. These points in time corresponded to critical years identified by the village’s elders; these were 2003/04, 2010/11 and 2016 in Turufe Ketcheme and 2005, 2011/12 and 2016 in Aze Deboa.<sup>7</sup> The participatory wealth ranking<sup>8</sup> enabled us to identify the participants’ poverty trajectories in the previous 15 years. This information was then used for the selection of households for life history interviews (see below).
- *Life history interviews* with 15 men and women from Turufe Ketcheme (all participants from the focus group: 7 females and 8 males) and 8 from Aze Deboa (3 female and 4 male participants from the focus group plus 1 wealthy farmer). The purpose of the interviews was to investigate the reasons behind movements in and

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<sup>3</sup> While more recent panel datasets exist, in particular the Ethiopia Socioeconomic Survey (ESS) which covers years between 2011 and 2014, these surveys comprise only two rounds of data collection. Examining transitory escapes and sustained escapers, in contrast, requires at least three waves of panel data.

<sup>4</sup> Later survey rounds included the following regions: Tigray, Amhara, Oromia, and SNNP.

<sup>5</sup> Of the 834 households analysed, 212 were impoverished, 122 experienced a transitory escape, and 51 experienced a sustained escape from poverty.

<sup>6</sup> Hulme, Shepherd, and Moore (2001) describe churners as those with “mean expenditures over all periods close to the poverty line but sometimes poor and sometimes non-poor in different periods”.

<sup>7</sup> See Annex C for details on this approach.

<sup>8</sup> Heavy rainfall and a long power cut reduced the amount of time available to conduct life history interviews in Aze Deboa.

out of poverty of individuals and households. Given the absence of sustained escapes from poverty, interviews focused on investigating the drivers of transitory poverty escapes and impoverishment and whether these differed across households and individuals with different characteristics.

- *Interviews with key informants*, specifically, representatives of the Disaster Prevention and Food Security Office, Cooperative Promotion Office and Women and Children Affairs Office for the Shashemene and the Kedida Gamela woredas.<sup>9</sup> These interviews provided information on the government programs active in the woreda and insights on the positive and negative changes at play in the area, including drivers of poverty dynamics.

The study was conducted in full awareness that recent climatic events in Ethiopia – namely the El Niño-induced drought – could strongly influence the results of the qualitative analysis. The presence of the drought was taken into account in the selection of the two fieldwork kebelles (see Annex D). The situation observed in the field was indeed characterised by a decline in production in the previous year, a high incidence of transitory escapers and impoverished households and a striking absence of sustained escapes from poverty. These negative trajectories had not started in the previous year but, in most cases, around 2011 (if not earlier). This suggests that the recent drought was not the main driver. It is also important to highlight that the empirical evidence employed in this study is not nationally representative: the household survey only covers rural areas and fieldwork was conducted in two kebelles in two different regions of the country. Other regions of Ethiopia may be experiencing more positive poverty trajectories. However, the evidence does capture processes which indeed are at play in the country and which demand attention. Accordingly, this study offers an investigation into the micro and macro drivers which can help explain the high incidence of transitory escapes and impoverishment observed in Ethiopia in the last 15 years, and how these have occurred in a context of generalised economic growth and poverty reduction.

## **A. WHAT IS THE EXTENT OF TRANSITORY POVERTY ESCAPES IN RURAL ETHIOPIA AND WHY IS THIS IMPORTANT?**

### **I. NATIONAL CONTEXT AND MACRO-LEVEL DRIVERS OF POVERTY DYNAMICS**

Ethiopia is a clear case of how transitory escapes and impoverishment can be widespread even in contexts of generalised economic growth and poverty reduction. In the last decade and a half, Ethiopia has been one of the fastest growing economies in Africa, with real GDP per capita growing at an average 7.9 percent per year between 2004/05 and 2013/14 (Bachewe et al., 2015). It has also experienced remarkable poverty reduction. The share of people living below \$1.25 PPP poverty line declined from 56 percent in 2000 to 31 percent in 2011; the share of people living below the national poverty line in the same period declined from 44 percent to 30 percent (WB, 2015).

Sustained and inclusive economic growth has been the major driver of poverty reduction between 1996 and 2011 (WB, 2015). Inequality has remained low throughout this period and a decrease in monetary poverty has been accompanied by improvements in non-monetary dimensions of deprivation. For example, the proportion of rural households deprived in three dimensions (access to sanitation and clear water, education and monetary poverty) fell from 4 in 10 to less than 1 in 10 rural households in this period (WB, 2015).

#### **Two characteristics of the pattern of growth explain its inclusiveness.**

First, agricultural growth was sustained and reached down to small farmers: the agricultural sector grew at an average annual rate of 7.6 percent between 2004/05 to 2013/14, accounting for 47 percent of real

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<sup>9</sup> Interviews were not conducted in Addis Ababa because it was decided to maximise time spent in the villages, in order to collect as many life history interviews as possible.



GDP growth over the last decade (Bachewe et al., 2015). The majority of poverty reduction between 1996 and 2011 is explained by poverty reduction among rural, self-employed agricultural households. Poverty reduction has been accompanied by improvements in nutrition status at the national level. The 2011 Ethiopia Demographic Health Survey recorded a decline in malnutrition rates and in the prevalence of underweight children, which decreased from 41 percent in 2000 to 29 percent in 2011 (CFSVA, 2014).

The link between agricultural growth and poverty reduction is strong in Ethiopia, where 81 percent of the population lived in rural areas and 73 percent were employed in agriculture in 2013 (World Development Indicators). Agriculture is still mostly based on smallholder farming and rainfed: 87 percent of rural households work less than 2 ha of land and 64.5 percent cultivate less than 1 ha (Gebreselassie 2006 in Oxfam 2010).

Second, economic growth has been compounded by large public investment and expenditure in social programs, as well as by a number of other policies and interventions (see Box 2). Public spending has been driven by the Growth and Transformation Plan, based on an agricultural development-led industrialization model putting emphasis on agriculture as a driver of economic transformation. In 2005, Ethiopia started the largest African safety net program – the Productive Safety Net Programme (PSNP – see Box 3). Investments in health and education have greatly increased access for the poorest people. For example, there has been an impressive expansion of primary education: nearly four in five primary-school-aged children were out of school in 1992, but this has fallen to less than one in five (Lenhardt et al., 2015). Girls have benefitted disproportionately more than boys: the ratio of girls to boys enrolled has increased from 0.66 in 1991 to 0.94 in 2012/13 (Ethiopian Federal Ministry of Education (EFME), 2013 in Lenhardt et al, 2015). Poorer, more remote, food insecure and pastoral areas have benefitted disproportionately more, and the gap in attainment between disadvantaged and better off woredas has decreased (Garcia and Rajkumar 2008).

Improved road infrastructure has been another important factor contributing to inclusiveness of growth (Dercon et al., 2007; Dorosh et al., 2012; Seid et al, 2015), linking rural areas to markets and employment opportunities. For example, lower transportation time and cost contributed to better functioning and development of the cereal wholesale market (Minten et al., 2014).

## **BOX 2: KEY GOVERNMENT INTERVENTIONS FOR ECONOMIC GROWTH, AGRICULTURAL TRANSFORMATION AND FOOD SECURITY**

**Agricultural transformation:** the Agriculture Transformation Agency (ATA) was established in December 2010 to promote inclusive agricultural transformation and food security through enhanced support to government agencies, private-sector and other non-governmental partners and address structural bottlenecks in the system. ATA aims to deliver a priority national agenda to achieve inclusive agricultural transformation and food security.

**Measures to improve access to agricultural inputs:** A new Seed Proclamation ratified by the Parliament in 2013; a Fertilizer Blending Program; and a new Seed Law, which took effect June 2000.

**Increasing tenure security for small and large-scale rural investment:** the Agricultural Investment Support Directorate (AISD) was created within the Ministry of Agriculture and Rural Development (MoARD) in 2009 to negotiate long-term leases for over 2.8 million hectares of land.

**Food security and nutrition policies:** the Food Security Strategy (2002), the National Nutrition Strategy and the National Nutrition Program (2008), the Growth and Transformation Plan (GTP) covering 2011-15, the Agriculture Sector Policy and Investment Framework (PIF) 2010-2020, aligned to the CAADP, and the National School Health and Nutrition Strategy (2012).

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## **BOX 2: CONTINUED**

**General investment benefits and incentives** include exemptions for investors setting up new enterprises or expanding existing ones in critical sectors (including agriculture and agro-industry). Investments in priority sectors, such as agro-processing, textile and garments, and leather products for export receive land at reduced lease rates and are entitled to large loans from the Development Bank of Ethiopia.

## **BOX 3: THE PRODUCTIVE SAFETY NET PROGRAMME (PSNP)**

Following the 2002-3 drought, the government launched the Food Security Programme, of which the Productive Safety Net Program (PSNP) has become its main component since its inception in 2005-2006, from a US\$ 70 million budget to 175 million in Phase II (2007-2009), 1.3 billion in Phase III (2010-2014) and 3.62 billion in Phase IV (2015-2020).

The PSNP delivers cash or food transfers to poor families in return for participation in public works such as soil and water conservation, road building, and construction of schools and clinics (only the able-bodied are expected to participate). There is also a direct support component which provides transfers to households with no able-bodied members. Often, one member of the family is chosen to represent all other eligible members in the public works. The programme aims at relieving families of the short-term effects of their destitution and helping them smooth consumption in the face of shocks and negative events.

Through Phase III, the PSNP was complemented by the Household Asset Building Program (HABP), which provided additional transfers, services and training (such as access to improved seeds, technical assistance and training in soil and water conservation, improved irrigation and beekeeping) with the aim of improving agricultural productivity and supporting microenterprise development. It supported families in designing plans to improve their livelihoods, training them in the skills needed to implement these activities, and providing information on where they could borrow money to fund these changes. Credit services are usually provided by microfinance institutions (MFIs) and Rural Savings and Credit Cooperatives (RUSACCO).

Several changes to program design have been introduced in Phase IV, including the aforementioned increase in budget in view of scaling up the program to achieve national rural coverage, with an estimated maximum annual caseload of 10 million beneficiaries. Another important change is the transition from a series of time-bound programs to a system of integrated service delivery. To this end, the HABP has been replaced with a set of livelihood activities directly integrated into PSNP 4. In particular, three livelihood pathways are supported: crop and livestock; off-farm income generation and employment. Support includes technical, business and marketing training for all households, referral to credit providers for households which are ready to engage with MFIs and livelihoods transfers for the most vulnerable households. Up to two members per household may select a livelihood 'pathway', and transfers are provided one per eligible household. As in the graduation approach pioneered by the NGO BRAC and CGAP (the World Bank's Consultative Group to Assist the Poor), interventions are meant to be provided in a sequenced combination tailored to each beneficiary's capacity and needs. While very early in its implementation, the inclusion of an employment pathway is especially innovative; this will help beneficiaries identify employment opportunities based on existing demand from industries and farms and link them with the required skill training.

*Source: MoA, 2014*

Yet, even in this context of widespread economic growth and poverty reduction, impoverishment and transitory poverty escapes have been frequent. Both the quantitative and qualitative analysis conducted for this case study point towards a worrying incidence of these phenomena in the country.<sup>10</sup> Growth has been less inclusive than in the past, with consumption of the bottom 40 percent growing slower than consumption of the top 60 percent between 2005 and 2011 (WB, 2015). In the same period, consumption did not grow at all for the bottom 10 percent of the population (WB, 2015).

The co-presence of poverty reduction with impoverishment and transitory poverty escapes is not unusual; in fact it has been observed in a number of developing countries at different times in the last two decades (Shepherd et al., 2014). Drivers of poverty dynamics – including of impoverishment and transitory escapes, operate at the micro level of individuals and households, at the meso level of communities and regions, and at the macro and national and international level. Identifying interventions to address poverty dynamics requires an understanding of all these three levels. This section provides an exploration of the meso and macro level, while the next section illustrates existing empirical evidence on micro-level drivers.

**In Ethiopia, at the macro context level, three factors help explain the high incidence of transitory poverty escapes and impoverishment observed in this study.<sup>11</sup>**

**The first factor is the slow pace at which structural transformation has advanced in the country, at least until recent years, as this has prevented the creation of sufficient income earning opportunities for poor people in rural areas.** Despite rapid economic growth, structural change has been slow in the country (Dorosh et al, 2012; WB, 2015): urbanization in Ethiopia is still one of the lowest in the world, with 83.2 percent of the population still living in rural areas in 2011 and only 8 percent of the population reporting at least one family member employed in industry. One important aspect of this slow transformation is the still limited size of the rural non-farm sector. According to the 2011 Household Consumption Expenditure Survey, only about 10 percent of household earnings in Ethiopia come from the rural non-farm sector (WB, 2015). A study using data from the Central Statistical Agency of Ethiopia combined with a number of large-scale household surveys<sup>12</sup> found that off-farm income constituted up to 18 percent of total rural household income in high potential agricultural areas of the country, while total wage income and agricultural wage income account for 10 percent and 7 percent, respectively, of total household income. Livestock income is also important, accounting for 11 percent of household income (Bachewe et al., 2016).

Limited growth of the rural non-farm sector implies that rural households face very limited livelihood opportunities outside agriculture. This constrains the strategies available to households to escape poverty, as well as to cope with shocks. This is particularly problematic in a context where agriculture is highly vulnerable to climatic and environmental shocks (see below). Further, this contrasts with the experience of the other countries included in this study (Uganda and Bangladesh), where agricultural growth was accompanied by substantial growth in the non-farm sector.

Another factor which can help explain the slow pace of transformation is the relatively limited rural-urban migration (Dorosh et al., 2012). While this has been on the rise, only 1 in 10 workers migrate in Ethiopia and overall migration has contributed little to poverty reduction in the last two decades (WB, 2015). However, when migration does happen, it is an important driver of welfare improvements. There is some evidence that manufacturing growth contributed to poverty reduction in urban areas between 2000 and

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<sup>10</sup> For example, 15% of the sample analysed in the Ethiopian Rural Household Surveys experienced a transitory poverty escape after having temporarily escaped it, while another quarter became impoverished over the waves. Only 6% experienced a sustained escape out of poverty (see Figures 1 and 2 for more information on poverty trends).

<sup>11</sup> These three factors were identified by the authors on the grounds of previous work conducted on the drivers of pro-poor growth Ethiopia (Shepherd, Mariotti, Rodriguez-Takeuchi, 2016), the literature reviewed in preparation of this report, and the analysis of the qualitative evidence collected on fieldwork.

<sup>12</sup> Including the Agricultural Growth Program of Ethiopia (hereafter AGP) baseline survey, IFPRI's Ethiopia Strategy Support Program (ESSP) Teff Producers dataset; the ESSP Coffee Producers dataset; the Feed the Future (FtF) midline impact evaluation survey; and from the Ethiopian Rural Socioeconomic Survey (ERSS).

2011, but manufacturing employs only 3 percent of the total population and growth of the service sector had limited impact on overall poverty reduction (WB, 2015).

It is important to remark that changes are at play in the country: for example, the urban population is expected to triple between 2012 and 2034 (WB, 2015); the contribution of agriculture to GDP has declined by about 10 percentage points between 1990 and 2014, from 52 to 42 percent, and the contribution of crop production to GDP has been overtaken by construction and wholesale and retail trade sub-sectors (Seid et al., 2015). However, some regions and groups of people have not yet been reached by these changes and are suffering the consequences of limited availability of income opportunities outside marginal agriculture.

**The second factor which can help explain the high incidence of transitory escapes and impoverishment is food price inflation**, which has been on the rise in the country in the last decade. It peaked in 2007, 2008 and again in 2011, when it reached 39 percent compared to the Sub-Saharan average of 13 percent (WB, 2015).<sup>13</sup> This led to reduced consumption, consumption of alternative foods, and a sense of being overwhelmed among the population (Woldehanna and Tafere, 2015). The impact on rural households has been mixed. On one side, high food prices have ensured high returns to investments in agriculture for those rural households that had access to markets and were able to make those investments (Bachewe et al., 2015). On the other side, food inflation hit the poorest rural households that are net purchasers of food, probably contributing to explaining why the poorest 10 percent of the population did not see an increase in consumption in the 2005 to 2011 period.

The government responded with an expansion of the public works and safety net programs and, from 2010, buying and selling grain at marginal profit and establishing a system of co-operative shops serving the public. Some stability was achieved by 2014, but problems remain for poor farmers who are net-purchasers of food and sell their produce at low prices but face the high cost of food (Shepherd et al, 2016; Woldehanna and Tafere, 2015).

The problem may have been aggravated by the fact that despite a positive general trend in the last decade, rural wages did not adjust – or not fast enough to the price rise (Pettit and Rizzo, 2015). Real wages declined in 2008 and between the middle of 2010 and 2011 (Bachewe et al., 2016). In fact, the purchasing power of poor urban casual labourers declined significantly during this period and the adjustment of wages to food price was slow (Headey et al., 2012). PSNP survey data also found that the sharp increases in food prices were not accompanied with similar increases in livestock prices or wages, although the labor market response was stronger in Tigray and Amhara—where the wages almost doubled over the period, than in Oromiya and SNNPR, where such increase was not recorded (Berhane et al., 2013). Because of the slow recovery of real wages, the price shocks may have been responsible for much of the impoverishment observed in the country, especially in the Oromiya and SNNP Region. This is also consistent with the fact that many of the families interviewed for this study mentioned the increasing cost of living as the most pressing problem and preoccupation which they were facing.

It is worth mentioning that the fourth phase of the PSNP (PSNP 4) has been designed to account for the unpredictability of food price inflation and its impact on the real value of cash transfers. In fact, wage rate reviews will be conducted annually and will assess the purchasing power of safety net transfers by assessing market prices of key cereals in safety net woredas. They will also make recommendations on whether and by how much the wage rate should be adjusted (MoA, 2104).

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<sup>13</sup> Over the years the Government of Ethiopia has introduced a number of monetary and administrative measures to tackle high inflation, which have been only relatively successful. Reasons for this may be the combination of high world food prices with domestic food supply shocks and weak monetary policy transmission channels, largely in reason of a less-than-fully developed financial system (Durevall and Sjö, 2012).

**The third factor is the increase in the vulnerability of farming conditions**, caused by the combination of increased land pressure and enhanced climate variability, including the frequency and severity of droughts. Climate variability and vulnerability to drought are recurrent phenomena in Ethiopia, which is also characterised by a variety of micro-climates and corresponding weather patterns. Highlands receive more rainfall than low arid areas and people are mostly engaged in agricultural activities; lowlands receive minimal rainfall and raising livestock is the main livelihood source.

However, climate variability has increased in the last 10 to 20 years as a consequence of climate change. For example, spring and summer rains have declined by 15–20 percent in certain parts of the country since the mid-1970s and increased warming and dryness have been observed across the whole country (USAID, 2012).

The fragility of farming conditions is increased by the fact that climate variability is accompanied by soil erosion on one side and increased population pressure on the other. Soil erosion is widespread and constrains increase in land productivity: every year 1.5 billion metric tons of topsoil erodes from the highlands, which in turn causes an estimated potential loss of 1-1.5 million tons of grains (Taddese 2001 in Oxfam 2010). Increased pressure on land is due to the fact that the majority of the rural population lives in the highlands and middle-highlands, which comprise only one-third of the country's territory, and are mostly found in Oromia and northern SNNPR. Accordingly, in this area population density can reach more than 300 people per square km (USAID, 2012; Livelihoods Integration Unit, 2010). In addition, the current land policy has resulted in small plot sizes. The size of small plots can be an inhibiting factor in implementing large scale watershed rehabilitation and erosion control interventions making it more difficult to address some of the key issues related to quality of the land. The situation is aggravated by the fact that fertility rates, albeit declining, are still high in rural areas.

Climate conditions have been especially unfavourable in the country in the last year, as the arrival of El Niño since 2015 has triggered the worst drought seen in decades,<sup>14</sup> with a decline in national cereal production in 2015 of 14.1 percent from the 2014 level (Bachewe et al., 2016). Rainfall failure has led to reduced agricultural output and loss of livestock in many parts of the country. It was estimated in the 2016 Humanitarian Requirements Document that 10.2 million people will require emergency food assistance in 2016, on top of the 7.9 million already covered by the Productive Safety Net Programme (HRD, 2016).

## **2. A MICRO PERSPECTIVE: EVIDENCE ON THE DRIVERS OF POVERTY DYNAMICS IN RURAL ETHIOPIA**

This section presents a review of the evidence on the drivers of poverty dynamics operating at the individual and household level, mostly relying on findings from various household surveys, both cross-sectional and panel. Drivers are organised into three categories:

1. The household demographic characteristics and life-cycle contingencies (including age, household size and structure, gender and education)
2. The initial household **resource base** including land, livestock and other assets
3. The types of **activities** which household members engage in including employment, non-farm enterprise, crop agriculture, and remittances as well as the **strategies** which they employ to cope with **shocks**.

### **Empirical evidence on drivers of transitory escapes**

Bigsten and Shimeles (2008) provide preliminary insights into poverty dynamics in the country. Exploring poverty persistence in the country between 1994 and 2004, they find that an increase in the time spent in or out of poverty reduces the chance of escaping or slipping back, respectively. In terms of gender, they

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<sup>14</sup> The *Belg* rains (February to May) of 2015 failed in large parts of Ethiopia; there was further inadequate rainfall in the main *Meher* season (June to September), mostly in (though to limited to) the northern and eastern parts of the country (FEWS NET 2016).

find that male-headed households in rural areas are both more likely to escape poverty but also are at higher risk of transitory escapes. As a result of these findings, the authors argue in favour of safety nets, both as a means of poverty reduction as well as contributor to growth. As far as we are aware, theirs is the only study to have examined transitory escapes empirically.

### ***Household characteristics: gender, disability, education***

While Bigsten and Shimeles (2008) find male-headed households more likely to escape poverty, Muletta and Deressa (2014) use the 1999-2009 rounds of the ERHS to offer some insights as to why. Their investigation finds **female-headed households** to be poorer than male-headed households. Specifically, variables such as the **education of the household head, household size, livestock owned and the amount of land** are found to affect poverty status of this group. Female-headed households are also sometimes more vulnerable to changes in food prices and to food price shocks (Kumar and Quisumbing, 2011). Often resource poor, these households tend to have a larger food gap relative to their male comparator group. As a result, their coping strategy to shocks often involves reducing their food consumption and quality of intake. Quality land often acts in a protective capacity to mitigate the effect of food price shocks in the country (Kumar and Quisumbing, 2011).

**Education** has long been stressed as a portable and intangible asset that contributes substantively to improved poverty trajectories across countries. Since 2000, Ethiopia has seen improvements in its human capital base. The percentage of the population without education dropped from 70 percent in 2000 to 50 percent by 2011. However, while the reduction is noteworthy, the absolute figure itself is cause for concern. Education remains strikingly limited, and even more so amongst women, in spite of literature stressing years of schooling as a significant determinant of household welfare and thus a driver of poverty reduction (Hanjra et al, 2009).

While improvements in education are necessary for poverty reduction, so, too, are **demographic changes**. In Ethiopia, improvements in the demographic composition of households, specifically through smaller household sizes, has helped spur poverty reduction since 2000 (World Bank, 2014). The same study finds that the incidence of poverty is higher for children relative to adults, suggesting the demographic changes underway in the country mark a positive trend. However, while the incidence of poverty may be higher for children, this is not to say that presence of adults is necessarily a counteracting force. Rather, Ghebru and Holden (2016) find that the likelihood of escaping poverty is reduced amongst households with a larger number of adult members in rural parts of northern Ethiopia. This finding may be attributable to the limited non-farm economy and the associated limits in income generation opportunities, so that more adults in the families do not necessarily imply more income earnings.

**Disability** also can exert a negative impact on welfare and subjective well-being, regardless of whether the person with disability is the head or another member of the household. This may happen if the person with a functional limitation faces social or environmental barriers preventing their participation on an equal basis with others and so rendering them disabled. Part of the problem then is due to the relative absence of social protection against disability. In addition, given that the main means of production remains dependent on physical labor, persons with disabilities are largely unable to contribute to household income and so reduce household welfare (Fafchamps and Kebede, 2008).

### ***Resources***

Besides characteristics of the household, its resources also play an important role in determining poverty dynamics and impoverishment. Agriculture in terms of quality of land as well as quantity of output are indispensable determinants of income and economic mobility in rural Ethiopia. Irrigation is central in improving the quantity of output. Ghebru and Holden (2016) find that access to irrigation helps increase household income for farmers and so helps drive poverty escapes (Gebregziabher et al, 2009, in Ghebru

and Holden, 2016). Nisrane et al (2010) also reinforce the importance of output, adding that increases in agricultural output is due primarily to an increase in the amount and quality of cultivable land, labour and livestock, as well as the amount of precipitation. Unfortunately, the quality of cultivable land is often poor due in no small part to soil erosion, while the quantity of land is also limited. Farmers and pastoralists across the country, especially women and youth, face inadequate access to and ownership of land to sustain themselves and their households. This renders them vulnerable and so affects poverty dynamics at the household level (Oxfam, 2010).

Agriculture can become more effective in generating poverty escapes **if households are well connected to markets**. Indeed, **local market towns** are an important hub for rural households to engage in economic transactions, comprising as much as half of their purchases of inputs for agricultural production. Over half of a household's consumable goods and food is purchased in these sites (Dercon and Hoddinot, 2005). However, remoteness from towns reduces a household's ability to use markets to buy and sell goods. Moreover, this remoteness is also a growth-inhibiting factor for communities. In contrast, improved access to market towns improves household welfare by increasing consumption outcomes (Dercon and Hoddinot, 2005).

### *Activities and strategies*

#### **Migration**

Evidence suggests that rural to rural migration in the country occurs mostly as a result of push factors, for example as a means of coping with and responding to poor agricultural conditions (Fransen and Kuschminder, 2009) and continued rural poverty, especially in areas where households are faced with low-potential agricultural yields and a shrinking resource base (World Bank, 2010). These households are also more likely to engage in local non-farm activities (Matsumotoa, Kijima, and Yamano, 2006). There is some evidence emerging that involvement in non-farm opportunities can lead to upwards mobility (Bezu et al., 2012). Indeed, this could be a positive trend if coupled with a rise in non-farm opportunities available to these households. However, to date this has not been the case for the most part. Migration is mainly to nearby towns, and for the purpose of employment (de Brauw et al. 2013; World Bank 2010). Moreover, in urban cities, this rural-urban migration has led to a rise in urban poverty as unemployment has accordingly escalated in cities (Fransen and Kuschminder, 2009). For women and girls, there is evidence that marriage, but also early marriage and sexual abuse are drivers of migration (World Bank, 2010).

Relatively low rates of internal migration can be explained by weak pull factors (unavailability of remunerative non-farm employment opportunities compounded by high job-search costs) and a land policy which reduces incentives to migration (Atnafu et al., 2014; WB, 2015): all land is owned and allocated by the government and households maintain the right to farm it through continuous residence and use of the land (de Brauw and Mueller 2012).

#### *Shocks*

While household characteristics and resources provide two sets of drivers of poverty trajectories, these tangible and intangible assets may break down in the face of shocks. Asfaw and von Braun (2004) find that **illness** negatively affects the level and stability of consumption in rural areas. Items from own production and external sources such as gifts tend to be insensitive to the illness of the household head, and so help stabilize consumption in these settings.

**Natural disasters** are another (covariate) shock that affects poverty trajectories. **Repeated exposure to drought** in Ethiopia has been found to reduce schooling investments in some instances, with the effect larger amongst children with lower nutritional status. USAID/Ethiopia has witnessed school attendance

drop dramatically in the current El Nino crisis-affected areas, for example. In general, children with poor health (and poor nutrition) have lower expected returns to schooling. As such, the authors advocate investing in child nutrition as a means of protecting investments in schooling and human capital formation of children in disaster-prone areas (Yamauchi et al., 2009).

Drought has affected households in a myriad of ways, even by changing migration trends and patterns. For example, Gray and Mueller (2012) found that drought increased long-distance migration by men in the country, but reduced the likelihood that women would migrate due to marriage-related reasons. Disasters like drought could reduce marriage-related migration by reducing the supply of marriageable partners who may be forced to migrate as a coping strategy. It could also inflate costs of dowry and other marriage expenses, and reduce access to resources to finance weddings. Climate-induced migration in the context of Ethiopian culture thus suggests that drought has varying effects on population mobility depending on gender and other household characteristics (Gray and Mueller, 2012).

### ***Policy responses to shocks***

To mitigate the effects of environmental shocks such as drought, **food transfers** have been used in the country. Gilligan and Hoddinot (2006) examine emergency **food aid** in rural Ethiopia and its effects on improving welfare in the aftermath of the 2002 drought. **A food for work program (the Employment Generation Scheme- EGS) and a free food distribution (FFD) program** were both found to be associated with an increase in consumption growth and food consumption between 1999 and 2004. However, the FFD tended to be better targeted and so had stronger impacts in improving the welfare of the poor, compared to the EGS wherein work requirements lowered the likelihood of program participation amongst those in poverty. This occurred primarily because those in poverty generally had limited labor endowments, tending to have more elderly members and persons with disabilities. The investigation also uncovers some persistence in the effects of transfer on consumption growth over time. Other examinations of a food for work (FFW) and a food security package (FSP) program found that only the FSP had a significant negative effect on chronic poverty, while the FFW benefits were mixed (Quisumbing, 2003; Nega et al., 2010).

The mixed results of food transfer programs could be partly explained through the **modalities of such aid distribution**. Political connections and social networks were found to increase households' ability to obtain food aid in the aftermath of the 2002-03 drought (Caeyers and Dercon, (2011). In the course of the last decade, however, several measures have been adopted to prevent political manipulation in the allocation of food and cash transfers. These include, but are not limited to: 1) relatively strict targeting criteria complemented by direct community involvement in the targeting process; 2) a seasonal needs assessment process to monitor food security and issue humanitarian appeals where necessary; 3) a strengthened grievance redress mechanism in the PSNP 4 to address issues related to errors of inclusion/exclusion and entitlements among others; and 4) a collaboration with the PBS (Promoting Basic Service) Social Accountability Programme.

Stronger evidence exists of the positive impact of the PSNP (see Box 3 above) on poor households. For example, the PSNP increased the amount of time a beneficiary is food secure by more than one month each year in all regions, as well as the number of meals consumed by children in the lean seasons between 2006 and 2010. Participation in the PSNP for five years has also been found to increase livestock holdings (Berhane et al., 2011). More recent evidence shows that in the highlands, PSNP participants have seen their average months of food security rise by 1.7 month per year (from 8.4 to 10.1) between 2006 and 2012, reflecting improvements in program implementation that occurred between 2010 and 2012 (MoA, 2014). Transfers, however, generally have not been big enough to save and build assets (Slater and McCord, 2013), though there is evidence that the combined action of the PSNP with the Household Asset Building Program (HABP) did promote agricultural investment with positive effects on



productivity (Berhane et al., 2011; Hoddinott et al., 2012). The fourth phase of the PSNP has been designed to address these shortcomings: notably, the value of the transfer has been increased to 15 kg of cereal and 4 kg of pulses per month (equivalent to 2,100 kcal, to be provided in cash or in kind) to allow for improved levels of consumption and more significant consumption smoothing and livelihood impacts because of the higher value of cash transfers (MoA, 2014). For the most vulnerable households, this will be complemented by a livelihood transfer to accompany beneficiaries (albeit only for two of the three pathways supported by the program - crop and livestock, and off-farm; employment is currently excluded).

### **3. EXTENT OF DIFFERENT POVERTY TRAJECTORIES AND TRANSITORY ESCAPES**

This section introduces the analysis of four waves of the Ethiopia Rural Household Survey (ERHS): 1997, 1999, 2004 and 2009.<sup>15</sup> Use of four rounds in the panel allows a more thorough examination of transitory escapes and a way to ensure robustness of findings that help distinguish between transitory escapers and churners.<sup>16</sup> To derive poverty status, real consumption per capita is compared to the poverty line provided in the dataset, equivalent to 50 birr per capita per month deflated in 1994 prices.

Figure 1 indicates that the largest number of households descended into poverty between 2004 and 2009 (equivalent to 31 percent of the sample).<sup>17</sup> This was also the period in which the most households remained in poverty (24 percent), while the fewest managed to escape (11 percent). This result is inconsistent with the general pattern of poverty reduction that the country was experiencing in the same period, but is somewhat consistent with the World Bank's finding that the poorest 10 percent of the population experienced minimal improvement in consumption between 2005 and 2011. It is also consistent with the evidence recorded through the focus groups and life history interviews: a minority of participants report an improvement in their living conditions during this period (more precisely, between 2003-04 and 2010-11 in Turufe Ketcheme, and between 2005 and 2011-12 in Aze Deboa). However, according to this qualitative evidence, the improvements in living conditions were reversed in the following years, up to present. Unfortunately, the quantitative analysis could not explore dynamics in the period following 2009, because this was the last year of the survey.

#### **BOX 4: DATASET USED FOR QUANTATIVE ANALYSIS**

The Ethiopia Rural Household Survey (ERHS) spans seven rounds of data collection from 1989-2009. Supervised by Addis Ababa University, the Centre for the Study of African Economies, University of Oxford and the International Food Policy Research Institute, the survey covers individual, household, and community level data. While the original 1989 round spanned seven peasant associations in three regions, subsequent rounds expanded this coverage to 1477 households in 24 villages chosen largely for their diversity of farming systems (Dercon and Hoddinot, 2004). The current analysis makes use of 834 households for which poverty data was available across four survey years from 1997 to 2009.

Looking more closely at the data, in Figure 2 below, over half of households are either transitory escapers (15 percent), impoverished (25 percent), churners (9 percent), or chronically poor (8 percent). That 2 in 5 households have either become impoverished or experienced a transitory escape over the period does not

<sup>15</sup> While more recent panel datasets exist, in particular the Ethiopia Socioeconomic Survey (ESS) which covers years between 2011 and 2014, these surveys comprise only two rounds of data collection. Examining transitory escapers and sustained escapers, in contrast, requires at least three waves of panel data. Moreover, changes in survey design and different households interviewed do not allow for cross-comparability of the ESS and the ERHS.

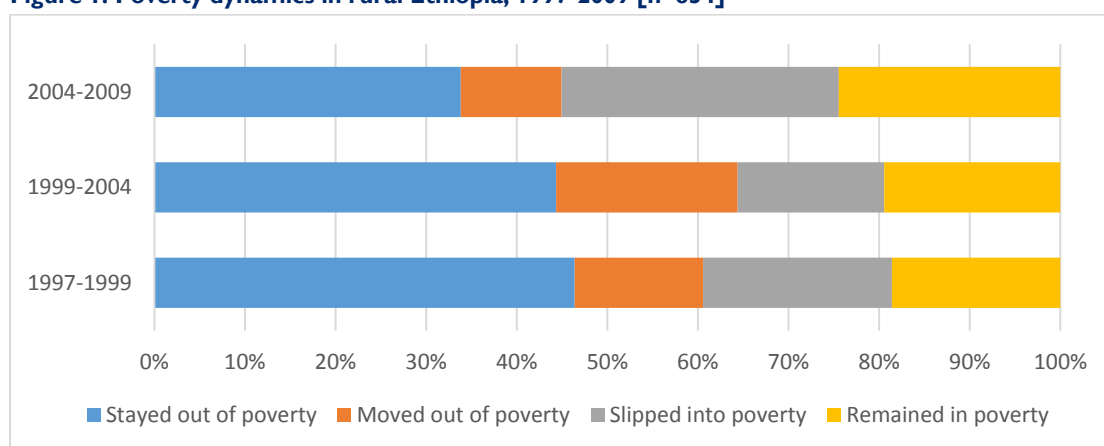
<sup>16</sup> In our sample, some of the trajectories could depict churning. However, adopting a poverty band as discussed in this section reveals that no households fall within its given range of uncertainty and so it is unlikely that we witness churning in our trajectories of interest.

<sup>17</sup> For numbers of households in poverty transitions between years, refer to the Annex.

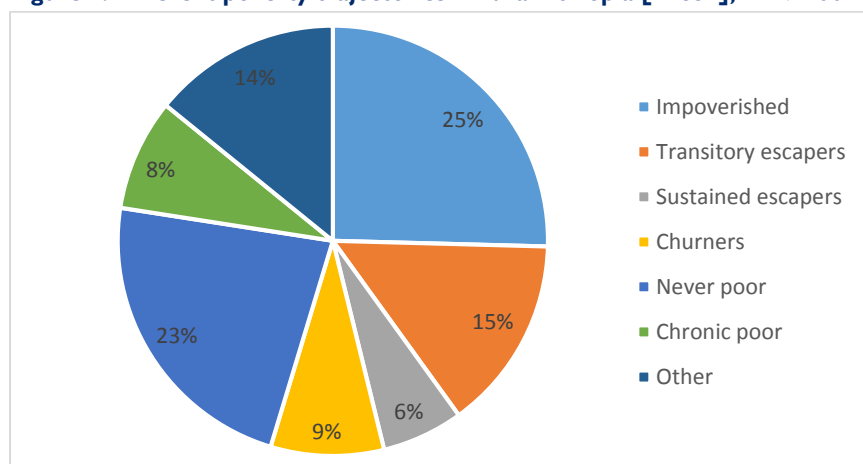
bode well. Without better understanding the factors associated with these trajectories and developing policies and programs specifically targeting such households, sustained poverty reduction in the country will only be met with limited success.

In addition to the categorization presented in Figure 2, Box 5 disaggregates the trajectories of interest to this study one unit further. It could be argued from the specific pathways that some of the transitory escapers represent churners that have only been hovering over the poverty line, or that measurement error may have wrongly classified households as poor in some years. To overcome this, we also create a 5 percent poverty band in the ERHS dataset above and below the poverty line around which we do not identify poverty status. The imposition of this line indicates no change in the share of households that have experienced a transitory escape, become impoverished, or sustained a poverty escape, suggesting that these trajectories are relatively robust to measurement error. Given that the sample does not change when adopting a poverty band, our empirical analysis in this paper proceeds as if we use such a band.

**Figure 1: Poverty dynamics in rural Ethiopia, 1997-2009 [n=834]**



**Figure 2: Different poverty trajectories in rural Ethiopia [n=834], 1997-2009<sup>18</sup>**



<sup>18</sup> Note: “Other” refers to households that had one of the following trajectories across survey waves: NNPN (33%), NPNN (35%), NPPN (20%), PPPN (12%). Churners were identified as households with the following trajectories: NPNP or PNP.

## BOX 5: TRAJECTORIES—TRANSITORY ESCAPERS, IMPOVERISHED, AND SUSTAINED ESCAPERS

Trajectories and shares per trajectory (for each of the four rounds P= poor; N=non-poor):

- **Transitory escapes:** of the 15% that experienced a transitory escape, 40.2% were PPNP, 36.1% were PNNP, and 23.8% were PNPP —households that began the period of analysis with per capita expenditures below the poverty line, thereafter escaped poverty, but did not sustain this escape and fell back into poverty by the end of the survey period.<sup>19</sup>
- **Impoverishment:** NPPP (25.5%), NNPP (24.0%), NNNP (50.5%) out of 25% of impoverished households—households that were non-poor at the start of the survey period, but thereafter fell under the poverty line and remained in poverty for the remaining survey rounds.<sup>20</sup>
- **Sustained poverty escapes:** PNNN (56.9%), PPNN (43.1%) out of 6% of sustained escapers—households that were poor in initial survey rounds, but became non-poor for at least the last two periods.

## B. WHY DO SOME HOUSEHOLDS ESCAPE POVERTY ONLY TO FALL BACK INTO IT, WHILE OTHERS ESCAPE POVERTY AND REMAIN OUT OF POVERTY OVER TIME?

This section analyses four waves of panel data from the Ethiopian Rural Household Survey, in conjunction with qualitative life history interviews to better understand the drivers of transitory escapes, impoverishment, and sustained poverty escapes. The impact of a host of relevant drivers, as outlined in the literature, are investigated in the context of rural Ethiopia. Specifically, we examine drivers as related to (i) household characteristics, (ii) resources, and (iii) household activities and strategies. Box 6 outlines the empirical approach, while regression tables are presented in Annex B.

### BOX 6: APPROACH TO EMPIRICAL ANALYSIS

Pooled multinomial logistic regressions form the basis of our empirical investigation into the determinants of transitory escapes and impoverishment. In our equations, the base outcome is whether a household has experienced a sustained poverty escape. We control for a host of characteristics of the household head, as well as demographics and regional variables. Our equation is similar to that employed in Scott et al. (2016), where:

$$Pr(\text{Poverty Trajectory}_{i,t} = 1 \mid \beta, v_{i,t}) = F(\beta_0 + \beta_1 \text{Head}_{i,t} + \beta_2 \text{Region}_{i,t} + \beta_3 H_{i,t})$$

for  $v_i = (1, \text{Head}_i, \text{Region}_i, H_i)$

where *Poverty Trajectory*<sub>*i*</sub> is probability of the household *i* experiencing a transitory poverty escape, becoming impoverished, or sustaining a poverty escape,

*Head* is a vector of variables defining the characteristics of the household head,

*Region* is a set of dummy variables stating which region of Ethiopia the household resides in, and whether it is located in an urban or rural area, and

*H* is a vector of household specific controls.

In interpreting the results, a variable coefficient that is greater than one indicates that a household has a higher risk ratio of the outcome (transitory escapes or impoverishment), relative to the base reference group of sustained escapers.

<sup>19</sup> Transitory escapers are not necessarily close to the poverty line during their non-poor period, but subsequently regress into poverty and do not necessarily escape it again. This differs from the churning poor, who Hulme, Shepherd, and Moore (2001) describe as those with “mean expenditures over all periods close to the poverty line but sometimes poor and sometimes non-poor in different periods”.

<sup>20</sup> It is also worth noting that the last trajectory may be a sign of churning as opposed to impoverishment. However, data limitations prevent us from testing this. We nevertheless do speculate further on this concern by adopting a poverty band. As stated earlier, since no households fall within this uncertainty band, we posit that the last trajectory is likely to reflect impoverishment.

The findings in this section draw either on the quantitative or qualitative research, or from both research methods. Some of the quantitative results are not statistically significant at conventional levels<sup>21</sup>; this is in part a function of the small sample size: 122 transitory poverty escapers and 51 sustained escapers. Where not statistically significant findings are presented in the text, this is clearly stated and these findings are included as they are supported by insights from the life history research.

## I. HOUSEHOLD CHARACTERISTICS

***Key finding: High fertility combined with a shrinking resource base increases the likelihood of transitory escapes and impoverishment.***

An increase in household size is associated with a higher and statistically significant risk of transitory escapes. A higher household size could potentially reduce the consumption capacity of the household in instances where there are many young children. In the dataset, the household size in 2009 ranged from zero to nine children, with only one in five households comprised of no children. In the fieldwork, too, the household size was large and the average number of children in the two kebelles visited was very high. In some cases, especially where polygamy was present, households would have ten children or more.

However, it is not necessarily the case that children are an unsustainable economic burden for a household; rather, it is the combination of the number of children with respect to their timing in a household's life cycle and income generating capacity which influences the trajectories in and out of poverty. For example, life history interviews revealed that many women feel that they have no other choice but to give up work upon the birth of a child, as in the case of Cheren (Box 7). When children grow up, women sometimes seek to go back to work, bringing their children with them (Cramer et al., 2014b). However, according to focus groups discussions, they often experience a drop in their pay as a result (Rizzo, 2011).

### **BOX 7: LACK OF FAMILY PLANNING COMPROMISES FEMALE EMPLOYMENT OPPORTUNITIES**

Cheren is 23 years old; when she was 15 years old she left her parents' village and went to live in town with her brother to complete her education. She went to school until grade 10 (i.e. she did two years of secondary education), but she had to leave when her brother died.

She started working in a state flower farm and got married. She had her first child after about a year and despite earning a good salary – even higher than her husband – she had to leave the job after the baby was born because the long working hours were incompatible with child-rearing duties. Her husband's salary was not enough to support the family in town and they had to move back to his home village. Their wellbeing has significantly decreased: they have no land and live off some casual work, which she is now unable to perform because she is pregnant again. Her husband's brother lent them a house to live in, but he is now asking them to leave and he is upset because she got pregnant again at this difficult time.

In many instances, in the two kebelles visited, transitory escapes and impoverishment occurred because high fertility was combined with a shrinking resource base. This is a widespread problem in Ethiopia: on one side, increasing population density puts more pressure on the already limited land base, accelerates fragmentation of landholdings and contributes to deteriorated production. On the other, the declining resource base needs to be shared among a higher number of people, given the unavailability of other sources of income generation. The case of Benaim in Box 8 illustrates this intersecting disadvantage.

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<sup>21</sup> Results are presented in the text as statistically significant if  $p < 0.01$ ,  $p < 0.05$  or  $p < 0.1$ . The actual level of significance of each finding is presented in Annex B.

## BOX 8: COMBINATION OF INCREASING DEPENDENCY RATIO AND SHRINKING RESOURCE BASE AS CAUSE OF IMPOVERISHMENT

Benaim is a relatively well-off farmer and a father to 20 children from two wives. He owns 1.5ha of land and used to rent land from others, but has recently stopped because the rental price has increased while production has declined. He owns 2 oxen but used to have a larger number of livestock.

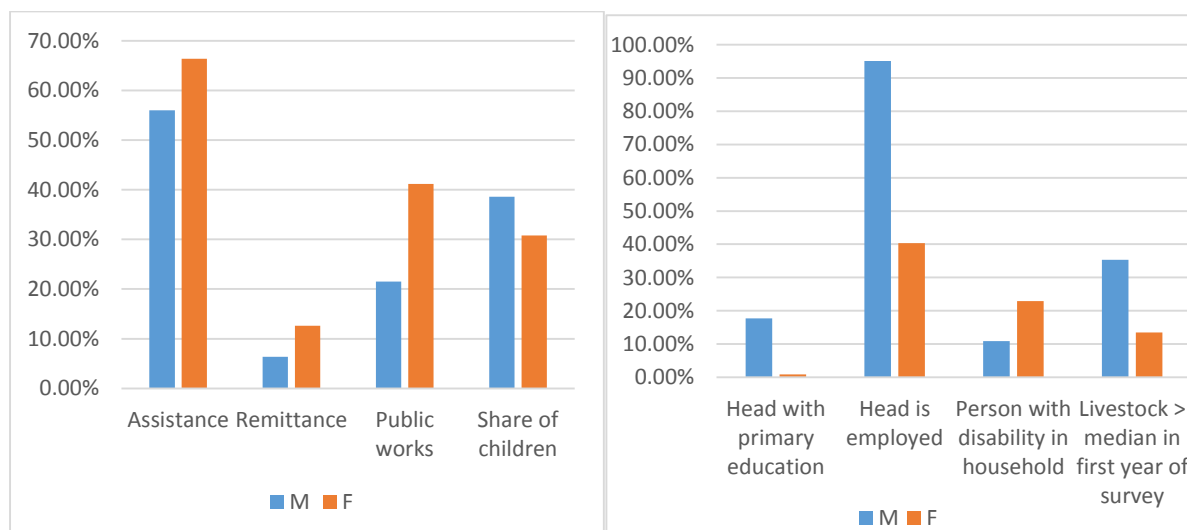
While his family size has increased, agriculture production has drastically decreased over the last decade. The increasing pressures he has faced have been further compounded by a reduction in the government's support in access to fertilisers over time. However, he has chosen not to take out a loan for agriculture, for fear of being unable to repay it. In fact, he has observed that many of his fellow farmers who borrowed from the government microfinance scheme and used the loans to purchase inputs were left with an outstanding debt, following the insufficient returns of their farming investments. Those with outstanding debt are then not allowed to access additional credit, making it difficult for those who might be able to engage in a productive activity to move forward.

**Key finding: Female headed households (FHH) are less at risk of transitory poverty escapes and impoverishment relative to sustained poverty escapes in comparison to male headed households.**

Descriptive statistics of the dataset revealed that in the sample of transitory escapers, impoverished, and sustained escapers, there are notable differences between male- and female-headed households (Figure 3). For example, almost twice as many of female-headed households take part in public works programs relative to their male comparator group. Interestingly, these households tend to be smaller on average, with four family members, compared to the average of seven members amongst male-headed households. One possible reason is that in a struggling female-headed household only members who are not economically independent stay; the others move away (e.g. the male adults leave in search of job, daughters are married off, children are sent to live with and work for families which can take care of them). These practices may be less accentuated in male-headed household, especially if they own land that requires the manpower of family members.

Other differences are less advantageous for female-headed households. For example, for every male-headed household containing at least one person with a disability, there are two such female-headed households. Moreover, under 1 percent of female heads have completed primary education, compared to 18 percent amongst male heads. On average, female-headed households are also half as likely to be employed, and own much less cultivable land and livestock relative to male-headed households.

**Figure 3: Differences that are advantageous (left) and disadvantageous (right) to FHH**



Moving to regression analysis, our findings indicate that female-headed households, who constitute 31 percent of the total sample, are less at risk of transitory escapes and impoverishment relative to sustained poverty escapes, with the results statistically significant at conventional levels. Our regression results match Ghebru and Holden's (2016) finding that, in the north of the country, the probability of escaping poverty is higher for female-headed households relative to their male comparator group. The authors attribute this finding to effective prioritization and targeting of female-headed households through the PSNP and the Food Security Package, introduced in the northern region in late 2002.

A somewhat similar explanation can be given to the results of our analysis. The regression controlled for household participation in public works in exchange of food or cash transfer, so higher female participation specifically in these programs does not explain their observed lower risk of transitory escapes and impoverishment. However, the survey data may still be missing other transfers not delivered in exchange of public works or other interventions (e.g. livelihood support), which prioritised female-headed household. These female-targeted interventions, not accounted for in the analysis, could explain women's better poverty trajectories. In addition, women are frequently cited as being more risk-averse than men, often saving instead of investing in productive measures – this offers one explanation for their ability to withstand shocks that may drive them back into poverty.

***Key finding: Households with persons with disabilities are more likely to experience a transitory escape and become impoverished, though it is worth noting that the impairment itself may not be impoverishing if it does not compromise productive capacity.***

Households containing at least one person with a disability are more likely to experience a transitory escape and become impoverished, though results are not statistically significant. It is likely that our results understate the impact of disability on poverty trajectory, as we cannot in our regression control for selectivity in the sample. In fact, it is possible that some persons with disabilities may have left the household to become beggars, or may have even died prematurely due to neglect (Fafchamps and Kebede, 2008).

It must be emphasized, however, that a functional limitation or impairment may in itself not be impoverishing if it does not compromise the individual's productive capacity or the ability to participate in the local economic system. Nevertheless, disability may be a factor that, combined with other contingencies (e.g. old age) may further increase the risk of impoverishment and transitory escapes. In Turufe Ketcheme, one of the kebelles visited, live many former patients of a nearby clinic which used to cure leprosy. The illness left their hands and feet deformed, but still able to perform various activities and live a functional life. Many of them have now become impoverished because their limited abilities are accentuated by their older age and the decrease in support from others, as in the case of Ayana (Box 9).

#### **BOX 9: DISABILITY AS A DRIVER OF IMPOVERISHMENT IN OLD AGE**

Ayana, who is in her late sixties, suffered from leprosy in her childhood, and was sent for treatment in a clinic close to the village where she lives now. The illness left her hands deformed, but she was able to work the land. After recovery, she moved to the village and was given some land by the government; she also received a lot of support from the community. She got married and had five children. Her life conditions have started to deteriorate after her husband's death in the 1980s. Six years ago she lost a leg (she has a fake limb) and since then she has not been able to work the land, which she had to give away. Her children and the community have limited ability to support her and she often has to beg for money at the local church.

## 2. HOUSEHOLD RESOURCES

***Key finding: Increases in per capita expenditures and asset value are associated with a reduced risk of transitory escapes.***

An increase in the log of household per capita expenditures and of asset value are both associated with a reduced risk of transitory escapes, with both results statistically significant.

Life history interviews revealed that the PSNP (see Box 3) in many cases played a fundamental role in supporting the consumption of poor households and helping them cope with shocks and negative circumstances (see the case of Sisay, Box 10). However, the life histories and the key informant interviews also pointed towards a number of limitations of the program and inability to prevent impoverishment for some families. The main problem observed in Aze Deboa was shortage of resources, which limited PSNP's coverage of the poorest families, excluding a number of eligible poor households. (PSNP was not active in Turufe Ketcheme). In some cases, households had initially been included in PSNP but taken out after a few years because of shortage of funds (as in the case of Rahad, Box 12), then included again in 2015 with the start of a new program cycle. At the household level, PSNP's discontinuation is likely to have created fluctuations in consumption which may have prevented or retarded positive poverty dynamics, if not triggered processes of impoverishment or even transitory escapes. It could be for this reason, coupled with participation bias, that quantitative findings indicate participation in public works to be associated with an increased risk of a transitory escape, though results are not statistically significant. At any rate, the limited coverage may have reduced the positive spill-over effects that a cash transfer program can generate at the local level, such as increase in demand. More generally, the stakeholder interviews revealed that the number of families which were able to graduate<sup>22</sup> after the first 5-year phase of PSNP was much lower than expected and that in fact many families experienced a transitory poverty escape during the second and third phase, due to the increased difficulties faced by the village, such as increased population pressure, irregular pattern of rainfalls and shortage of land.

### **BOX 10: INCLUSION IN THE PSNP IMPROVES HOUSEHOLD CONSUMPTION CAPACITY**

Sisay is 35-year old and has 8 children. Her husband owns 0.125 ha of land, which is not enough to feed all of the family. To make ends meet, he goes out in search of daily labor. She cannot look for work because she must take care of the children and because she has not been feeling well. Because of their difficult economic situation, they had to send two of their children, a boy and a girl, to live with other families. These families give them food and accommodation, and send them to school, in exchange for some domestic services. Sisay is very sad that she had to send her children away, but this has helped a little with their conditions. Another recent improvement has come from the fact that last year she became a PSNP beneficiary for the first time. There are four eligible members in her family, and so far she has collected the money from the cash transfer three times.

***Key finding: While primary education itself is associated with a lower risk of transitory escapes, education remains a luxury of men.***

Completing primary education is associated with a lower risk of transitory escapes, with the result statistically significant. However, all the household heads in the survey that had completed primary education were male. While completion of primary education may have been a luxury of men, the situation is dire across genders for education beyond primary. In the dataset, no head of household who

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<sup>22</sup> The graduation threshold (based on asset ownership) is set at the regional level.

experienced a transitory escape and just one head of an impoverished household had completed secondary education.

Women who have completed primary education may be more entrepreneurial and better placed to cope with shocks, although this is no guarantee in itself: the contingencies of the life cycle may hamper their ability to use the skills which they have acquired. This was, for instance, the case of Cheren (Box 7). The life history interviews revealed that the cost of education is still an issue for many families and single and widowed mothers struggle more than others, as in the case of Alam (Box 11).

### BOX 11: THE COST OF EDUCATION IS STILL TOO HIGH FOR MANY POOR FAMILIES

Alam is 45 years old and lost her husband two years ago, who died after a long illness. To pay for his treatment they contracted out their land (0.25 ha) and this is now her only source of income. She lives with her 20 year-old son and her 10 year-old daughter. The son studied up to grade 10 but then had to drop out because of poor grades and lack of funds to invest in private tuition. The daughter also had to drop out of school because she had no money to pay for her school registration fees or for a uniform.

Alam looks for daily work but struggles because of her health. She is unable to join a local savings group because she does not have the financial capacity to save regularly.

**Key finding: Livestock provides a liquid insurance mechanism preventing transitory escapes and impoverishment amongst many households.**

Households which own a high number of livestock are less likely to experience a transitory escape or become impoverished, with the result statistically significant. In the dataset, amongst our poverty trajectories of interest, 15-16 percent of households owned cows in 2009, which featured as the first or second most favourable livestock option. Other preferable livestock include calves (13-14 percent) and oxen (1 in 5 households who experienced a transitory poverty escape and around 15 percent of impoverished and sustained escapers owned oxen in 2009), as well as sheep, heifer, goats, and donkeys. Such livestock act as liquid assets that can be sold in times of crises or to pay for life events. That sustained escapers experienced a considerable decrease in their ownership of heifer between the first and last survey years (see Figure 4) gives a preliminary indication of a type of livestock that may have been sold in order to prevent transitory escapes and instead sustain poverty escapes.

**Figure 4: Change in percent of households owning top 5 livestock choices between 1997 and 2009**



Qualitative results also indicate that for highland farming households, livelihood activities linked to livestock rearing can be a route out of poverty (as in the case of Aman, Box 13) but also that the first asset that households de-mobilize when they began to experience a transitory poverty escape, or face



shocks or unexpected events, was livestock (see Rahad in Box 12)<sup>23</sup>. It is thus possible that the liquidity provided by livestock endowed many households with a buffer asset to be sold in times of crises that, to an extent, would have cushioned their downward mobility in times of crises, or lessened the degree of their slide back into poverty.

It is indicative of the impoverishment experienced by the two villages visited for fieldwork that most of the households declared that they used to own more livestock in the past than they did at the time of the interview. Community-level reduction of grazing land (and forests) also contributed to the shrinkage in livestock ownership. In Turufe Kecheme this was mostly driven by population growth (Gezahegn et al., 2006); in Aze Deboa a contributing factor was the allocation of a portion of these lands to the landless people by village officials (Dea et al., 1996).

### **BOX 12: DEMOBILISATION OF LIVESTOCK TO PAY FOR FAMILY MEMBER'S FUNERAL**

Rahad is 25 years old and lives with his wife, his mother and his younger brother; his father died 12 years ago. He owns about 0.10 ha of land, inherited from his parents. His parents used to have 2 cows, but one was sold to pay for the burial ceremony of his father and the other for the burial ceremony of his elder brother who died about ten years ago. He has two other brothers which live elsewhere and are not able to support him and his family.

All of his family members are PSNP beneficiaries. They were originally included when it started in 2005, but were taken out around 2012. This caused a decline in their wellbeing. He was told that the reason was that there was a shortage of resources in the program. Recently, they have been included again and receive in total 508 birr per month (124 birr\*4 family members) for six months a year.

### **BOX 13: SUSTAINED ESCAPE FROM POVERTY THANKS TO WORK MIGRATION AND MFI-FUNDED MICROBUSINESS**

Aman is 42 years old and was able to complete primary school only, after which he quit to help his parents with income. In 1998, he left the village to work in a state farm where he stayed for seven years. In the meantime, he got married and had children. In 2005, following his father's death, he left the farm and came back to take care of his family. With the savings from the state farm he was able to build a nice house with a door, windows and an iron roof

His owns 0.125 ha of land, where he has some fruit trees and some coffee. For three years he has been engaged in a cow fattening business, which he started after borrowing 5000 birr from a microfinance institution. He has been able to repay this loan on time. This activity has helped him and his family earn some stable income. However, he has provisionally stopped cow fattening because the loan is not sufficient to cover all the costs of the fattening process, which is also very time consuming, while market demand has gone down. He may start again if he can convince the MFI institution to give him a larger loan. Aman feels that despite some difficulties, he is still doing better than his neighbours.

***Key finding: An increase in cultivable land makes female-headed households less likely to experience a transitory escape or become impoverished, with results dependent on conditions of production, land tenure, and other factors.***

An increase in the amount of cultivable land owned makes female-headed households less at risk of transitory escapes and impoverishment. Though the result for transitory escapes lack statistical

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<sup>23</sup> This may not be the case for lowland households for whom pastoralism is the primary source of livelihood.

significance, it is worth noting that the result would be significant at a slightly higher p-value of 0.125. It is also worth stressing that access to or ownership of land alone is not associated with a lower risk of transitory escapes or impoverishment for the sample as a whole.

This suggests that in rural Ethiopia poverty dynamics are not driven by land ownership itself but rather by the factors which underpin the conditions of production, including land quality and broader environmental and weather conditions and the availability and cost of inputs (seeds and fertilisers). Even a relatively small variation in these conditions can make a great difference in terms of wellbeing and trajectory in or out of poverty experienced at the household level, as seen in the case of Dawit (Box 14). This is especially the case in contexts where land holdings are small and shrinking, agriculture is entirely rain-fed and farmers have limited formal and informal insurance mechanisms to fall back on. At the same time, lack of a proper land market and unavailability of livelihood opportunities outside agriculture hold people attached to their plot of land.

#### **BOX 14: ACCESS TO INPUTS IS CRITICAL TO ENSURE THAT FARMING IS A DRIVER OF POVERTY ESCAPES**

Dawit is a relatively well-off farmer with a large house with a metal roof, built around 16 years ago. He moved to the village with his parents when he was a child and went to school up to 12<sup>th</sup> grade (secondary education). In 1978, his parents were assigned land from the Derg's regime land redistribution reform; he is now working this land as well as another plot which he received from the kebele administration following the land reform implemented by the EPRDF (Ethiopian People's Revolutionary Democratic Front) in the early 2000s.

He got married 22 years ago and the period which followed was a good one; agricultural production was abundant and their conditions improved. He used to have donkeys, milking cows, oxen and goats. He still owns some livestock, but in smaller numbers and of less variety.

Production has declined in the last years, but he is still considered a role model for other farmers because of his success. Four years ago, an NGO operating in the area gave him improved potato seeds to test. Their performance was good: he was able to produce 10 quintiles of output and sell them at 300 birr per quintal. However, this success could not be repeated: potato seeds cannot be stored from one year to the other, and this special variety hasn't been available on the market for three years. Only very recently has it become available again.

The cooperative of which he is part operates a credit and saving scheme from which members can borrow money to purchase agricultural inputs. The loan is usually repaid after the harvest, but they are sometimes unable to do so. One problem which farmers face is that the price of outputs tends to drop after the harvest, so that their earnings are often lower than the cost of inputs. This is especially the case for crops, such as potatoes, which are perishable and cannot be stored over time.

Access to inputs is especially critical and a change in the cost, availability and accessibility of inputs (including human labour) can trigger trajectories of descent into poverty. This is testified by the persistence of a number of traditional institutions at the village level meant to support poor households in accessing inputs. For example, sharecropping was a common practice in both the kebelles visited: families which are unable to farm their land themselves – usually because they lack the necessary inputs (as in the case of Fana in Box 15), 'give it away' to others for a season or more and receive in exchange a share of the output. This was indeed the only source of earning for the poorest families visited. Renting land for cash also occurs in both villages visited, but in general land owners prefer sharecropping and rent for cash only if they need ready cash to face shocks and sudden expenses, e.g. for health treatment (Gezahegn et al., 2006).

In some cases, oxen are rented from others, or co-owned by two farmers. In Aze Deboa, the ability to pay for agricultural inputs upfront rather than having to borrow was a key characteristics differentiating rich from poor families (see Annex C). Support in accessing inputs is provided by the better-off farmers through cooperatives, but most households are unable to join cooperatives because their plots of land are too small and too unproductive. Interviews with officials from the Cooperative Promotion Office (CPO) in Shashamane and in Durame revealed that scarcity and high cost of inputs are major constraints even for farmers who have joined a cooperative. The CPO assists the cooperative union, which procures agricultural inputs and supplies them to the single cooperatives, which in turn delivers them to their members. The prices are not subsidised; on the contrary the final price paid by farmers is augmented of the operational costs supported by the cooperatives and the cooperative union.

### **BOX 15: SINGLE MOTHER GIVING LAND IN A SHARECROPPING AGREEMENT**

Fana is a 28-year old single mother of three children. Her relationship with the children's father ended about 5 years ago, after which she came back to her home village. She now lives in a small hut which was constructed 9 months ago with the support of the neighbours and the local church. Her sister, who has a similar life story, lives in a twin hut just next to hers. Fana owns 0.25 ha of land which she inherited from her father, but she is not able to work the land herself; she gives it away in a sharecropping agreement for which she receives 1 quintal of output per year.

She does not have any livestock and when she can she does domestic work for other families such as washing clothes, cooking, etc. The smallest of her children lives with her and goes to school, but the others live with neighbouring better-off families because she does not have the financial capacity to support them.

The quantitative analysis suggests that land may have a larger influence on the poverty dynamics experienced by female-headed than male-headed households, though results were not statistically significant for the transitory escapes outcome. A possible explanation of this finding is that female-headed households tend to have characteristics which increase their poverty and vulnerability. This implies that for these households at the margin, having or not having land makes a bigger difference than for other, less vulnerable households.

### **3. HOUSEHOLD ACTIVITIES**

***Key finding: Employment reduces the risk of transitory escapes and impoverishment, while non-agriculture employment results in an even lower risk of transitory escapes; however, results are not statistically significant.***

Employment (including both farm work and non-agriculture employment) is associated with a reduced risk of transitory escapes and impoverishment relative to sustained escapes, and the risk of transitory escapes and impoverishment is even lower for households whose head is engaged in non-agriculture employment. However, all results are not statistically significant at conventional levels. In addition, these households represented a very small minority: in 2009, of the household heads that were employed, 93 percent worked as farmers or engaged as a family farm worker as their primary occupation, while in the dataset there were only 50 non-agricultural workers (in our subsamples of interest). These household heads engaged in primary activities such as manual work, traders, and crafts workers. However, it is unclear how closely these occupations were linked to the agro-cycle, through for example trading in crops. Domestic work was also common, but the true extent of this is unknown due to data limitations.<sup>24</sup>

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<sup>24</sup> In the dataset, housewife status and domestic work was combined into one response so in the analysis household members who selected this response (18% in 2009) were recorded as unemployed.

The two kebelles visited were characterised by a lack of employment opportunities outside agricultural labour. Reliance on casual wage labour has increased over time. In Aze Deboa, one of the characteristics of poor households identified by the focus group discussion was engagement in daily labour (see Annex C); in Turufe Ketcheme daily labour mostly constituted manual tasks such as ploughing land, roof repairing, cooking or washing clothes for better-off neighbouring families. Working for others was said to be more frequent in the past but to have declined in recent years due to the difficult economic conditions faced by most families in the village. Further, while this type of employment is an important coping strategy, it is not in itself a driver of poverty escape.

Disaggregating results by gender, quantitative findings indicate that while 94 percent of male heads were employed in 2009 (including both agricultural and non-agricultural work, and predominantly characterised by farm or family work), this percent dropped to 41 percent amongst female heads of households. At least part of this may be explained through a larger share of women likely engaging in domestic work, though data limitations preclude us from examining this in further detail.

It is important to remark that reliance on agricultural wage employment at the national level may be larger than what is suggested by official national labor statistics (Mueller and Chan, 2015). For example, data based on the LSMS survey indicate that less than 1 percent of rural women and 2 percent of rural men spent any time in wage labor in the past 7 days (Ethiopian Central Statistics Agency and World Bank, 2013). However, data from a recent specialised labor market survey looking at the flower export sector, found that over 47.5 percent of all sampled adults (rural only) and 45.8 percent of all women participated in agricultural wage labor (Cramer et al., 2014). Further, as previously mentioned, there is evidence that total wage income accounts for 10 percent of total household income, and agricultural wage income for about 7 percent (Bachewe et al., 2016). The same study also finds that off-farm income and wage income tend to be relatively more important for the poorest income quintiles of the distribution. This suggests that these activities are in many part of the countries not remunerative enough to put people on trajectories of poverty escape.

***Key finding: Receipt of a loan is associated with increased risk of impoverishment.***

Participation in *iddir*<sup>25</sup> makes a household more likely to experience a transitory escape, and receipt of a loan makes households more at risk of impoverishment. While results lack statistical significance at conventional levels, this could be a function of small sample sizes; increasing these levels slightly would render both results significant (p-values rest at 0.189 and 0.103, respectively). Unfortunately, the analysis is not able to distinguish whether the negative poverty trajectory was caused by the loan itself or by associated factors. For example, self-selection may drive households that are already more at risk of transitory escapes to use *iddir*, while impoverishment could be due to the purpose of the loan, rather than the loan itself.

In the dataset, loans were obtained to repay other debts only amongst the transitory escapers group, while the majority of loans were used to buy food and goods for the household and therefore associated with a high risk of impoverishment (Figure 5). This was also observed in the two kebelles visited, where many households borrowed to make improvements to their households. In addition, in the context of climate change, loans taken to purchase agricultural inputs may be relatively riskier than loans to start a micro-business (e.g. fattening of cows), because the ability to repay the loan in the former instance is more strongly dependent on factors outside of the control of the household, such as weather conditions and agricultural production performance. In Turufe Ketcheme, many farmers were sceptical of borrowing to purchase agricultural inputs, as seen in the case of Benaim (Box 8). In contrast, those who had borrowed for other activities (e.g. preparing drinks, fattening of cows) had been able to repay their debt in time. At

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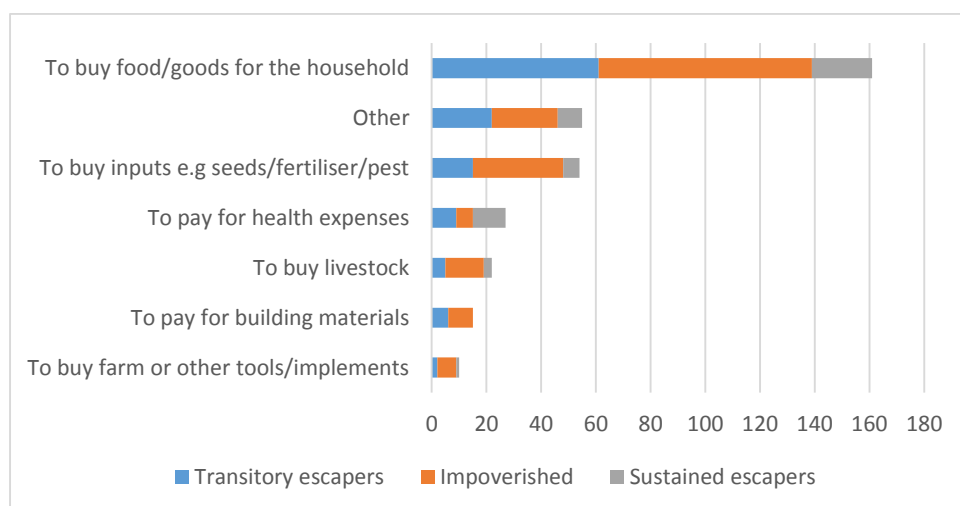
<sup>25</sup> Iddir is a local informal risk-sharing and insurance arrangement by which members receive a payout in cash or in kind in the face of specific adversities – for example burial expenses for a family member.

the same time, in Aze Deboa, poor people were described as those who had to taken loans in order to purchase inputs for agricultural production, while rich households were those who did not need to borrow to purchase their inputs. This tendency is also observable in the descriptive statistics, where we see sustained escapers taking out a loan for agriculture inputs just 11 percent of the time, compared to 1 in 5 loans received for this purpose by impoverished households.

The fact that loans are associated with risk of impoverishment does not necessarily imply that they cannot play a positive role in mitigating negative poverty trajectories if certain constraints are properly managed. Currently, an important constraint in the ability of loans to lead to sustained poverty reduction includes the amount of capital available. Half of the loans obtained in the last year of the dataset came from either relatives or friends and neighbours, suggesting lack – or lack of access to – formal financial services. Key informant interviews in Durame suggested that SACO (Savings and Credit Organisations) are less risky because they rely on an endogenous capacity to generate savings, but at the same time suffer from a shortage of capital. This problem however was also noted for cooperatives and government microfinance institutions, which often suffer from insufficient budget allocation.

Another important finding of these interviews was that institutional microfinance loans may not always be appropriately allocated. In Durame, many of the households participating in the HABP who received a loan were not able to repay it according to schedule (after one year). This was a problem frequently observed under the OFSP (Other Food Security Program, the livelihood program which preceded the HABP), partly because there was confusion among implementers and beneficiaries as to whether beneficiaries were receiving a grant, a loan, or participating in a revolving funds scheme (Berhane et al. 2013). As mentioned in Box 3, the HABP sought to address the problem by establishing mechanisms to link beneficiaries to MFIs and rural Saving and Credit Cooperatives. However, credit access remained constrained for many households due to outstanding loans, a focus on household head - which tended to exclude women and youth, and credit-adversity of many households fearing credit-debt spirals (MoA, 2014). Acknowledging that the HABP was still missing or not properly serving the poorest and most vulnerable households, PSNP 4 has been designed so that this type of beneficiary is provided with livelihood transfers instead of a loan, in combination with other sequenced interventions (see Box 3).

**Figure 5: Reasons for obtaining a loan, 2009**



#### 4. HOUSEHOLD STRATEGIES

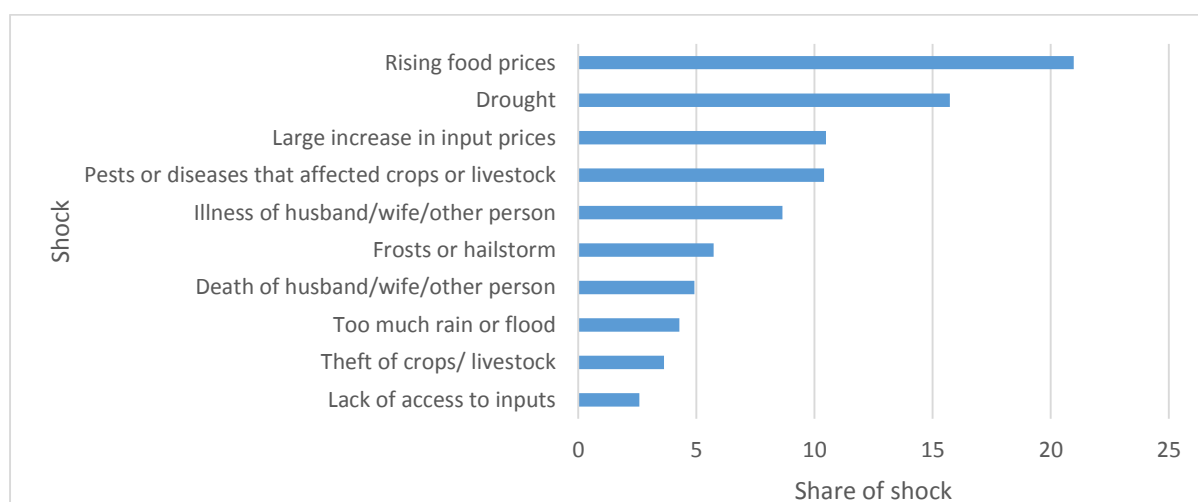
**Key finding: The risk of impoverishment and transitory escapes increases for households that experience more than one shock in sequence.**

The number of shocks that a household experiences increases the risk of impoverishment and transitory escapes, though the results are not statistically significant. However, there are significant if introducing a higher p-value (0.13 for impoverishment and 0.17 for transitory escapes, respectively). Figure 6 illustrates the top 10 shocks most prevalent in the latest survey year. These 10 shocks comprise just over 87 percent of all shocks affecting households captured by the 2009 dataset. Of the types of shocks, a rise in food prices and drought constitute over a third of shocks affecting rural households in the country: environmental and price shocks were much more frequent than idiosyncratic shocks.

In the dataset, over half of the households experienced between 2 and 4 shocks between 2000 and 2009, while over a quarter experienced 5 or more shocks during the same period.<sup>26</sup> Aside from the number of shocks, descriptive statistics do not reveal notable differences in the types of shocks affecting transitory escapes households relative to sustained escapers. This means that the different poverty trajectories are not explained by the types of shocks but by how each shock interacts with some other factors, such as household characteristics.

The main effect of the shocks described above was loss of income: 60 percent of households affected by shocks in the dataset experienced loss of income (Figure 7).<sup>27</sup> In about 16 percent of cases, loss of income was accompanied by loss of assets and reduced consumption. These three compounded effects underscore the multiple and often intersecting pathways by which shocks may aggravate coping abilities and strategies for poor households. However, results suggest that their presence does not necessarily result in negative poverty trajectories: 22 percent of the sustained escapes households experience shocks affecting income, assets, and consumption at the same time, compared to just 13 percent of households amongst transitory escapers.

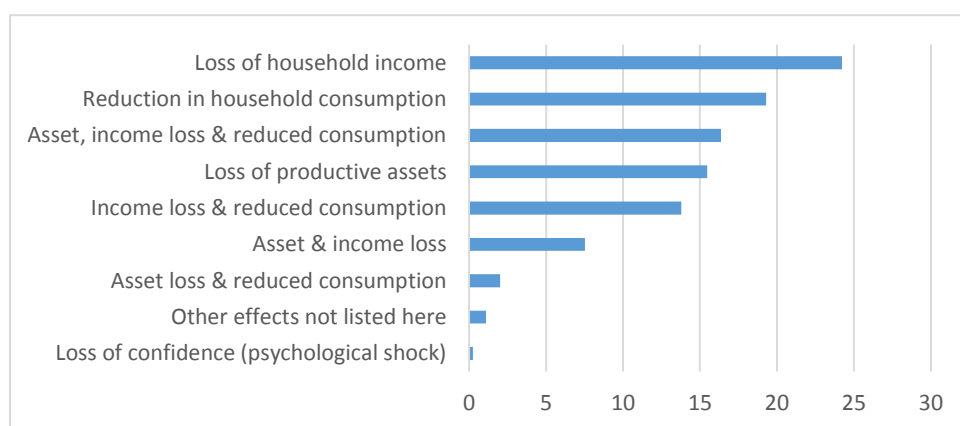
**Figure 6: Types and prevalence of shocks to affect households according to 2009 survey**



<sup>26</sup> Note that the actual number of shocks experienced is likely to be even higher than those reported, given that the shock module from which the data was derived covers information on only the first three instances in which a specific type of shock occurred.

<sup>27</sup> The survey data does not clarify if this was a reduction in real income and purchasing power or otherwise.

**Figure 7: Effect of individual shocks according to 2009 survey**



***Key finding: Migration and remittances are associated with reduced risk of impoverishment, though not statistically significant. However, these practices are still relatively uncommon in rural Ethiopia especially among internal migrants.***

Households that receive remittances are found to be more likely to experience a transitory escape. Though the result lacks statistical significance at conventional values, the p-value is at 0.112 and so relatively close to the 0.10 threshold. They are also less likely to become impoverished though results also lack statistical significance. If households receive remittances ex post facto, they are likely to be a way in which households cope after reducing their welfare and sliding back into poverty. Descriptive statistics indicate that while only 3 percent of households received remittances between 1997 and 2004, the share increased to 8 percent by 2009. The increase in remittances was highest amongst the group of sustained escapers, where just 2 percent of households received remittances in 1997, compared to 14 percent by 2009.

Remittances are still relatively uncommon in rural Ethiopia. It could be that most of the migration is internal, and is often an unplanned event for the poorest individuals and households, rather than a strategy of poverty escape. Life histories revealed a number of cases where family members were unaware of a (male) relative's whereabouts because he had left without a clear destination or purpose (as in the case of Bworo's son, Box 16). However, at the same time, the only case of sustained escape from poverty observed with the qualitative analysis was associated with migration to work in a state farm (see the story of Aman in Box 13). This is perhaps an indication of the changing nature of internal migration among the youth cohort seeking work in secondary cities, though absence of data precludes us from testing this in further detail.

**BOX 16: MIGRATION AS LAST RESORT STRATEGY TO ESCAPE CONDITION OF CHRONIC POVERTY**

Bworo, who is 60 years old, suffered from leprosy during his childhood and moved to the village after he was treated in the nearby clinic. His land is given to a family in a sharecropping agreement, because he does not have the capacity nor the sufficient inputs to work it by himself. His wife helps other families prepare the local alcoholic beverage. He used to work as a carpenter building thatched roofs for huts, but recently he had to stop because he does not have the strength any longer. He has five children; one of his sons has been missing for the last three years. This son left because he was unsatisfied with their condition of poverty and his family could not support him.

**Key finding: An increase in asset value and a decrease in household size and number of jobs is associated with improvements in per capita expenditures for those living under the poverty line.**

We also examine movements below the poverty line to see what helps or constrains improvements, even if this is not sufficient to take a household completely over the poverty line. To do so, we run fixed effects regressions with the log of per capita expenditure as the outcome variable. Results indicate that higher asset value and spending on health are associated with increased expenditures, while the household size and number of jobs is associated with a decrease in expenditures. Intuitively, these results are expected. Improvements in asset value would suggest that the resource base of the household is expanding and so contributing to improved welfare at large. The positive association of health expenditures would be reflected in the higher overall expenditures accruing to these households. In terms of downward stressors, an increase in household size could reduce the per capita amount of expenditures available for a household without an expansion of the resource base. Finally, an increase in the number of jobs could be a stressor if employment is not accompanied by good working conditions but rather a reflection of the vulnerable state of households. These results suggest then that in terms of improving expenditures and the poverty status of those living in poverty, efforts are needed to address vulnerable employment, family planning, and expanding the asset base available to households.

## **C. IMPLICATIONS FOR USAID AND FOR WORK TO PROMOTE SUSTAINED PATHWAYS OUT OF POVERTY**

This section presents some considerations on the policy interventions needed to improve poverty dynamics – specifically to prevent transitory escapes and impoverishment and support sustained escapes in the Ethiopian context. The considerations are based on the findings of the quantitative and qualitative analysis discussed in section B, and thus on the broader analysis of evidence carried out in the paper. The policy discussion is necessarily influenced by the high prevalence of transitory escapes and impoverishment found in the data and in the life histories. Policy recommendations therefore focus on measures which can help prevent impoverishment and transitory escapes which occur even in a context of broad economic growth. In comparison to the Uganda and Bangladesh case studies, this case study has fewer lessons to offer on the strategies adopted by households, which successfully escaped poverty. This does not mean that sustained poverty escapes are not occurring in Ethiopia. In this respect, it is worth noting that the two villages visited and analysed for this study were both characterised by lack of state and donor assistance: the only significant intervention was the PSNP in Aze Deboa. This absence of support targeted to the poorest people can help explain the rather negative picture emerging from this case study. The qualitative empirical evidence reported here therefore is not to be interpreted as representative of an average national tendency, rather of processes which are at play in some parts of the country for some people, which need to be taken into account to improve and reinforce the path towards poverty reduction. Given the country's heterogeneity, USAID may want to consider conducting more research on poverty dynamics in areas of the country with different characteristics than the ones explored for this case study.

**A general lesson of this case study is that drivers of poverty dynamics are systemic as much as related to individual and household characteristics.** People become impoverished and experience transitory poverty escapes as a result of idiosyncratic as well as systemic risks. Accordingly, an analysis of drivers of poverty dynamics (including household characteristics, activities and strategies) needs to account for household characteristics and how they interact with the context (including existing government and donor policies and interventions).



## *Household characteristics*

### **Improving poverty dynamics in Ethiopia demands a stronger focus on family planning.**

Population growth and fertility rate have declined in the last decade: the former was 2.5 percent in 2014; the latter declined from 6 average children per woman in 2000 to 4 in 2011. Yet rates are still high, especially in certain parts of the country. The combination of increasing pressure on an already degraded land and absence of family planning push many families into choices which prevent them from embarking on sustained strategies out of poverty – for example, persevering with marginal farming in the home village because of lack of family support in towns. This situation is particularly damaging for women, which are tied to their traditional housework models.

A possible approach could be mainstreaming family planning into the existing food and cash transfer program, especially the PSNP. In fact, design innovations introduced in the PSNP 4 go in this direction: soft conditionalities have been built into the program to support pregnant and lactating women who are eligible for temporary direct support. Such women are temporarily exempt from participating in public works but are asked to commit to attend prenatal counselling sessions and a postpartum health facility visit, and participate in the Community Based Nutrition Programme. Soft conditionality implies that such participation is monitored, but penalties are not enforced.

**Women's productive role is often the critical factor which not only prevents transitory escapes and impoverishment, but also enables households to escape from poverty. Supporting these positive dynamics requires endowing women with more skills as well as providing avenues to put the acquired skills into use.** Ethiopia has achieved great progress in girls' education, but literacy rate among adult women still remain low (29 percent in 2007): in fact, much lower than men (49 percent in 2007) and below the Sub-Saharan Africa average (52.5 percent in 2010) (World Development Indicators). Efforts in ensuring that all girls complete at least primary education should be accompanied by interventions targeted to working-age women meant to ensure that the acquired skills are put into use. **This implies creation of livelihood opportunities through programmes which combine training, technical assistance and financial support, as well as family planning and child care services.** In fact, pregnancy and motherhood often occur at times which compromise women's capacity to participate in income earning activities, including for those who would be able to engage in wage employment or other remunerating activities.

**Targeting interventions (cash and food transfers as well as livelihood programs) to female-headed households can go a long way in improving poverty dynamics:** on one side, female headed households tend to be characterised by high levels of poverty and vulnerability which demand support and assistance; on the other, they also show lower risk of transitory escape and impoverishment, suggesting potential to embark in sustained poverty escapes if endowed with sufficient assets and skills. This suggests that targeting these households with the combined interventions outlined above (including cash transfers as well as training, livelihood support and family planning) can both reduce chronic poverty and support sustained escapes.

There are indications that prioritisation of female-headed households has occurred within the PSNP, with positive poverty effects. This however has not been the outcome of explicit targeting, rather of the fact that female-headed households are more likely to be very poor and eligible for the program. Turning the lower risk of transitory escapes and impoverishment into capacity to embark into escapes from poverty would require systematic and continued prioritisation of female-headed household, within and beyond the PSNP. Again, it is encouraging that PSNP 4 has been designed with the explicit intent of strengthening the focus on gender equity, particularly in the areas of nutrition, household asset management, and community cohesion.

Importantly, however, targeting should not become a zero-sum game, and prioritisation of female-headed households should not come at the expenses of poor and vulnerable male-headed households, especially in consideration of our finding that these households are often at higher risk of transitory escapes. A possible way to address all these important objectives would be to maintain the current gender-neutral targeting criteria focused on indicators of poverty and vulnerability, but include in the program activities specifically targeted to female-headed households. The livelihood component of the PSNP 4 includes the provision of a sequenced combination of interventions tailored to each beneficiary's capacity and needs. This measure could be implemented paying particular attention to the potential and interest of female-headed households to run microbusinesses. Specific supporting interventions, such as child-care, could be built into the package.

**Disability does not need to be a driver of impoverishment and transitory escapes, provided that the impaired individuals are given an appropriate form of support.** Some forms of disability are more impairing than others. Individuals with impairments which do not fully prevent their productive capacities can be helped to realise their economic potential with support tailored to their abilities, for example with specific training and asset transfers. The support of the local community is fundamental, as is adapting the support to the evolving circumstances of the individual: old age and contingencies of the life cycle can aggravate the impairment and further increase the risk of impoverishment and transitory escapes. One of the PSNP 4's innovations include the provisions of transfers to permanent direct support clients (including disabled, sick, and elderly people, who cannot take part in public works) for 12 months each year instead of the standard 6 months.

### *Household activities*

**Support to smallholder farming is critical given the very high rate of land ownership in Ethiopia. Focus should be on improving access to agricultural inputs** and ensuring that this access is continued over time, as discontinued investments prevent profitable farming. Cooperatives can play a key role in this, but should be endowed with more resources to expand their credit and technical assistance capacities, as well as their role of intermediation in the provision of agricultural inputs. Micro and small farmers unable to join cooperatives should also receive support in accessing agricultural inputs, but not through credit, as this would risk to increase their vulnerability (see more below on financial inclusion). Continued public investment in irrigation – including small-scale irrigation more easily accessible by small farmers - is also essential to increase productivity and reduce vulnerability of rural households.

**However, for a large number of households, farming is not sufficiently remunerative to lift them sustainably out of poverty.** This is mostly due to the combination of increasing land fragmentation, land degradation and lack of irrigation. Families hold on to their micro plots of land for lack of employment alternatives and of a smoothly functioning land market. Completing the formalisation of land rights and of rural land lease would incentivise land transaction and agricultural investment, as well as contribute to create conditions for poor households to move away from agriculture into more remunerative activities.

**Helping households to accumulate livestock and encouraging livestock-related businesses (such as cow fattening) can improve poverty dynamics.** Livestock plays a critical factor in supporting poverty dynamics in Ethiopia: it is an asset that households liquidate in the face of negative shocks, and it is also often associated with strategies of poverty escape. Two types of interventions are especially critical: financial assistance to purchase livestock combined with business and rearing training and veterinary services. It should however be stressed that while livestock activities can support poverty dynamics in the short term, support to these activities does not constitute a long-term strategy for sustained poverty escapes: in fact, livestock is a contender with the already degraded and scarce agricultural land, while urbanisation is progressively eroding the remaining grazing land. Moreover, in the face of prolonged drought, helping households to understand when to de-stock is also important, as many end up keeping

their animals too long into a drought. In the medium to long term, however, focus should be on the creation of employment opportunities in the rural non-farm sector.

**Access to credit and financial inclusion should be expanded, and made more efficient and pro-poor. Especially critical is to increase the amount of capital available to MFIs to provide loans to farmers and microentrepreneurs.** Evidence suggests that livelihoods programs such as HABP have at times delivered loans to households which were not able to support one, while government MFIs and SOCAs suffer from lack of capital to distribute to their members. More financial resources should be made available to these institutions, and mechanisms implemented to better screen beneficiaries and their use of loans, to avoid borrowing that systematically worsens poverty dynamics. Given that households often borrow to fund their consumption needs or to respond to shock, the expansion of the PSNP, possibly accompanied by the introduction of savings and insurance schemes for less poor families, could reduce the use of risky borrowing practices and help people embark in trajectories out of poverty.

### *Household strategies and shock management*

**The fourth phase of the PSNP (2015-2020) envisions the program's gradual expansion to rural national coverage, seeking to reach 8.3 million chronically food insecure people and up to 1.7 million people who are transitory food insecure, to be identified through an early warning system. Such expansion of the program can greatly contribute to prevent transitory escapes and impoverishment in the country.** This holds not only for the current context of persistent drought and aggravating food insecurity, but more generally given the trend of increasing vulnerability of farming even in previously productive areas. In fact, in the latter cash and food transfers will be critical to prevent the erosion of the progress achieved in the last decade.

**Discontinuation of the program from year to year for lower-priority but still eligible families, as a strategy to face shortage of resources, should be avoided as much as possible.** In fact, such strategy can defeat the purpose of the program altogether, causing fluctuations in consumption which prevent the implementation of adequate coping strategies when shocks occur as well as strategies to improve and expand livelihoods.

**The PSNP has played and can play an important role in enhancing the ability of poor households to cope with shocks and smooth consumption in the face of negative circumstances, but it needs complementary interventions to also systematically enable participant's graduation.** Support to households needs to be tailored and continued, and include cash transfers as well as training, access to markets, business support and financial inclusion – more generally interventions which help tackle structural problems. In this sense, the replacement of the HABP with a livelihood component encompassing three different pathways (crop and livestock, off-farm income generation, and employment) is promising.

Overall, the innovations in program design introduced in PSNP 4 address many of the issues identified in this study and this bodes well for an improvement of poverty dynamics in the country, with more people reaching and possibly lifting themselves up and above the poverty line, and less sliding back into poverty. However, these innovations require considerably large resources and implementation and coordination capacities. These capacities vary in the country and will have to be strengthened for the fourth phase of the PSNP to reach its potential. Importantly, such efforts would contribute to balance the country's regional development.

**More widespread and substantial interventions in support of the rural non-farm sector in the most vulnerable and untransformed regions are essential to create opportunities for households to embark in strategies of poverty escapes. Where the non-farm sector is stagnant and farming is increasingly vulnerable, the interventions discussed above will at best prevent impoverishment, but will not be sufficient to bring people above and away from the poverty line.** This holds even

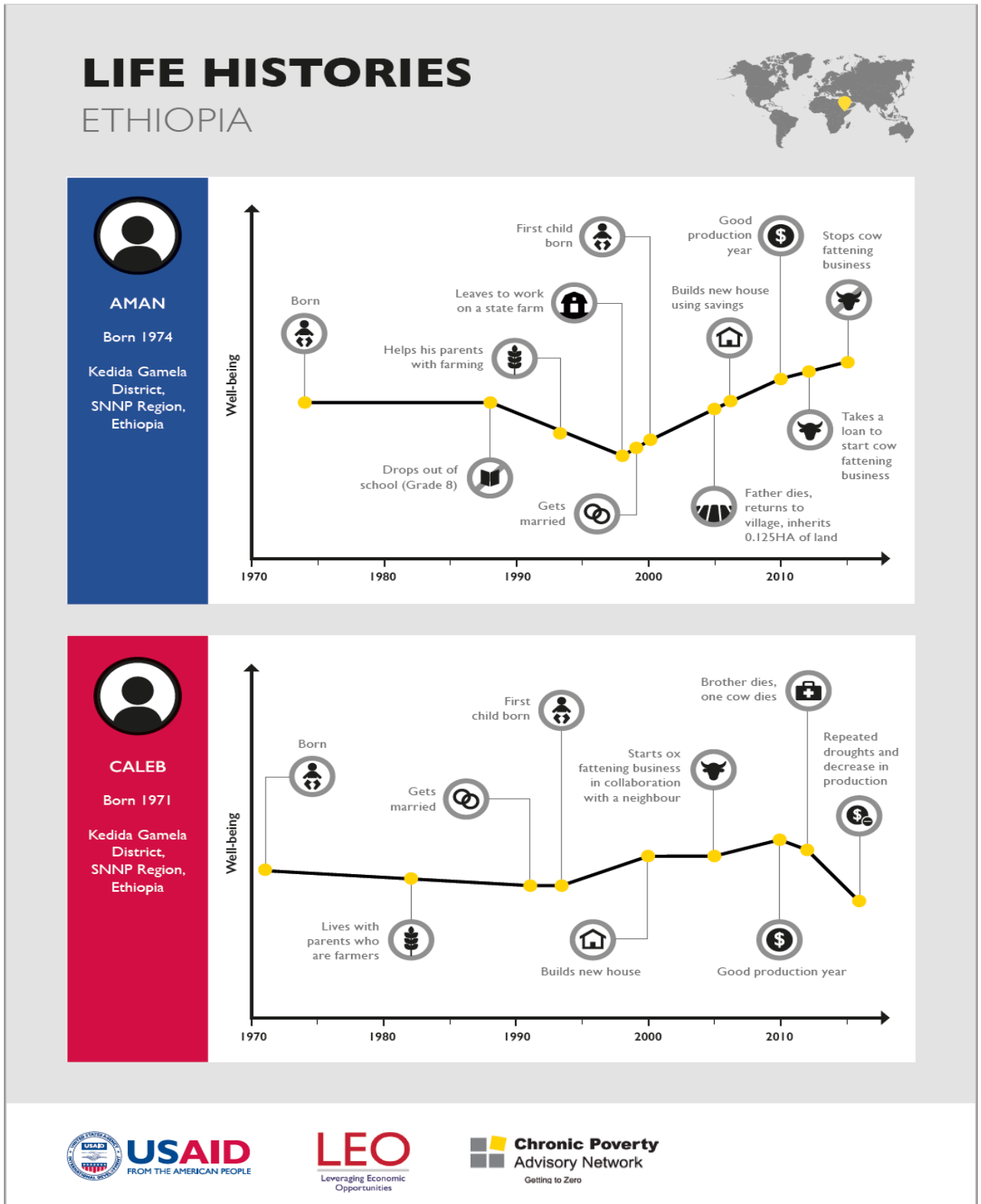
for the PSNP 4 livelihood pathways component. No single intervention alone can transform the rural non-farm sector – what is needed is a combination of the interventions discussed above with public investment and incentives to private activities, including support to SMEs. Despite Ethiopia’s agricultural-led industrialisation strategy, these types of interventions still escape many parts of the country.

**Support to migration should be part of the strategy to promote development of the rural non-farm sector and transformation:** evidence suggests that when work migration does happen as part of a well-thought strategy, it is a powerful driver of poverty escape. However, the poorest people do not migrate, or migrate for lack of alternatives, following routes which perpetuate poverty or are interrupted by negative events. Facilitating internal and circular migration for poor people could greatly contribute to advance the process of structural transformation in Ethiopia. Facilitating international migration would also be beneficial to poverty dynamics, especially in preventing impoverishment of near-poor families (more likely to be able to migrate abroad than the poor) through remittances.

**Given Ethiopia’s vulnerability context, early warning systems – accompanied by prompt emergency interventions – are essential to decrease rates of impoverishment and transitory escapes.** However, these systems may be inadequate or insufficient if increased vulnerability is caused not by sudden shocks but rather by a slow deterioration of conditions accompanied by unresolved structural problems (such as insecure land rights, ever-rising inflation, and lack of access to financial services). In fact, in a highly agricultural dependent country, with incomplete structural transformation, repeated crop failure and shocks to agricultural production and factors which challenge productivity can trigger system-wide processes of impoverishment and transitory poverty escapes even in contexts which had previously been characterised by growth and increased prosperity. When these processes occur, because the decrease in agricultural and economic activities is systemic, recovering the original position may be especially difficult and require larger interventions. This is the case in some Ethiopian regions where climate variability and exposure to climate change are compounded by limited structural change. In such contexts, the PSNP may not even be sufficient to prevent impoverishment and transitory escapes, let alone support poverty escapes.

**Overall, these considerations suggest that interventions to prevent transitory escapes and impoverishment should be connected to interventions in support of sustained escapes from poverty. The specific interventions may differ, but they all need to be designed taking into account the characteristics of the broader context, the positive and negative processes which are at play and the structural changes which are needed to activate drivers of poverty reduction.**

Figure 8: Life histories, Ethiopia



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# ANNEX A: SUMMARY STATISTICS

Table 1: Households who experienced a transitory escape

	Obs	1997	1999	2004	2009
<b>Household characteristics</b>					
Household size	122	6.75	6.52	5.90	6.15
Share of children (%)	122	1.08	0.39	0.38	0.36
Share of dependents (%)	122	1.20	0.44	0.44	0.45
Age (years)	122	46.58	48.81	50.70	53.89
Female head (%)	122	1.20	1.19	1.27	1.30
Household with at least one disabled members (%)	122	0.12	0.28	0.07	0.15
<b>Household resources</b>					
Per capita expenditure Ethiopian birr	122	30.00	67.91	87.76	29.97
Household receives assistance (%)	122	0.73	0.36	0.47	0.58
Value of assets (birr)	122	240.93	271.25	266.00	1389.64
Head with primary education (%)	122	0.09	0.09	0.08	0.11
Head with secondary education (%)	122	0.00	0.00	0.00	0.00
Livestock>median in 1997 (%)	122	0.26	0.24	0.24	0.24
Amount of cultivable land owned (acres)	122	2.48	1.01	2.30	7.61
<b>Activities and strategies</b>					
Household receives remittances (%)	122	0.02	0.03	0.02	0.11
Household receives loan (%)	122	0.53	0.59	0.53	0.66
Participation in IDDIR (%)	122	0.67	0.69	0.75	0.80
Participation in public works program (%)	122	0.26	0.25	0.61	0.28
Crops severely affected (%)	122	0.52	0.43	0.44	0.58
Number of shocks	122	5.39	3.24	2.55	2.55
Presence of shock (%)	122	0.99	0.52	0.90	0.90
Health expenditures per capita/month (birr)	122	5.40	3.71	6.98	20.03
Head is employed (%)	122	0.79	0.77	0.80	0.76
Employment in non-agriculture (%)	122	0.05	0.02	0.03	0.04
Total jobs in household	122	1.84	1.98	1.80	1.86

**Table 2: Impoverished households**

	Obs	1997	1999	2004	2009
<b>Household characteristics</b>					
Household size	212	5.04	5.36	5.62	6.08
Share of children (%)	212	1.13	0.39	0.40	0.39
Share of dependents (%)	212	1.25	0.46	0.47	0.47
Age (years)	212	44.27	48.21	49.25	51.04
Female head (%)	212	1.21	1.24	1.26	1.29
Household with at least one disabled members (%)	212	0.09	0.19	0.10	0.13
<b>Household resources</b>					
Per capita expenditure Ethiopian birr	212	111.48	91.60	76.28	31.06
Household receives assistance (%)	212	0.65	0.32	0.40	0.59
Value of assets (birr)	212	399.18	439.62	511.4801	1397.93
Head with primary education (%)	212	0.11	0.11	0.12	0.14
Head with secondary education (%)	212	0.00	0.00	0.00	0.00
Livestock>median in 1997 (%)	212	0.30	0.25	0.33	0.29
Amount of cultivable land owned (acres)	212	3.39	0.95	3.16	1.61
<b>Activities and strategies</b>					
Household receives remittances (%)	212	0.03	0.03	0.01	0.06
Household receives loan (%)	212	0.50	0.54	0.50	0.56
Participation in IDDIR (%)	212	0.69	0.69	0.72	0.77
Participation in public works program (%)	212	0.18	0.09	0.41	0.31
Crops severely affected (%)	212	0.44	0.39	0.38	0.36
Number of shocks	212	3.80	2.66	2.44	2.44
Presence of shock (%)	212	0.96	0.49	0.86	0.86
Health expenditures per capita/month (birr)	212	4.70	3.53	7.86	17.33
Head is employed (%)	212	0.77	0.76	0.80	0.79
Employment in non-agriculture (%)	212	0.06	0.02	0.03	0.05
Total jobs in household	212	1.54	1.77	1.73	1.67

**Table 3: Sustained escapers**

	Obs	1997	1999	2004	2009
<b>Household characteristics</b>					
Household size	51	6.39	6.14	5.24	4.57
Share of children (%)	51	0.96	0.35	0.33	0.24
Share of dependents (%)	51	1.13	0.40	0.43	0.39
Age (years)	51	50.82	50.86	53.12	55.39
Female head (%)	51	1.27	1.22	1.35	1.41
Household with at least one disabled members (%)	51	0.14	0.10	0.14	0.20
<b>Household resources</b>					
Per capita expenditure Ethiopian birr	51	32.64	80.41	118.47	79.58
Household receives assistance (%)	51	0.75	0.43	0.41	0.63
Value of assets (birr)	51	300.61	357.72	738.66	3689.87
Head with primary education (%)	51	0.14	0.14	0.14	0.10
Head with secondary education (%)	51	0.00	0.00	0.00	0.02
Livestock>median in 1997 (%)	51	0.35	0.37	0.39	0.37
Amount of cultivable land owned (acres)	51	3.74	1.37	2.16	2.01
<b>Activities and strategies</b>					
Household receives remittances (%)	51	0.02	0.04	0.02	0.14
Household receives loan (%)	51	0.53	0.47	0.53	0.61
Participation in IDDIR (%)	51	0.82	0.86	0.88	0.94
Participation in public works program (%)	51	0.18	0.18	0.55	0.14
Crops severely affected (%)	51	0.47	0.43	0.41	0.49
Number of shocks	51	4.25	2.67	2.51	2.51
Presence of shock (%)	51	0.98	0.47	0.94	0.94
Health expenditures per capita/month (birr)	51	8.55	2.26	10.09	61.15
Head is employed (%)	51	0.71	0.67	0.82	0.76
Employment in non-agriculture (%)	51	0.02	0.04	0.12	0.12
Total jobs in household	51	1.90	2.06	1.61	1.35

**Table 4: Poverty transitions by survey wave**

	<b>1997-1999</b>	<b>1999-2004</b>	<b>2004-2009</b>
<i>Stayed out of poverty</i>	387	370	282
<i>Slipped into poverty</i>	174	135	255
<i>Moved out of poverty</i>	118	167	93
<i>Remained in poverty</i>	155	162	204
<i>N (households)</i>	834	834	834

Note: Each cell states the number of households engaged in the transition

# ANNEX B: REGRESSION RESULTS

The majority of the empirical analysis employed in the Ethiopia transitory escape study relies on pooled multinomial regressions. This method of analysis allows us to remain methodologically consistent across country reports where in some cases we were faced with small sample sizes when exploring certain poverty trajectories of households, yet at the same time investigated a variety of predictors. It is true that pooling data does not remove endogenous characteristics specific to households, or allow us to investigate changes within households over time. Nevertheless, pooled models are increasingly popular today not only because of the “small N” problem which we face in this study but also because it allows investigation into variables that may not change over time, which we were also interested in examining in our study (Scott et al, 2016).

**Table 1: Drivers associated with poverty trajectories**

VARIABLES	Transitory escapes	Impoverishment
Log (per capita monthly expenditure)	0.624*** (0.0950)	0.981 (0.139)
Assistance	0.976 (0.201)	0.750 (0.141)
Remittance receipt	2.152 (1.038)	0.761 (0.339)
Loan	1.045 (0.210)	1.351 (0.249)
Participation in IDDIR	1.566 (0.535)	0.942 (0.288)
Participation in Public Works	1.029 (0.253)	0.808 (0.191)
Log (asset value)	0.787*** (0.0733)	0.976 (0.0839)
Household size	1.203*** (0.0649)	0.999 (0.0507)
Share of children	1.194 (0.761)	2.368 (1.361)
Share of dependents	0.870 (0.505)	0.868 (0.448)
Age of household head	1.028 (0.0424)	0.966 (0.0352)
Age-squared	1.000 (0.000391)	1.000 (0.000344)

Female head	0.474** (0.152)	0.458*** (0.135)
Head with primary education	0.551* (0.181)	0.786 (0.235)
Head with secondary education	2.47e-08 (9.29e-05)	0.812 (1.124)
Number of shocks	1.060 (0.0458)	1.063 (0.0429)
Presence of shock	0.824 (0.244)	0.885 (0.232)
Log (per capita monthly health expenditure)	1.010 (0.0774)	1.027 (0.0719)
Household with disabled member	1.339 (0.403)	1.442 (0.407)
Head is employed	0.850 (0.281)	0.764 (0.232)
Head is employed in non-farm activity	0.627 (0.278)	0.633 (0.245)
Number of jobs	1.068 (0.110)	1.120 (0.109)
Cultivable land area	1.000 (0.00799)	0.999 (0.00824)
Crops severely affected	0.981 (0.194)	0.721* (0.132)
Livestock > median in first year	0.420*** (0.115)	0.565** (0.143)
Woreda controls	Yes	Yes
Year controls	Yes	Yes
Constant	6.632e+08 (5.293e+11)	5.230e+08 (4.174e+11)
Observations	1,523	1,523

See form in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 2: Female headship interactions with household resources and activities**

Variable of interest:	Cultivable land area owned		Remittances received	
	Transitory escapes	Impoverishment	Transitory escapes	Impoverishment
Female head * Cultivable land owned	0.833 (0.0990)	0.728*** (0.0896)		
Female head * Remittance receipt			2.560 (2.308)	0.763 (0.647)
Cultivable land owned	1.201 (0.144)	1.375** (0.170)	1.001 (0.00802)	0.999 (0.00825)
Remittance receipt	2.294* (1.119)	0.811 (0.366)	0.566 (0.765)	1.079 (1.319)
Woreda controls	Yes	Yes	Yes	Yes
Year controls	Yes	Yes	Yes	Yes
Constant	2.960e+08 (1.975e+11)	1.865e+08 (1.244e+11)	6.689e+08 (5.340e+11)	5.311e+08 (4.240e+11)
Observations	1,540	1,540	1,540	1,540

seEform in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1



**Table 3: Female headship interactions with social assistance**

Variable of interest:	Public works participation		IDDIR participation	
	Transitory escapes	Impoverishment	Transitory escapes	Impoverishment
Female head * Public works	0.943 (0.432)	1.322 (0.567)		
Female head * IDDIR			0.915 (0.575)	0.601 (0.355)
Public works	1.038 (0.256)	0.820 (0.195)	1.016 (0.250)	0.811 (0.192)
IDDIR	1.586 (0.544)	0.961 (0.295)	1.557 (0.531)	0.942 (0.288)
Woreda controls	Yes	Yes	Yes	Yes
Year controls	Yes	Yes	Yes	Yes
Constant	4.316e+08 (2.687e+11)	3.849e+08 (2.396e+11)	2.260e+08 (1.114e+11)	1.165e+08 (5.742e+10)
Observations	1,540	1,540	1,540	1,540

See form in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 4: Drivers associated with improvements in expenditures for households under the poverty line (fixed effects regression)**

Outcome:	Log (PCE)
Variables	
Assistance	-0.0143 (0.0314)
Remittance receipt	-0.0391 (0.0718)
Loan	-0.00467 (0.0365)
Participation in IDDIR	0.0496 (0.0513)
Participation in Public Works	0.0427 (0.0390)
Log (asset value)	0.0488*** (0.0164)
Household size	-0.0409*** (0.00989)
Share of children	0.118 (0.173)
Share of dependents	-0.265 (0.163)
Age of household head	0.00980 (0.00975)
Age-squared	-9.09e-05 (9.52e-05)
Female head	-0.115 (0.0710)
Head with primary education	-0.000581 (0.0740)
Head with secondary education	0.108

	(0.130)
Number of shocks	-0.00648
	(0.00670)
Presence of shock	-0.00501
	(0.0522)
Log (per capita monthly health expenditure)	0.0338***
	(0.0117)
Household with disabled member	0.0754
	(0.0479)
Head is employed	-0.00137
	(0.0677)
Head is employed in non-farm activity	0.112
	(0.0908)
Number of jobs	-0.0289**
	(0.0145)
Cultivable land area	-0.000206
	(0.000214)
Crops severely affected	-0.0119
	(0.0291)
Livestock > median in first year	0.0501
	(0.0482)
Woreda controls	Yes
Year controls	Yes
Constant	3.547***
	(0.311)
Observations	1,732
R-squared	0.080
Number of UID	833

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

# ANNEX C: PARTICIPATORY AND VILLAGE-SPECIFIC DEFINITION OF WELLBEING AND HISTORICAL WEALTH RANKING

Participatory Definition of Well-being

## AZE DEBOA

Characteristics of rich households	Characteristics of so-so rich households (middle)	Characteristics of poor households	Characteristics of very poor households
<p>Has 2 oxen + milking cow(s) [cow not of the local variety, which is of less value]</p> <p>House with corrugated iron sheet as roof</p> <p>Does some trading activities</p> <p>Can feed family members 3 times a day</p> <p>Can directly purchase agricultural inputs rather than having to borrow first</p>	<p>Shares 1 ox with another family</p> <p>Has 1 cow of local variety</p> <p>Land = 0.25 ha</p> <p>Can educate some of the children</p> <p>Has house with corrugated iron sheet, but overall house is in worst conditions</p> <p>Can pay 50% of cost of agricultural inputs upfront</p> <p>Can feed family members 2-3 times a day</p>	<p>Land = 0.125 ha</p> <p>Looks for daily labour</p> <p>Gives some of the children to work for and live with other families</p> <p>Use the leaf of coffee instead of beans to make coffee</p> <p>Can pay 25% of agricultural inputs upfront</p> <p>Children go to school max to grade 10</p> <p>House is in bad conditions, often with ruined grass cover</p>	<p>Living in dilapidated house (grass roof is in poor conditions)</p> <p>Children suffer of malnutrition and are often stunted</p> <p>Main source of income is daily labour</p> <p>Have less than 1 tenth ha of land</p> <p>They have no oxen</p> <p>Usually engaged in food aid program (including PSNP)</p> <p>Their children are not educated and are often given to live with other families</p>

## TURUFE KETCHEME

Characteristics of rich households	Characteristics of so-so rich households (middle)	Characteristics of poor households	Characteristics of very poor households
<p>Has 1 pair of oxen and 1 or 2 milking cows and up to 5 sheep or goats</p> <p>Can get 20 to 30 quintals of production per year</p> <p>Has a cart with donkey</p> <p>House has corrugated iron roof</p> <p>Can send children to school up to high school (but with difficulties)</p> <p>Some may receive remittances, but it's quite rare</p>	<p>Has 1 ox</p> <p>Receives up to 10 quintals of production per year</p> <p>Can educate children up to grade 10</p> <p>Has house covered with grass roof</p> <p>Has 1 to 4 sheep/ goats</p>	<p>Has No oxen</p> <p>Has no capacity to farm own land and gives it to others to work and share production</p> <p>Gets 2 to 3 quintals of production per year out of the sharing arrangement</p> <p>Can educate children up to grade 5</p> <p>House is very dilapidates, not even grass cover</p> <p>Main source of income is sharecropping</p> <p>Nutrition is suffering</p>	<p>Landless, no other means of income apart from daily labour – or help from others, including begging</p> <p>No official house, may have a shed or accommodation given by kebele administration, or may live with others (in exchange of work)</p> <p>Stunted children and inadequate nutrition</p>

### Historical wealth ranking exercise: methodology

- 1) Meeting with kebele key informants (elders). Explain purpose of the visit and ask for help in identifying key past events (going back of about 15-20 years) in the life of the kebele and reference years to be used in the historical wealth ranking exercise.

Prepare a table/ spreadsheet listing key reference years and a word or two explaining (in Amharic) why that year was eventful.

ERHS SURVEY YEARS	KEBELLE REFERENCE YEAR	ASSOCIATED EVENT
1999		
2004		
2009		
	2015/TODAY	

- 2) Focus group to identify the wealth categories (which are relevant for Ethiopia/for the kebele)  
Use (and adapt if necessary) the following:

	Assets and Income	Education	Nutrition	Economic activities	Other (example: social relations)
A) Characteristics of rich households					
B) Characteristics of moderately rich households					
<b>POVERTY LINE</b>					
C) Characteristics of poor households					
D) Characteristics of very poor households					

- 3) Historical participatory wealth ranking. Start asking each household to assign their current situation to a particular wealth category. Each person can write her name on the post it and stick it to the relevant wealth category

	WEALTH CATEGORY			
YEAR	A	B	C	D
2016/NOW				

Then ask to repeat the exercise for each reference year identified

	WEALTH CATEGORY			
YEAR	A	B	C	D
2016/NOW				

# ANNEX D: METHODOLOGY FOR SELECTION OF SAMPLE WOREDAS AND HOUSEHOLD

## District/woreda selection

Criteria observed:

-woreda included in the Ethiopian Rural Household Survey - ERHS [these are: Atsbi, Subhassahssie, Ankober, Basso na Worana, Enemay, Bugna, Adaa, Kersa/Alemaya, Dodota, Shashemene, Cheha, Kedida Gamela, Bule, Boloso Sorie, Daramalo/Gardula];

-woreda which, according to the ERHS analysis, have a significant proportion of households on transitory escapes (PNP) and sustained escape (PNN) trajectories (specifically over 15% of households on those two trajectories combined);

-woreda included in the Productive Safety Net Project (PSNP);

-woreda included in USAID's Feeding the Future Program or other USAID-supported interventions;

-woreda hit by El Niño-induced drought crisis.

- ➔ Select three woredas (all of which included in the ERHS), of which at least one non-severely hit by El Niño, and at least two included in the PSNP and/or FtF.

Information on the ERHS woredas were obtained with the support of USAID Ethiopia Office (particularly the ALT Office – Assets and Livelihoods in Transition). Information included the presence of PSNP in the woreda, the presence of USAID-led intervention, the drought Hotspot level (as well as accessibility and security issues). These information, combined with the ERHS analysis, led to the following district shortlist:

- Bugna (in Ahmara region; Peasant Association: Shumsheha)
  - It is a DFAP-PSNSP woreda, also JEOP (so a USAID intervention woreda)
  - Hotspot 1 – severely affected by drought
  - 5 BK (transitory escapers) and 5 SE (sustained escape) households
- Ankober (Amhara region, Peasant Association: Dinki)
  - Hotspot 1
  - Non PSNSP and no other USAID programs
  - 15BK and 3 SE households
- Kedida Gamela (SNNPR, Peasant Association: Aze Deboa)
  - Government PSNP woreda; JEOP and ALT FtF also present
  - Hotspot 2
  - 5BK and 9 SE households
- Dodota (Oromia, Peasant Association Korodegaga)
  - it is a DFAP/PSNP woreda, also JEOP beneficiary and EGT-FtF present
  - Hotspot 2
  - 8BK AND 4SE households
- Boloso Sore (in SNNPR region, Peasant Association Gara Godo)
  - there is government implemented PSNP, but no other program
  - no info on Hotspot level

-28BK and 4 SE

- Shashemene (Oromia, Peasant Association Trirufe/Ketchema)
  - Non PSNP woreda but JEOP, EGT FtF and ALT FtF are present.
  - Hotspot 1
  - 10 BK and 6 SE.

After consultation with the contracted Ethiopian research consultant, the following woredas were selected: **Shashemene, Kedida Gamela and Ankober.**

The initial plan was to conduct fieldwork in these three woredas, under the assumption that the list of household identifiers from the ERHS would have been available. However, as this turned out not to be the case, it was necessary to spend more time in each woreda to select the household for the life history interviews. For this reason, eventually fieldwork was conducted in only two woredas: Shashemene (Oromia region) and Kedida Gamela (SNNPR region). The selected woredas did not include USAID/GRAD Program supported areas.

### **Household selection**

As mentioned above, it was not possible to get access to the list of household identifiers from the ERHS. However, information was available on the kebelles (also called Peasant Association, equivalent to a village) where the survey had been conducted in each woreda; in addition, village studies in the kebelles had been conducted in 1995 and 2005.

These kebelles were Turufe Ketcheme in Shashemene and Aze Deboa in Kedida Gamela. Households from these kebelles were selected following a methodology based on participatory wealth ranking.

### **Outcome: Key characteristics of villages visited for fieldwork**

The two kebelles (villages) visited for this research are indicative of the processes at play at the national level. **Turufe Ketcheme** is located about 12.5 km from the town of Shashemene, which is also the administrative capital of the woreda (also called Shashemene). It is situated in a plain area with fertile soil suitable for agriculture and it has never been a PSNP beneficiary in reason of its good production conditions. However, key informant interviews revealed that agricultural productivity has steadily declined in the last 20 years, largely because of poor rain and decline in soil fertility. The decline in production and living conditions described by the participants to the focus groups and life history interviews was associated with changes occurred in the previous five to ten years, and not exclusively with the 2015 drought. Unlike other villages in the woreda situated in lowlands near the Rift Valley, at the time of fieldwork (April 2016) Turufe Ketcheme was not considered a hotspot village (it was not covered by the 2016 Humanitarian Requirements Document) and therefore was not receiving relief food aid. Several USAID programs are active in the Shashemene woreda (including JEOP, EGT FtF and ALT FtF), but none was present in Turufe Ketcheme.

Aze Deboa is located in Kedida Gamela woreda, in close proximity to the woreda's administrative capital Durame, which is in turn not accessible through asphalted road. It is a highland kebele, with a favourable climate but very high levels of land erosion and a population density which had reached 300 people per square km already in 1983 (Dea et al., 1996). Because of these difficult conditions, it has been a PSNP recipient since 2005, but it was not receiving any additional food aid at the time of fieldwork. USAID is present in Kedida Gamela with two programs (JEOP and ALT FtF), but not in Aze Deboa. The change in the woreda's conditions described by the key informants was not fully negative (possibly because it was starting from very low levels of development), but the wealth ranking trajectories recorded through the focus groups suggested a decline in household's conditions following 2011-12 as a consequence of poor weather conditions and the effects of the most recent drought.