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RESILIENCE AND SUSTAINABLE POVERTY ESCAPES IN **RURAL KENYA**

Report

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There is a companion policy brief to this research report: Shepherd et al. (2018). Sustaining Poverty Escapes in Rural Kenya. Washington D.C.: USAID.

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EXECUTIVE SUMMARY

The focus of this report is on household poverty escapes and what explains why some households escape poverty and remain out of poverty (sustainable poverty escape), while other households escape poverty only to fall back into poverty (transitory poverty escape) and still other descend into poverty for the first time (impoverishment). Analysis of four rounds of the Tegemeo Agricultural Panel Survey over 2000-2010 for this case study reveals that transitory poverty escapes are a significant phenomenon in rural Kenya. This report combines analysis from four rounds of the panel survey with qualitative research approaches, in particular, key informant interviews, life histories, and participatory wealth ranking in two counties (Makueni and Vihiga) to further investigate the drivers of transitory poverty escapes or of re-impoverishment. 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. The report investigates the resources (land, livestock, and assets), attributes (household composition and education level), and activities (including jobs and engagement in non-farm activities) of households that enable them to escape poverty sustainably and minimize the likelihood of returning to living in poverty again.

Key findings from the report include those around the:

Household resource base:

- Accumulating land and livestock may no longer be a viable sustained escape pathway for the majority.
- Life histories show that livestock (both cattle and small ruminants) are an important 'store of value' for respondents in both Makueni and Vihiga counties but the context (particularly the cost of feed, security and an absence of veterinary services) pose restrictions on rearing livestock as a business;
- Land remains a valued asset, but households on all poverty trajectories are seeing reductions, over time, in the amount of land that they own. Small land sizes limit the role that land, and associated agricultural activities, can play in boosting wellbeing and sustaining poverty escapes.

Household attributes and capacities:

- Panel data analysis reveals that larger households are significantly more likely to experience a sustained escape rather than a transitory escape or to become impoverished. However, the composition of the household is also important and households with a higher dependency ratio are significantly more likely experience a transitory escape or become impoverished than to have a sustained escape from poverty;
- Sustained and transitory poverty escapes are closely related to life cycle factors. Periods of lower well-being include young families paying school fees for their children as well as households headed by older individuals;
- A surprising finding from the panel data analysis is that households where the head is more educated are significantly more likely to experience a transitory poverty escape than a sustained escape. One reason for this could be the focus on academic education and the weak linkages between this and skills required in the labor market;
- Panel data analysis reveals that female headed households are significantly more likely to experience a transitory escape than to have a sustained escape from poverty.

Household activities:

- Panel data analysis shows that households cultivating more acres of land with crops are more likely to become impoverished or to experience a transitory escape than a sustained escape. This may reflect the risks, related to both production and the market, associated with crop cultivation;
- Meanwhile, households with more agricultural assets and closer to piped water are significantly more likely to experience a sustained escape than a transitory escape suggesting that there are some necessary preconditions, beyond land, for engagement in crop agriculture to contribute to

sustained poverty escapes. This suggests that intensification may be more profitable than extensification;

- The panel data analysis also reveals that households that receive income from a business are significantly more likely to experience a transitory escape than a sustained escape. This is likely due to the inconsequential nature of many 'business' that households engage in (predominantly a small kiosk or petty trading) as well as the risks, particularly from crime, of engaging in business activities;
- The quantitative data does not reveal a significant relationship between salaried employment and sustained poverty escapes. This is likely due to the broad nature of salaried work (spanning both the formal and informal economies). The qualitative data moreover highlights the importance of households having a regular salary for driving poverty escapes, with a job in the formal sector, and its associated benefits, are the surest route for a sustained escape.

Household shocks:

- Rainfed agriculture is an inherently risky venture and this is likely to be the underlying reason why the panel data analysis shows that having more land under crops is significantly associated with transitory rather than sustained poverty escapes. While farmers are able to adopt certain inputs and techniques to minimize their exposure to weather-related shocks, widespread reports of less predictable rains mean that different strategies are likely to be required in the future;
- The predominant shock arising during the life history interviews are health shocks. These directly impact household wellbeing with the costs of treatment draining resources and also indirectly;
- Crime shocks as drivers of transitory escapes arose in both Makueni and Vihiga counties. While both male and female-headed households report to being victims of crimes there is some evidence that female-headed households are more exposed to this type of shock.

Household strategies for sustained poverty escapes:

- Engaging in agriculture (crops and livestock) can maintain a household's situation over time and lead to small improvements. However, agriculture on its own is insufficient to lead to sustained poverty escapes;
- Migration of men to urban centers for work, leaving behind their families, and the associated remittances is the most prevalent strategy for a sustained escape;
- Education, and the migration of adult children to urban centers are viewed as strategies to ensure well-being gains are protected in old-age. However, this can place families into intergenerational cycles of poverty.

Note: The report is accompanied by a separate policy brief (Shepherd et al., 2018) which presents policy implications for sustaining poverty escapes in rural Kenya that emerge from the analysis presented in this study.

INTRODUCTION

This report investigates the drivers of sustained and transitory escapes from poverty (see Box 1). It brings together:

- Quantitative analysis of the Tegemeo Agricultural Panel Survey. This report presents analysis from the 2000, 2004, 2007 and 2010 rounds of the panel survey; comprising 1,309 households. This panel survey is representative of rural, non-pastoralist households in Kenya, covering all major, eight agroecological zones (Suri et al., 2009). It is representative of about 85% of the rural Kenyan population and about 60% of the rural areas (land surface). This is because the data set excludes the north-eastern region which is sparsely populated but constitutes about 40% of the Kenyan land. The north-eastern region has much higher poverty rates than most of the rest of Kenya, and so our analysis is likely to understate the impact of the various drivers of poverty dynamics analysed.
- Insights from key informant interviews with development stakeholders in Nairobi, Makueni and Vihiga counties. The two counties were purposively sampled from the counties where the Tegemeo Agricultural Panel Survey was undertaken. Makueni county was chosen as a semi-arid county, while Vihiga county was selected as a densely populated, more agriculturally favorable county. These counties are also in USAID's Feed the Future Zone of Influence.
- Information from focus group discussions (FGDs) used to create historical participatory wealth ranking in four rural settlements in four wards in Makueni and Vihiga counties (two wards per county). The gender-disaggregated community FGDs provided a snapshot through which to better understand the meso-level drivers of mobility in wellbeing.
- Life history interviews[1] with 60 households that were identified from the panel data analysis (22 panel survey households were sampled)[2], during the participatory wealth ranking, or by local stakeholders as being on the different poverty trajectories.
- Wider literature on the extent and nature of poverty reduction and poverty dynamics in Kenya.

Box 1: Definitions of poverty trajectories used in the study

Impoverishment in this study refers to the process whereby a person or household that is non-poor slips into poverty.

Chronic poverty is long-term poverty that persists over many years or even a lifetime, and is often transmitted intergenerationally.

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.

Sustained poverty escapes in this work is viewed as a set of capacities enabling households to be resilient[3] and 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 a poverty escape that is transitory.

[1] All names of the qualitative respondents in this study have been changed to protect their identities.

[2] Only a selection of panel households were interviewed out of the 60 life histories in order to have a diverse group of households represented by: 1) the panel, as well as 2) those who at the time of the study had experienced a transitory or sustained escape from poverty according to local knowledgeable members and focus group discussions.

[3] USAID views resilience as the ability of people, households, communities, countries, and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth (USAID, 2017).

A MACRO-PERSPECTIVE ON POVERTY AND ECONOMIC GROWTH IN KENYA

Official poverty figures for Kenya[4] put poverty incidence at 36% in 2015/16; a reduction in poverty of 11 percentage points since 2005/06. According to the latest KIHBS, poverty rates were markedly higher in rural areas (40%) than in peri-urban (28%) and core-urban ones (29%), while in the remote, arid, sparsely populated north-eastern parts of the country (Turkana and Mandera), poverty rates have been close to 80 percent. The decline in poverty in the early 2000s followed a period of relatively strong economic growth; between 2000 and 2009 economic growth in the country averaged 3.7% (World Bank, 2012 NSNP Assessment).

Economic growth declined sharply in 2008 and 2009; the result of violence following the December 2007 presidential elections, of the global food, fuel, and financial crisis, and of the drought that occurred after a fourth consecutive year with no rain during the usual rainy season. Economic growth rebounded strongly in 2010, reaching 5.8% and since 2013 has remained above 5% per annum (Deloitte, 2017). Strong recent growth partly results from the fact that the Kenyan economy is not principally driven by agriculture, which has seen a relative decline in efficacy as the prime poverty exit strategy; instead, roughly 55% of its GDP comes from services, which have fared well (World Bank, 2013).

Major factors that remain to be overcome to further improve the translation of growth to poverty reduction particularly in rural Kenya include;

(i) the stagnation of agriculture (which accounts for over one quarter of the economy) and manufacturing. These two sectors have not created enough jobs for the growing working-age population. Rather most jobs created have been low-productivity service jobs in the informal economy (The World Bank Group, 2016). Moreover, inequality remains high (Gini of 47.4 according to the WB Country Strategy); and

(ii) the continued vulnerability of the population to shocks. Between 2004 and 2012, the number of people in need of emergency assistance never fell below 900,000 (World Bank, 2012, NSNP Assessment). These shocks include drought as well as insecurity; the latter a result of al Shabab insurgencies, but also because of land and ethnicity issues, and between farming and pastoralist communities in different parts of the country.

A MESO- AND MICRO-PERSPECTIVE: EVIDENCE ON DRIVERS OF POVERTY DESCENTS AND ESCAPES

The literature points to several meso- and micro-level drivers of poverty escapes and descents, which are discussed in the following section and elaborated on in observations from the focus group discussions presented thereafter.

(I) EVIDENCE FROM THE LITERATURE

As noted above, poverty reduction in Kenya has been geographically uneven and many reasons for escapes and descents differ across livelihood zones (Kristjanson et al., 2010). **Areas with land constraints and relatively low agricultural potential (including areas of low or variable rainfall and market isolation) are more likely to contain chronically poor households.** In particular, nearly 75% of chronically poor households between 1997 and 2007 resided in divisions where the median farm size is smaller than two acres (Burke & Jayne, 2010).

However, not all households in these areas characterized by 'spatial poverty traps' are chronically poor, indicating that **spatial factors are not wholly determinant of chronic poverty and there is little or no evidence of spatial factors playing a defining role in the ability to rise from poverty or fall into it** (Burke & Jayne, 2010). Other research, meanwhile, investigating asset accumulation, rather than income-poverty, reveals that reduced distance to infrastructural facilities

[4] From the 2005/06 Kenya Integrated Household Budget Survey (KIHBS). A 2015/16 KIHBS has also been collected but the findings are not currently publicly available.

(distance to motorable road, to nearest healthcare facility and nearest fertilizer seller) increase asset wealth (Muyanga et al., 2013).

Application of the Stages of Progress methodology[5] in other work reveals that, of the households that escaped poverty, a major driver of this was diversification of on-farm crop income, including through engaging in the production of cash crops as well as crop commercialization (shifting from producing crops solely for home consumption) (Kristjanson et al., 2004; Kristjanson et al., 2010). Households that escaped poverty were consistently able to produce and sell either surplus food crops (sorghum, maize, bananas) or cash crops (tea, sugarcane, rice) (Kristjanson et al., 2004; Kristjanson et al., 2010). Other, less prevalent, crop-related pathways of poverty escapes include increasing land under cultivation and crop intensification through improved land management practices, increased use of fertilizer and the introduction of new varieties (Kristjanson et al., 2010). However, investments in agriculture are not without their risks and previous analysis of the Tegemeo Agricultural Panel Survey finds that descenders were more likely to use fertilizer, had higher fertilizer application rates per acre cultivated, and to receive agricultural credit than the ascender households. Two possible reasons for this include that high fertilizer use rates are only beneficial if accompanied by use of other inputs, while continued land intensification beyond a certain threshold has been found to be unprofitable (Muyanga et al., 2013).

Particularly when engaging in agriculture as a pathway out of poverty, initial assets matter. **Households that rose out of poverty; receive relatively more land from their parents at the time the household was formed and acquired, and cultivated more land as a pathway of escape** (Muyanga et al., 2010). In contrast, land subdivision, resulting in small and uneconomic landholdings (<1ha., and in many cases, down to 1acre or less), and reduced soil fertility were important drivers of poverty descents in both the high potential and agropastoral zones (Kristjanson et al., 2010; Radeny et al., 2012). The shrinking size of landholdings has resulted from high population densities and the widespread practice of subdivision for sons as an inheritance. Because these households own such small parcels of land, many tend to no longer leave land fallow and over-cultivate, resulting in the mining of nutrients (and many of these areas are also prone to serious soil erosion) (Kristjanson et al., 2010).

In addition to crop diversification, on-farm diversification can also be through engaging in livestock rearing; whether poultry, small ruminants or cattle. **Diversification of income sources through livestock farming is a particularly important strategy for escaping poverty, especially in the high potential and pastoral zones** (Kristjanson et al., 2010). Livestock can play an important role through either livestock diversification – investing in new and/or different types of animals, or in shifting to production of new animal products or livestock commercialization, that is shifting from mostly home consumption to selling a significant share of the product (Kristjanson et al., 2010). Another mechanism through which livestock can promote escapes from poverty is through protecting consumption from shocks. This is particularly the case for small ruminants, which can be sold in the face of idiosyncratic shocks. Meanwhile, ownership neither of cattle nor small ruminants can protect household consumption in the face of covariate shocks, particularly drought, due to fluctuations in livestock prices during these periods (Christiaensen & Subbarao, 2005).

Across the country, off-farm income is important in supporting households to escape poverty (Kristjanson et al., 2010), and in particular, where this off-farm income diversifies household income away from sole reliance on farm income. Two different pathways are involved in diversification: first, business progress in small community-based enterprises, again in instances where the business is complemented by farm income; and second, through obtaining a job, most often in the informal sector (Kristjanson et al., 2010). In terms of employment; households where a member is involved in non-farm employment both consume more on average and tend to face fewer fluctuations in their income, especially in arid and semi-arid areas

[5] A participatory approach where people are asked to identify the key steps that households take in improving their situation over time.

— the effect being larger for those with skilled laborers than those with unskilled laborers (Christiaensen & Subbarao, 2005). Getting a job in the formal sector is an important reason for poverty escapes, though compared to working in the informal economy it accounts for fewer escapes from poverty, given the relatively limited number of formal sector jobs available (Kristjanson et al., 2010).

Getting a formal sector job is almost invariably associated with education, but relatively few educated people were lucky enough to get jobs, so education alone served in very few cases as a pathway out of poverty (Kristjanson et al., 2010). Lack of education though, is reported as being a contributory factor for households becoming poor (Kristjanson et al., 2004) and households with declining asset trajectories over time have poorly educated household heads while the fathers of those heads also have low levels of education (Muyanga et al., 2010).

Social factors that play an important role in escapes include help from friends and relatives, and other forms of social capital and connections, as measured by the length of time spent in the current location (Muyanga et al., 2013). Meanwhile, large household sizes and high dependency ratios are both associated with descents into poverty (Kristjanson et al., 2010; Radeny et al., 2012; Muyanga et al., 2013), while households with declining asset trajectories are also more likely to have turned from male- to female-headed due to male mortality or have two or more wives in the household (Muyanga et al., 2010). Alcohol consumption is also associated with structural downwards mobility (Radeny et al., 2012).

Shocks, and an inability of households to manage in the face of these, emerge as a key driver of descents into poverty. Crop-related losses, due to crop diseases, pests and long-term (not seasonal) declines in world prices of tea and coffee are implicated in poverty descents in high potential areas. In pastoral and agropastoral zones livestock -related losses, due to diseases and predators, are also an important driver of poverty descents (Kristjanson et al., 2010). Other types of shock including insecurity, theft of property, cattle rustling and tribal clashes are all also linked with descents into poverty (Kristjanson et al., 2010). **It is often a series of shocks, rather than a single shock, that result in structural downwards mobility; in other words, households may be able to cope in the face of one shock but are unable to maintain their situation in the face of several** (Radeny et al., 2012).

A major factor driving people into poverty across Kenya is poor health and heavy expenses related to health care (Kristjanson et al., 2010; Radeny et al., 2012). In many cases, poor health of one or several family members led to decreases in productivity or an inability to work. In addition, these households incurred high costs for health treatments, hospitalization expenses associated with long illnesses, and regular and/or particularly high use of medications (Kristjanson et al., 2010). Meanwhile, households successfully accumulating assets and rising out of poverty were more likely to have remained healthy and suffer no unexpected deaths and were less adversely affected by mortality than those households that didn't succeed in improving their situation (Muyanga et al., 2010).

(II) EVIDENCE FROM FOCUS GROUP DISCUSSIONS

FGDs, undertaken for this research in Makueni and Vihiga counties, with groups of women, men and knowledgeable people, add to this evidence base on the drivers of poverty escapes and descents between 2007-2011 and from 2011 to the present.

Table 1 presents the main factors identified in these FGDs. In general, people felt that, except for the positive effects stemming from the implementation of devolution following the passage of the 2010 Constitution and the negative effects of post-election violence in 2007, that the drivers of ascents and descents were reasonably similar across the two periods. The FGDs also revealed interesting differences in perceptions of drivers of change by men and women. The male FGD in Makueni focused solely on agricultural and land-related drivers, while in Vihiga they argued that lives had stagnated over the previous 10 years and as such there were no community-level drivers of

ascents and descents. Meanwhile, the female FGDs in both Makueni and Vihiga highlighted a range of drivers of changes including those related to the provision of education and health facilities.

Table I: Meso-level drivers of poverty mobility in the research wards

Drivers of poverty escapes since 2011	**Drivers of poverty descents since 2011**
The 2010 Constitution: · Administrative offices opened at the sub-county level. This brought services closer to people, and involved people more in their affairs. (Makueni, KP FGD and Female FGD; Vihiga KP FGD and Female FGD). Note- implementation of devolution started following the 2013 elections, when county governors and assemblies were first elected. Examples: · People are able to get services like birth certificates from chief's office- reducing time, energy and distance (Vihiga, Female FGD) · Devolved hospitals to sub-county level with adequate drugs and facilities; free treatment at dispensaries within villages (Makueni Female and KP FGD). Note- free primary healthcare and free maternal healthcare were commitments made by the president in the 2013 election – funding was increased to county health facilities for this. · Employment levels increased because of the new roles that came with devolution. · Improved road infrastructure – a county responsibility from 2013- making business easier and cheaper. Road construction employment programs for youth (Makueni Female FGD; Vihiga KP FGD). · Construction of water structures to address the shortages (Makueni Female and KP FGDs) Roll-out of national programs: · The last mile connectivity program saw many households get access to electricity thus reducing the burden of buying paraffin. Many schools and markets have electricity now (Makueni and Vihiga Female FGDs; Vihiga KP FGD) · Introduction of stipends for the elderly (Makueni and Vihiga Female FGDs) · Merry go rounds and table banking groups which have enabled women to save money and invest (Makueni and Vihiga Female FGDs)	Education-related factors: · Teachers strikes which affected traders, casual laborers and shopkeepers as teachers had no money to clear their bills. The strike affected the food budgets of most households as they had to look for means of catering for their children at home while the teachers were on strike. (Makueni and Vihiga, Female FGDs) · The general election has affected the education calendar especially the universities which means the parents must pay more for the children to complete their courses. Also bursaries cannot be disbursed due to the repeat of presidential elections (Makueni and Vihiga, Female FGD) · Student strikes which has resulted in wanton destruction of school facilities all over the country. The parents must bear the burden of replacing the burnt/destroyed facilities (Makueni, Female FGDs) · In the last year there has been an increase in school fees in most schools in the area. This is to hire more PTA teachers, buy books and pay school workers such as watchmen, which is a burden to the parents (Makueni, KP FGD) Health-care related factors: · Doctors and nurses strikes which has forced most of the people to seek treatment at private medical hospitals. This has drained their income and affected other activities in the households. Some of those who cannot afford private hospital charges have lost their lives (Makueni and Vihiga, Female FGDs) Shocks to food production and food prices: · Erratic rainfall led to low production and high food prices (3 times higher than normal), leading government to import and subsidize the prices of maize and maize flour. People lived by 'mercy of God'.

- A police station was established in the area (ward in Makueni). More police and administrative officers in the area brought about higher security and people started to seek justice (Makueni, Female FGD) (Makueni and Vihiga, KP FGDs)
- Reduced family sizes resulting from vigorous campaign by ministry of health and other organization on the importance of family planning (Makueni and Vihiga, Female FGDs)

Presence of non-government programs:

- Diversification through the TC banana. One Acre Fund improved yields per acre, farmers adopted new technologies and trained in soil conservation practices (Vihiga KP FGD).
- World Vision's Food for Work program provided beneficiaries with food as they worked on soil conservation structures in their farms. They also dug banana holes and looked for plantlets. Most of them are harvesting them to sell and use as food (Makueni, Female FGD)

(Makueni, Female FGD and KP) Recently there has been a rice in food prices (Vihiga KP FGD)

- Hailstones in 2017 led to low food production. Drought in 2016 affected people and livestock. Fall army worms6 in 2017 damaged maize fields (Vihiga, KP and Female FGDs).
- Political uncertainties have scared investors and businesses leading to high food prices. Supplies are now low compared to the demand (Vihiga, Female FGD)

Over-population and decreasing land sizes:

- Fragmentation on inheritance can lead to a family having many too small plots dispersed over an area, too far apart to be viable. Most people own between 0.5 and 2 acres (Makueni KP and Male FGDs).

Drivers of poverty escapes, 2007-2011 (not mentioned during the later period)	**Drivers of poverty descents, 2007-2011 (not mentioned during the later period)**
Increasing access to technology: · Availability and expansion of M-Pesa facilities which enabled rural folk to receive remittances in rural areas unlike before where they relied on postal facilities, friends and relatives to remit the money. Electronic devices are more common and allow information to be shared quickly (Makueni, Female FGD; Vihiga KP FGD) Education-related factors: · Bursaries to students in vulnerable households increased enrolment in local secondary schools and universities and reduced drop-outs (Makueni, Female FGD and Vihiga KP FGD)	Post-election violence (2007-08): · People lost investments after businesses were burned. Farms forcefully taken away, people displaced. Some breadwinners lost lives (Vihiga, Female and KP FGDs) · Post-election violence affected workers in Nairobi and remittances to rural areas. Others lost jobs (Makueni, KP Female FGDs) Cash crop production: · Demise of coffee farming as government neglected coffee cooperatives and collapse of factories through mismanagement (Makueni and Vihiga, KP FGDs). · Collapse of market for French beans in 2007 due to pesticide traces (Makueni, Male FGD)

[6] A new pest spreading rapidly in Africa, indigenous to north and south American, highly destructive of maize.

THE EXTENT OF DIFFERENT POVERTY TRAJECTORIES AND TRANSITORY POVERTY ESCAPES:

This section introduces analysis of four rounds of the Tegemeo Agricultural Panel Survey, from 2000, 2004, 2007 and 2010 to investigate poverty dynamics in non-pastoral rural areas of Kenya. Figure 1 presents the poverty trajectories of households during this period.

Figure 1: Poverty trajectories in rural Kenya 2000-2010[7]

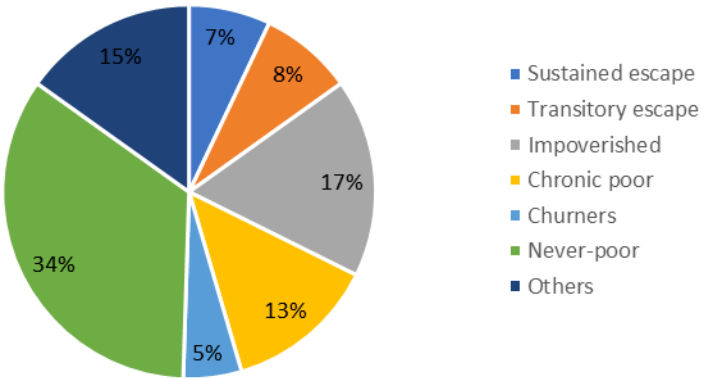

Figure 1 shows how just under two-thirds of the rural population in non-pastoral areas of Kenya were poor at some point between 2000 and 2010, while 13% of the population was poor across the ten year period. Roughly the same proportion of households escaped poverty and sustained that escape over time as escaped poverty and fell back into it during the period (7% and 8% respectively), while 17% of the population was living out of poverty in either 2000 or 2004 and then remained living in poverty in 2007 and 2010; they became impoverished.

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 investigates the extent to which various factors help promote or constrain the ability of households to escape poverty sustainably. These factors are grouped into those relating to: (i) household resource base; (ii) household attributes and capacities; (iii) engagement in certain activities; (iv) shocks; and (v) household strategies. The investigation relies on mixed methods research, comprising:

- Analysis of four waves of the Tegemeo Agricultural Panel Survey (see Box 2 for the empirical approach employed in this paper, and Annex A for the regression results);
- Life histories with 60 rural households on different poverty trajectories in Makueni and Vihiga counties.

Box II: Approach to empirical analysis

This study employs multinomial logistic regressions to investigate determinants of transitory poverty escapes and impoverishment. Our equation is similar to that employed in Scott et al. (2016), where:

$$Pr(Poverty\ Trajectory_{i,t} = 1 \mid \beta,\ v_{i,t}) = F\ (\beta_0 + \beta_1 Head_{i,t} + \beta_2 Zone_{i,t} + \beta_3 H_{i,t})$$

for v_i = $(1,\ Head_i,\ Province_i, H_i)$

where $Poverty\ Trajectory_i$ is probability of the household i experiencing a transitory poverty escape, becoming impoverished, or sustaining a poverty escape,

[7] Churners are households on PNPN or NPNP trajectories

$Head$ is a vector of variables defining the characteristics of the household head,
$Zone$ is a set of dummy variables stating in which zone the household resides and whether it is located in an urban or rural area, and
H is a vector of household specific controls.

In our equations, the base outcome is whether a household has experienced a sustained poverty escape. 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 poverty escape or impoverishment) relative to the base reference group of sustained escapers. For definitions of variables and summary statistics, please see the Annex.

The findings in this section draw on a combination of quantitative and/or qualitative research analysis, as specified in the text. As noted earlier, caution is needed in generalizability to rural Kenya as a whole, as pastoralist households are not covered in the panel survey and so are excluded from this analysis. In addition, in several instances the quantitative and qualitative information provided insights that could not be easily reconciled. Box 3, below, provides more information about why this may be the case and how the analysis attempted to overcome this.

Box III: Differences in the qualitative and quantitative data

There are two key factors that limit the comparability of the qualitative and quantitative data:

1. T**ime period covered:** The panel data covers the period 2000-2010. Thus, households that were sampled from the panel data for life history interviews were sampled on the basis of their poverty trajectory over that period. Meanwhile, households sampled from FGDs and KIIs were selected on the basis of their poverty trajectory over a more recent period; 2007-2011-2017.

2. **How poverty is defined:** The panel data analysis uses an income-based definition of poverty. As noted earlier, the national poverty line gives an estimate of poverty, which is higher than that using the international $1.90 poverty line. The qualitative research uses a well-being ranking to assign households to one of five categories based on asset ownership and other locally-understood definitions of poverty (e.g. meals per day, ability to send children to school).

Following data-collection, the qualitative data analysis assigned two poverty trajectories to the life histories. The first was the trajectory that the household was selected for (through either the panel data analysis or the FGDs/ KIIs). The second trajectory, constructed following the collection of the life history, was a biographical trajectory. This assigned households to either P or N at three different periods of time relating to their predominant situation; (i) at their first job (male) and getting married (female) or both; (ii) when there are young children in the household; and (iii) for established households. Given the importance of life cycle effects, which emerged during life history analysis (partly a reflection of the ageing of panel households), households that are post-production age were also identified, and a + was assigned as a marker to distinguish these households.

HOUSEHOLD RESOURCE BASE

Key messages

- **Accumulating land and livestock may no longer be a viable sustained escape pathway for the majority according to analysis of life history interviews.**
- **Life histories show that livestock (both cattle and small ruminants) are an important 'store of value' for respondents in both Makueni and Vihiga counties but the context (particularly the cost of feed, security and an absence of veterinary services) pose restrictions on rearing livestock as a business;**

- **Land remains a valued asset, but households on all poverty trajectories are seeing reductions, over time, in the amount of land that they own. According to the fieldwork, small land sizes limit the role that land, and associated agricultural activities, can play in boosting wellbeing and sustaining poverty escapes.**

LIVESTOCK

The sale of livestock and poultry remains to this day as a source of easily converted ready cash. The fieldwork provides insights on the importance of livestock. Unlike crops where the investment can only be realized at harvest and the price fluctuates seasonally, livestock and poultry can be sold throughout the year (though seasonal price variations remain, particularly in the face of covariant shocks). Interviewees point to five main means through which livestock rearing supports their livelihoods;

- Home consumption of milk and eggs;
- Use of manure to support agricultural production;
- Sales of milk and eggs;
- Sales of livestock to meet predictable expenditures;
- Using livestock as a 'store of value' to be sold in the case of unexpected shocks

The two main items that life history respondents reported using the proceeds from the sale of livestock or livestock products was for school fees (particularly in the case of sales of goats and cattle) and for food. Across the households interviewed, livestock rearing is undertaken by both women and men and is reported as being a particularly important asset for female-headed households. Several respondents acquired cattle through share-rearing for friends or neighbors, indicating the importance of social capital. Mwikaki[8], for instance, says that she, "was rewarded with a calf by a relative after keeping his cow for him for more than four years". The calf that she acquired has since produced two more cows and this has contributed to improvements in her well-being through selling the milk. She also grows sufficient food and now feels that she can survive without much support from her children. Musuva,[9] below, describes how they use livestock to improve the situation of their household;

> *Both him and his wife are involved in livestock rearing to get income and keep themselves busy. They have one cow, goats-2, chicken-6 and pigeon-7. He bought the livestock by himself, then started breeding them. The profitability of livestock rearing is driven by selling some livestock and its products to acquire money to boost his business and pay school fees for the children.*

However, despite the importance of livestock rearing to household livelihoods, **no households report recently expanding their cattle numbers to more than five animals or investing in livestock as a business.** This is due to; (i) the need to sell livestock to meet regular needs; (ii) the risks of livestock rearing including to diseases in the absence of effectively functioning, affordable veterinary services as well as to theft and attacks from dogs; and (iii) constraints on livestock rearing posed by limited access to grazing land and the expense of livestock feed.

LAND

The nature of the strategy that accepted the dominant driver of accumulation has changed over time. From the time of *Uhuru* until recent decades, life histories describe how the main driver was the accumulation of agricultural land. Opportunities for land ownership opened up at the end of the colonial period. Large tracts of land that formerly had been owned by white farmers became available. Some of these were initially run as cooperatives by Kenyans, but eventually were broken up into individual farms. Other swaths of undeveloped land were cleared and new farming areas

[8] Sampled from the FGD as being PNN. Biographical trajectory PNP+
[9] Sampled from the panel survey as being on a PNP trajectory. Biographical trajectory PPP.

established. During this period, much land by tradition was held communally. All of these factors helped establish a general strategic approach to poverty exits that relied on agricultural production. The situation changed in the late 1990s when the country was surveyed and formal individual title to land became established. A route out of poverty was exploiting more land, either through renting plots and/or accumulating land by purchase and/or consolidating land holdings at the time of inheritance (including land grabbing from less powerful relations and neighbors, who were often female-headed households). **The accumulation of land over one's lifetime was a viable strategy for moving out of poverty and providing security in old age.**

Although Vihiga and Makueni were not part of the white highlands where land was redistributed, qualitative research reveals how land continues to be considered an important asset by respondents in both districts. Malaa[10], in Makueni, highlights how important her husband considers increasing the amount of land that they own;

> *"I remember when we were buying this plot he said to me; "don't let someone else buy that land, if you don't have enough money you can sell a cow and top-up""*

Indeed, land is still seen through the lens of the 'African pension'; a resource families buy to provide support for themselves in old age and to pass-on as an asset to future generations. This is explained by Salome[11] in Vihiga, who also receives a cash pension;

> *"When I got the money at retirement I bought the piece of land because I didn't want my children to suffer, this one here is small… I think it's an acre plus or minus a few points… I thought to myself, in my old age, my children will go live there (in the piece of land I bought) grow maize and bring me some to eat. I was not left with any money apart from the pension that comes per month".*

Ingasia[12] in Vihiga district describes a similar situation;

> *"When my husband retired, he bought an additional 1.5 acres of land and has sub-divided the land among our four sons. They continue growing crops such as ground nuts, sugarcane for chewing, bananas and arrow roots. We planted tea shrubs and have 1 cow with 2 calves and a few goats."*

This is even the case where the children are not necessarily interested in farming, as described by Nduku[13] in Makueni, who has 11 children and whose husband has died (they had 5 acres of land);

> *"Nowadays children hate going to the farm. My husband already divided the land to the boys. But also left land aside to the girls who will not have settled or gotten married. The land is left bare all the time. None of her children wants to do farming and they have never thought of leasing it out".*

However, land is not always purchased. Only rarely in the fieldwork was agricultural land rented in, indicating that land markets are not working as well as they might. Instead, there are many stories of people lending land, even substantial acreages, to relatives who need it – In Makueni this was a common pattern among sustained escapers, and this occurred even in Vihiga with its much smaller landholdings. Where a husband dies, among sustained escapers, in-laws in Makueni would frequently allow the widow to continue farming the family land, which was seen by the widows concerned as generous – it was a departure from the prevalent social norms. In Vihiga, by contrast, there were cases where this was not allowed. These are further examples of the importance of social relationships in helping people escape and remain out of poverty. The chronically poor in the fieldwork, however, lack this kind of social capital, and face reduced opportunities as a result. Combined with limited savings and productive capital, this was enough to keep people poor.

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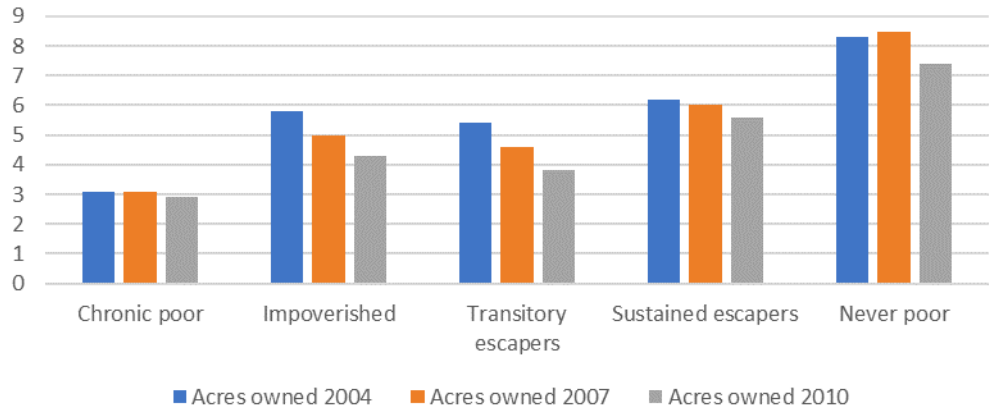
[10] Sampled from the panel survey as being on a PNP trajectory. Biographical trajectory PNN.
[11] Sampled from the female FGD as PNN. Biographical trajectory PNN+
[12] Sampled from the panel data as PNN. Biographical trajectory PNN+
[13] Sampled from the female FGD as PPP. Biographical trajectory PPN+

However, the accumulation of agricultural land is no longer the dominant pathway for sustained poverty escapes. Relatedly, regression results reveal that an increase in the acres of crop is associated with a higher risk of transitory poverty escape, which is discussed in more detailed in the subsequent section on household activities. Nora's situation highlights an important process that emerges from both the qualitative and qualitative research; land division and fragmentation of land holdings on inheritance. Figure 2 shows how the amount of land owned by households across all trajectories has declined over the years of the panel survey, with the difference between 2004 and 2010 amongst the impoverished and transitory poverty escapers statistically significant at conventional levels. The qualitative research reveals the importance of inheritance practices, in the context of population growth, in driving this trend.

Figure 2: Land ownership among households in the panel survey



Inheritance practices, combined with increasing land scarcity in the face of population growth seem to be contributing to land disputes and land grabbing. Seven qualitative respondents, across Makueni and Vihiga counties, reported land disputes as a contributor to either a stagnation or a decline in their living standards. This includes with neighbors and with other family members. In one instance, in Makueni, a land dispute with neighbors had been going through the courts for over 30 years; draining financial resources. Meanwhile, for Musumbi[14] in Makueni the dispute was with his family after his father died before subdividing some of his land. He and his brothers fought many court cases that emptied his bank account and the case remains unresolved. For Andeso[15] in Vihiga, the dispute was following the period of sickness and subsequent death of her husband in 2009 when her brother-in-law took the land. She has filed a case in the courts but it is pending. Buyanzi, in a similar situation to Andeso, was able to go to the chief to get her land back.

HOUSEHOLD ATTRIBUTES AND CAPACITIES: 'FAMILY LIFE CYCLES'

Key messages

- **Panel data analysis reveals that larger households are significantly more likely to experience a sustained escape rather than a transitory escape or to become impoverished. However, the composition of the household is also important and households with a higher dependency ratio are significantly more likely experience a transitory escape or become impoverished than to have a sustained escape from poverty;**
- **Sustained and transitory poverty escapes are closely related to life cycle factors. Periods of lower well-being include young families paying school fees for their children as well as households headed by older individuals;**
- **A surprising finding from the panel data analysis is that households where the head is more educated are significantly more likely to experience an escape from poverty**

[14] Sampled from the panel data as being on a PNN trajectory. Biographical trajectory NNP+
[15] Sampled from the female FGD. Biographical trajectory PNP.

that is transitory rather than sustained. A reason could be the focus on academic education and weak linkages between this and skills required in the labor market;

- **Panel data analysis reveals that female headed households are significantly more likely to experience an escape from poverty that is transitory rather than sustained.**

THE COSTS OF EDUCATING CHILDREN

Household composition emerges as an important contributor of sustained poverty escapes. The point of formation of a new household is when a couple joins together, either by marriage and/or when the female partner becomes pregnant. Children quickly appear on the scene and begin their schooling. Children can eventually help to boost household well-being through contributing to household labor supply. However, throughout the life history interviews **the costs of education, and particularly secondary education with its associated fees, emerged as an important constraint to households improving their situation and as a contributor to transitory poverty escapes**, as explained by Tabitha[16];

> *"When I started married life, my husband owned only one acre of land, had three cows, five goats and 15 indigenous chickens. I'm struggling with life. For the last two years I have been renting 1 acre for 3,000 Shillings for two seasons. The surplus maize I harvest goes to school to offset school fees."*

The crucial transition from primary to secondary education is a point where a child's exit from education due to fees is common. For many of those in remote rural areas, providing a better quality secondary education means the children must board – creating a drastic rise in costs if the family takes this option. While primary school fees are no longer charged since 2003 and the Kenyan government is mooting the possibility of secondary fees also being covered, other costs remain, such as the above-mentioned boarding, the cost of books and other school material, uniforms etc. As time passes and the older children (sometimes prematurely) leave education and begin work, they often contribute to the educational costs of their younger siblings, another aspect of the contribution collaborative social relationships make to escapes from poverty. While this help can be crucial for their younger siblings' educational success, it also introduces the prospect of an intergenerational transmission of poverty through burdening the older siblings who will be trying to form their own household[17]. Albanas[18] describes this situation, though he had sufficient resources to be able to sustain his poverty escape despite these obligations;

> *When I was working, my parents gave me the responsibility of getting my younger siblings to form one… I would fully support each of them when being enrolled in form one, then my parents would take over after that. There were four behind me. My dad died in 2001 and my mom died in 2015. I cannot give up; that is what keeps me going.*

Many interviewees described the effects of being released from paying school fees – 'this was when our lives started to improve' being a frequent refrain from the grandparents, parents or siblings supporting children through school.

EDUCATION AND THE LABOUR MARKET

The panel data analysis reveals, for the current generation of households, that an educated household head has not increased the chances of that household experiencing a sustained poverty escape. Indeed, households where the head has completed primary education are significantly less likely to experience a sustained escape than a transitory escape. Descriptively, secondary education rates are higher amongst heads of households, which have

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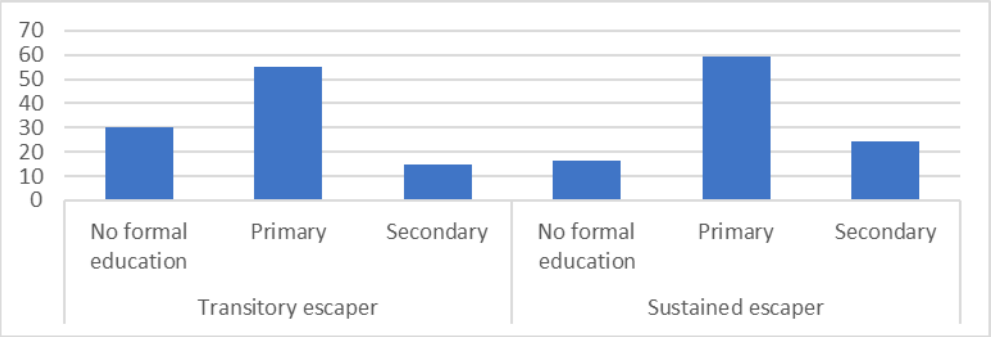
[16] Sampled from the panel data as PNP. Biographical trajectory PPP.

[17] One interviewee was aware of this possibility for his working children and explicitly had told them not to send back money because he did not want to burden their setting up their own households.

[18] Sampled from the panel data as PNN. Biographical trajectory PNN.

escaped poverty sustainably (Figure III). Moreover, the 2015/6 KIHBS found a positive relationship between welfare and years of education.

Figure 3: Education completion amongst household heads in the panel survey



Together with the regression results, this finding indicates that secondary education on its own may not be particularly useful in enabling a sustained escape out of poverty specifically when controlling for other factors that could promote poverty escapes. Possible explanations for this include: households may have misapplied resources to academic education when technical training may have been a better investment, or factors around the low quality of education combined with the opportunity costs of going to school and weak links between the formal academic education system and the labor market.

While education may, in some instances, be an important precondition to access a job, life histories point also to the **role of social connections and networks in securing decent work**. Igina[19], whose six sons all finished secondary school describes how she got her son a job at a factory making soda bottle tops: *"When my husband died, I went to his boss to seek help. He asked how he could help; I requested him to employ my child and one of sons got a job in that company… that helped us a lot…"*

The burden of educational expenses upon families is exacerbated by the tendency of rural Kenyans to value academic education over technical training as identified in many life histories, even though the employment prospects for a person with a technical skill can surpass those of the routinely educated. Technical training can be seen as a second choice after the academic route has closed. Similarly, due to the lack of employment opportunities in rural areas for the educated, parents who lack education themselves have only teachers as the model for an educated person's employment goal. Eventually, however, often helped by the support and remittances of elder children, the burden of educational costs eases and the financial drag on families fades.

DECLINING WELL-BEING IN OLD AGE:

The latter stage of the family 'life cycle', the 'post-production age', is one of decline, as seen in the regression results whereby an increase in age is associated with an increased risk of transitory relative to a sustained escape from poverty. Moreover, it is also a factor in chronic poverty in the regression results, with the onset of old age deepening one's entrapment in chronic poverty. In both situations, the ability of the couple to earn at their previous level dwindles with decreased physical vigor. The tradition of the 'African pension' -- accumulating land to farm when old -- only works up until one becomes too feeble to farm. This decline is accelerated when one of the partners dies and the surviving partner becomes dependent upon their children. The household either persists as a shadow of its former self or is subsumed within one of the children's households. The surviving partner, usually the grandmother, can still play a role within the family,

[19] Sampled from the panel data. Biographical trajectory PNN+

providing childcare and helping with domestic chores. This situation is exacerbated by a lack of universal old age pension. Makungu [20]in Vihiga county describes her current situation:

> *"Both husband and son were very important in my life and they used to help me a lot. After their untimely deaths, I developed high blood pressure and now I depend very much on my son in Nairobi and my daughters for medication to survive. Besides that, I normally sell Napier grass and bananas to support myself. I tell you now I'm so lonely to such an extent I had to request my son to give me one of his children to keep me company [Saa hii sina ubongo kabisa]. I used to be a member of merry go round group but I had to drop out because I cannot afford the contributions."*

These findings are confirmed by the 2015/6 KIHBS: 'Households headed by older persons (60 years and above) recorded a higher poverty rate of 36.3 per cent and also contributed a higher [than average] share of the poor (22%) (KNBS, 2018). In the life history interviews undertaken for our analysis, older persons who managed to avoid falling back into poverty were frequently supported by remittances from migrant children, usually in Nairobi. This is another indicator of the importance of social relationships in sustaining escapes from poverty.

A NOTE ON FEMALE-HEADED HOUSEHOLDS

Another component of household composition that plays an important role in transitory poverty escapes is the gender of the household head, **with female headed households, according to the panel data analysis, being significantly more likely to experience a transitory rather than a sustained poverty escape**. The qualitative research highlights how this is due both to the loss of an income-earner and also the greater exposure of female-headed households to crime shocks (more details below), as well as to land grabbing from their husband's relatives; diminishing their resources.

HOUSEHOLD ACTIVITIES

Key messages

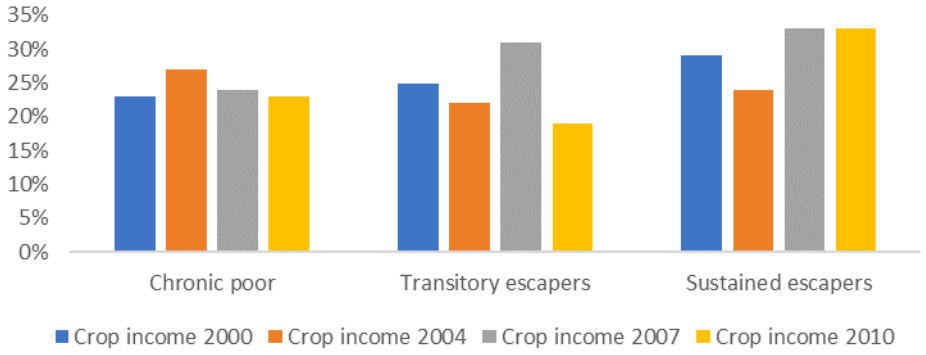
- **Panel data analysis shows that households cultivating more acres of land with crops are more likely to become impoverished or to experience a transitory escape than a sustained escape. This may reflect the risks, related to production and markets, associated with crop cultivation;**
- **Meanwhile, households with more agricultural assets and closer to piped water are more likely to experience a sustained than a transitory escape in regression results, suggesting that there are some necessary preconditions, beyond land, for engagement in crop agriculture to contribute to sustained poverty escapes. The fieldwork suggests that intensification may be more profitable than extensification;**
- **The panel data analysis also reveals that households that receive income from a business are more likely to experience a transitory escape than a sustained escape. This is likely due to the inconsequential nature of many 'business' that households engage in (predominantly a small kiosk or petty trading) as well as the significant risks of engaging in small business activities;**
- **The quantitative data does not reveal a significant relationship between salaried employment and sustained poverty escapes. This is likely due to the broad nature of salaried work (spanning both the formal and informal economies). The qualitative data moreover highlights the importance of households having a regular salary for driving poverty escapes, with a job in the formal sector, and its associated benefits, are the surest route for a sustained escape.**

[20] Sampled from the panel data as PNN. Biographical trajectory NNP+

THE DECLINE OF THE SHAMBA AS THE PREEMINENT SOURCES OF RURAL INCOME

As discussed above, **rising population and the traditional of sub-dividing land among all male heirs now has created a land shortage and led to the fading of this strategy as a viable means of poverty exit**. The more intensive farming of progressively smaller plots puts stress on the land as its quality can fall. Relying solely on farming brings the danger of progressive pauperization. The qualitative research reveals limited use of improved agricultural inputs or of mechanized agriculture, with respondents noting that the costs of commercial seeds and artificial fertilizer have increased over time. This, combined with small land parcels, means that many households in the qualitative research were producing food for home consumption, with any extra being sold for school fees or to purchase other types of food. This is described by Ajiza[21] in Vihiga who owns and farms one acre of land with her family. However, she points out that the crops (maize and beans) that she grows are only sufficient for consumption by herself and her four grandchildren. Meanwhile Andeso[22] has a small shamba near home where she plants maize and beans and divides what she harvested in two portions, retaining one portion and taking the other to school to offset school fees.

Figure 4: Crop income as a proportion of household income by poverty trajectory



The finding of limited sales of agricultural products by chronically poor, sustained and transitory escaping households is supported by descriptive statistics from the quantitative research (see Figure 4). Limited sales of crops means that many smallholders have to purchase much of their food on the market, and can then be caught between rising food prices and rising input costs, leading to a negative spiral. Though income from crops in 2010 comprised between 19 and 33 percent of household income, it is also the case that amongst the chronic poor and transitory escapers, the share of crop income has been decreasing between 2007 and 2010. Moreover, **of the three trajectories, only the sustained escapers are keeping their share of income up, but represent just 7% of the sample.**

The panel data analysis also shows that even where households are cultivating more land with crops, that this is associated with transitory escapes rather than sustained escapes. This is likely to reflect the fragility of investments in crop agriculture, particularly in instances of rainfed agriculture as well as low and variable market prices for crops. The panel data analysis meanwhile, reveals the importance of agricultural assets and piped water in sustaining escapes from poverty, suggesting that agriculture requires certain capital investments in order for it to be able to support sustained escapes. Life histories in Makueni highlight the importance of water tanks and irrigation, in particular. This is described below;

> *Through individual efforts, three families came together and laid pipes for irrigation. This was in 2002. It was this irrigation that helped uplift the families' economic wellbeing; they were able to sell*

[21] Sampled in the KII as being PNN. Biographical trajectory PPN+
[22] Sampled from the FGD. Biographical trajectory PNP.

horticultural produce from this irrigation which earned the household good money to the extent that they were able to employ a farm worker who was earning Ksh 1,500 per month.

ENGAGEMENT IN A BUSINESS

Both the quantitative and qualitative data highlight the limitations of starting a business in contributing to sustained poverty escapes. Table 2, below, gives more details of the types of business that households on different trajectories are engaged in according to the panel data. The qualitative research with chronically poor, transitory and sustained escape households investigated further the nature of these businesses, revealing that in most instances **businesses involve low initial investments and are often not viewed through the lens of a 'business' with a long-term strategy for expansion, but are often petty trade activities to tide households over.**

Table II: The five most common types of non-farm business, by poverty trajectory (2010)

Chronic Poor	Impoverished	Transitory escapers	Sustained escapers	Non-poor
Agricultural trading	Rental property	Agricultural trading	Agricultural trading	Retail shop/ kiosk
Rental property	Agricultural trading	Weaving	Fish trading	Agricultural trading
Retail shop/ kiosk	Retail shop/ kiosk	Tout	Ploughing	Rental properties
Trading firewood/ ropes/ sisal	Masonry	Vehicle mechanic	Rental properties	Masonry
Tailor	Fish trading	Casual laborer (non-agricultural)	Retail shop/ kiosk	Posho mill

Source: Tegemeo agricultural panel survey

There was also a lot of entrepreneurship – people keep trying to develop small businesses despite the risks and challenges. Much of this was around agriculture – selling napier grass to livestock owners; harvesting trees and selling wood, owning a breeding bull to service cows with were examples in Vihiga, where land holdings are so limited.

In addition to the nature of the business, the life history interviews highlight **two main risks of engaging in non-farm businesses: one relating to business relations, and the second stemming from crime.** Business relationships include those with customers, sellers, or the owners of properties where the business is being undertaken. This is illustrated by Mutua[23] and Ajiza[24] below;

> *"After a year selling vegetables in the local market, the landlord of the shop increased rent. The shop was picking up well but we were not making that much money to meet the increased rent amount. We were forced to close the shop. In 2011, I applied for youth fund and I was lucky to get it. I opened for my wife a clothing shop since she had a tailoring background. We did the business for also three months and the owner increased rent. We again closed the business. She was lucky to get a job almost the same time in a hardware store while I was also doing well in my farm."*

> *Ajiza was engaged in petty trading where she sold maize, beans, tomatoes and fish to get income to cater for family needs and also to keep herself busy since she was not employed. She used income from the farming to finance this activity and it was profitable. The main risks of petty trading was the delayed payment of debts by most customers or even customers not paying their debts at all. Most of the items, such as vegetables were perishable hence could be spoilt before they were sold*

[23] Sampled as PNN. Biographical trajectory PNN.
[24] Sampled as PNN by the KII. Biographical trajectory PPN+

and tomatoes could be destroyed while in transit which was also a loss to the business. She tried to overcome the risks by not giving out many items on credit, though this lowered her number of customers, and also being careful while handling the items.

The second major risk is from crime, with five life history respondents (across both Makueni and Vihiga) reporting theft from a non-farm business precipitating a decline in well-being. This is reported by Malaa[25];

> *"We struggled to make the business stable; several times thieves broke in and took everything. I do carry these things home every evening in a basket (kyondo) and back to the shop every morning. I only leave behind the small less valuable ones, I hide them in here. The thieves would reduce me to zero but each time I would start all over again; I did not give up… I would farm and raise some capital. Those days I used to plant French beans, they helped me raise capital. We used to sell them at Ksh.20 per kg and I used to harvest about 20kgs thrice a week. Whenever they stole from my shop, I would stay like a week and reopen. There was a time I just brought stock from the market… it was on a Tuesday, a market day… and it was stolen the same day; they also carried my sewing machine, customer's clothes that I was working on… it was a big loss… sometimes when debtors saw the trouble I was in, they could pay and this also helped me keep reopening."*

SALARIED WORK

The qualitative data reveals **two benefits of having salaried work; the first is the benefit of having a regular stream of income, which means that households are able better to plan their income and expenditure. The second is, if the salaried employment is in the formal economy, that there are a range of benefits, including NHIF membership and pension and sometimes also a lump-sum pay-off in the case of job loss.**

The panel data analysis however, does not reveal a significant relationship between salaried employment and sustained poverty escapes. **Descriptive statistics reveal that households on all poverty trajectories saw an increase in the proportion of income coming from a salary between 2007 and 2010** (Figure 5). Indeed, this increase was largest for transitory escapers and the chronically poor.

Figure 5: Share of income from salaried work, by poverty trajectory

Salaried employment could vary in type in the formal and informal economies. **The informal sector in Kenya has activities associated with the formal sector as well as others more purely informal sector activities.** Activities associated with the informal sector include selling fruits and vegetables, small retailers, and small manufacturing, production, and construction and repair of goods (World Bank, 2010). Earning a salary in either sector could thus be useful depending

[25] Sampled from the panel data as PNP. Biographical trajectory PNN.

in part on the type of activity. However, equally, employment in informal economic activities may be more vulnerable at times, and may help explain the regression result.

Further investigation of the types of salaried work that household members engage in across the poverty trajectories is shown in Table 3. Except for teaching, it is difficult to distinguish among employment in the formal and informal economy from the panel data. While Table 3 does show some differences in terms of occupation by poverty trajectory (drivers, for instance are more predominant among individuals from sustained escape and non-poor households) the difference in job quality among households on sustained escaping and transitory escaping households emerges more from the qualitative fieldwork. Here, it was more likely that households that experienced sustained escapes had a household member working in the formal economy. Meanwhile, **salaried work among transitory escapers was more likely to be in lower quality jobs or with lower salaries, which could still be in the formal sector**. Mumbua[26] situation illustrates a potential shortcoming of a salaried job;

> *In 2016 January Ann secured another job to work as a security officer in a local security firm. The contract indicated that she was to be paid Ksh 6000 per month. Instead she was receiving only half that amount. In January 2017 she left the job due to unpaid dues and also she never had any days off. Her money had accumulated and when she tried asking for the remaining dues she was told to come with a lawyer something she could not afford. She gave up.*

Table III: The five most common types of salaried work, by poverty trajectory (2010))

Chronic poor	Impoverished	Transitory escapers	Sustained escapers	Non-poor
Watchman	Teacher	Teacher	Driver	Teacher
Teacher	Watchman	Sales person	Teacher	Driver
Caretaker	Caretaker	Watchman	Pastor	Pastor
House help	General farm worker	Conductor	Industrial worker	Shop keeper
Cook/ caterer	Cook/ caterer	Lab attendant	Waiter/ cook	Accountant

Source: Tegemeo agricultural panel survey

HOUSEHOLD SHOCKS

Key messages

- **Rainfed agriculture is a risky venture and this is likely to be the underlying reason why the panel data analysis shows that having more land under crops is significantly associated with transitory rather than sustained poverty escapes. While farmers are able to adopt certain inputs and techniques to minimize their exposure to weather-related shocks, widespread reports of less predictable rains mean that different strategies are likely to be required in the future;**
- **The predominant shock from the life history interviews are health shocks. These directly impact household wellbeing with the costs of treatment draining resources;**
- **Crime shocks as drivers of transitory escapes arose in both Makueni and Vihiga counties. While both male and female-headed households report to being victims of crimes there is some evidence that female-headed households are more exposed to this type of shock.**

'If all goes well' is a significant qualifier. 'All' often does not go well. Unexpected, often cataclysmic, life events can occur that are major setbacks. This leads to the now well-known 'sawtooth' pattern of movement in and out of poverty – periods of gradual improvement and accumulation that are negated by abrupt drops caused by a unique event that can be disastrous in its consequences (Davis

[26] Sampled from the FGD as PNP. Biographical trajectory PPP.

and Baulch, 2011). This section discusses some of these setbacks and shocks that exert a downward push on household wellbeing.

WEATHER SHOCKS

Makueni County has a semi-arid climate, which leads to a precarious situation regarding water supply, and water issues featured prominently in interviewees' accounts. **Periods of drought, both historically and that of 2011, pushed many families down.** An indicator of moving out of poverty is the ability to purchase a significantly sized water storage tank; with being able to afford a very large (10,000 liters or more) tank or irrigation and, beyond that, a dam being an indicator of wealth. The arid climate was also seen as a contributor to soil degradation since, when it does rain, the steep topography exacerbates soil erosion. Many respondents considered the rain patterns to have become less predictable during their lifetimes, often attributing this to climate change.

While dry periods were also mentioned by Vihiga County interviewees, these were seen more as a problem causing plants to 'wilt' and not as periods of prolonged drought. The weather shock most frequently mentioned in the life histories in Vihiga instead was hailstorms that destroyed the flowers on newly-planted crops. The emphasis accorded to hailstorms likely reflects its rapid-onset status which would have immediate effects on welfare discernible to crop growers and other farmers in the County, compared to droughts which still do lead to lower outcomes over time in rural Kenya (XX) and impoverish but through a more gradual process.

HEALTH SHOCKS

The most commonly mentioned shocks in the fieldwork by far were health shocks. These are a 'triple whammy':

1) First, households had a limited, or perhaps no, capacity to cope with the sudden need to provide expensive medical care for loved ones who fall ill or suffer an accident. The expense can be devastating and sufficient to reverse a family's fortunes and drive them below the poverty line. Azenga's[27] experience in securing care for her husband illustrates this;

> *"He was sick for an extended period; he first fell and broke his leg, then he had some stomach problems and were operated. He stayed in Kakamega got well and came back. He stayed for some time and got hernia, this is what killed him. We sold livestock; the first time about Ksh.30000 was required to be paid prior to the operation. Before he died he was to be operated on again it required Ksh.25000 but he refused; he said, "I am not seeing any other future for me save that money you can use it in my funeral…" all preparations had been done, just the down payment, for him to receive the treatment but he refused. We sold all the cows about 11, plus the goats and chicken, there is no livestock left now."*

As well as households often simply being unable to pay for care, there were instances were family members elected to forego necessary treatment or hospitalization due to the financial burden it would place on the household. While the National Hospital Insurance Fund (NHIF), a system of health insurance exists, only a small proportion of the population is covered. Coverage can be easily arranged only for those in formal paid employment, and only civil servants receive cover as a matter of course. There now is an attempt to extend coverage to the majority of the population not in formal employment but take-up is very low. In general, life history respondents were aware of the NHIF but, with one exception, had not taken it up due to lack of 'interest' and understanding of the product and the cost of the premiums. Just one life history, of Leonard[28], highlighted the important role of the NHIF in cushioning the effects of a health shock and here the household was covered due to engagement in formal employment;

[27] Sampled from the panel data as PPP. Biographical trajectory PNP+
[28] Sampled as PNN. Biographical trajectory PNN.

> *"In 2009 May I got my first born child. I had also registered with NHIF (National Health Insurance Fund), so the hospital bills were catered for. I remember I even got a taxi to bring my wife home after the cesarean operation. It could have cost me 30,000/= if I were not under NHIF."*

2) Second, if the person who requires medical treatment is the main breadwinner or a major earner, the financial effects on the household are doubled – earnings are lost at the same time that the household needs to find extra cash for treatment. WHO (2017) notes that the incidence of impoverishment due to out-of-pocket health spending in Kenya was as high as 1.36% in 2005, a figure on par with the average for Africa.

3) Finally, if the health emergency ends in the death of the head of the household, the effects can be tripled by the permanent loss of the main earner coupled with potential problems of the loss of land due to inheritance problems. There were frequent mentions in the interviews of families weakened by illness or the death of the male head of household having to fight off 'land grabbing' by neighbors and relatives (most typically by the brothers or sons of the deceased head of household appropriating land at the cost of the deceased's wife and children).

As well as health shocks, **chronic health issues such as diabetes (often termed 'sugar' by our respondents), high blood pressure and mental health problems can put a long-term drag on the finances of a household both through the costs of treatment and medical care and lost earnings**. This situation is described by Florence[29] in relation to the mental health of her son;

> *In 2010, my third born son who used to stay in Nairobi started to have a mental illness and began to disappear and come home. We took him to Mbale hospital where he was admitted for three days. We parted with Ksh. 49,000. The following year the problem persisted and took him to Kakamega where we spent Ksh. 39,000. In 2013, again the family used Ksh.42, 000 for his medication. In 2014, I was advised by the doctor to stop injecting him as he will still continue to be violent and will require strong men to be holding him. Instead, he should be taking medication on daily basis. I used to have a well-stocked kiosk but the business collapsed since 2013.My sons are not financially stable to help me. I depend on his aunt who works in Nairobi and assists in buying medication.*

By far, the worst chronic health problem mentioned in interviews was alcoholism. Many interviewees talked about their drunken fathers driving their family of origin into poverty. Many male interviewees did not themselves drink, explicitly citing their fathers' alcoholism. **Domestic violence against the wife and often the children almost always accompanied accounts of drunkenness**. **Several women talked about the alcoholism of their husbands as a major factor keeping or driving the family into poverty.** The alcoholism of the male spouse often began while they were working away from home, with the husband eventually returning home with a drinking problem after having lost his employment. While local brewing can be an important source of income for poor households, none mentioned this as a source of income in the life histories, potentially because the activity is now illegal.

CRIME SHOCKS

Becoming the victim of a serious crime is a shock. **Injury or death due to an assault, particularly if the victim is a major breadwinner or the head of the household, imposes medical or funeral expenses at the same time as the earning capacity of the household is reduced.** Some interviews contained veiled allusions to witchcraft (e.g., the death of a cow in suspicious circumstances, but also some more serious cases where people died in quick sequence) with interviewees' families being perceived as victims and, in at least one instance, hints that the

[29] Sampled from the FGD. Biographical trajectory PPP+

interviewee was a practitioner. The motivation for witchcraft seems to be linked to jealousy – you need to guard your success carefully.

Serious theft was the most commonly reported crime shock, and included those particular to rural areas such as having crops stolen. This is prevalent when farm land is far from household's residence (the dispersion being exacerbated by a trend of scattered land ownership/renting as people try to accumulate more land in a situation of increasing fragmentation of plots),

> *"Even two weeks ago I had cassava in the farm but they were stolen when I went to bury my brother; he died in the election period [2017], he was drowned by some people… when I came back from his funeral I found all my cassava stolen[30]".*

Ajiza, who is in old age and widowed, says that with her involvement in the activities of 'One Acre Fund' the major challenge that she now faces is the theft of maize when it is ready for harvest and this affects her total yields. Theft, combined with inflation in the price of commodities and sickness related to old-age all mean that her situation in old age is slowly declining. Other types of theft are water theft from irrigation pipes and the theft of farmyard equipment. Non-farm livelihoods were affected by the theft of machinery. A particular hazard for those attempting to move up by running a shop was the loss of stock due to repeated burglaries (see above).

Benefitting from criminal activity or corruption is the other side of the coin. Part of exiting poverty is accumulating additional assets. If one is willing to take the risk (and perhaps to use violence), theft and robbery are means of accumulating assets quickly with nil outlay of capital. Corruption is another means of accumulation, or at least a factor in giving oneself advantages and easing the route to accumulation. A male focus group in Makueni was adamant that corruption is endemic, citing the allocation of contracts by government. There were allusions to corruption in a Vihiga interview (though the interviewee may have seen these practices as normal rather than corrupt). Successful corruption, by creating routes and connections that can be exploited again later, and by providing wealth that can be used for inducements and bribes, can be expected to breed more corruption. While the above anti-social activities damage society, what they have in common is that they can benefit individuals who participate in them successfully.

To a great extent, whether a household experiences life-changing shocks is a matter of bad or good luck or circumstances beyond one's control. Two households with equal resources and provisions for the future can be on identical upward trajectories and then, while one has the misfortune to suffer multiple shocks that send it into poverty, the other has no such experiences and continues on.

After ascending out of poverty, the issue about avoiding a fall back is not solely about avoiding shocks -- whether or not these occur is largely a matter of luck – but instead the real issue is one of *resilience*, the extent to which a household has the capacity to cope with a shock or a series of shocks. The next section explores strategies for sustaining poverty escapes and building resilience.

HOUSEHOLD STRATEGIES FOR RESILIENCE AND SUSTAINED POVERTY ESCAPES

Key messages

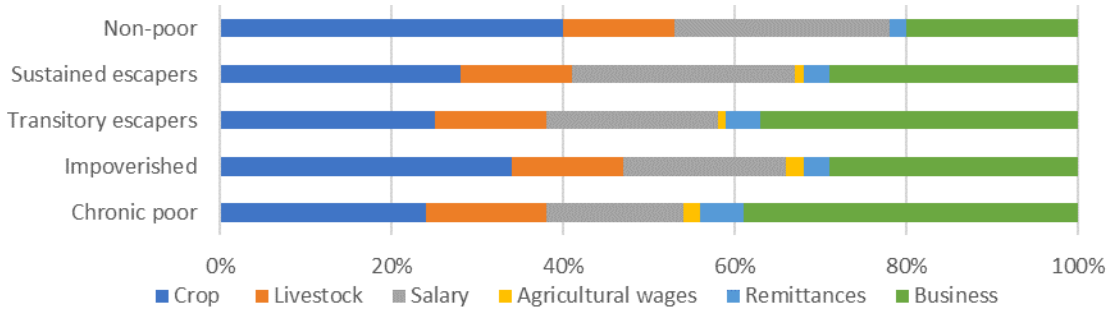
- **Engaging in agriculture (crops and livestock) can maintain a household's situation over time and lead to small improvements. However, agriculture on its own is insufficient to lead to sustained poverty escapes;**
- **Migration of men to urban centers for work, leaving behind their families, and the associated remittances is the most prevalent strategy for a sustained escape;**
- **Education, and the migration of adult children to urban centers are viewed as strategies that can sometimes help ensure well-being gains are protected in old-age.**

[30] Sampled from the panel data as PPP. Biographical trajectory PNP+. Female headed household

- **Social relationships- including intra-household relationships between husband and wife, but extending to extended family contributions to household expenses and beyond- have helped households escape and stay out of poverty.**

The key to resilience is diversification of resources – multiple sources of income, preferably generated by different people in the household. If one person becomes incapacitated or loses their job or one source of income dries up, all is not lost. Within our family histories, the households that had well diversified sources of income had more capacity for coping with shocks. FGD participants in both counties also pointed to the importance of diversified income sources both for sustaining poverty escapes and as characteristics of households that are relatively better-off. As pointed out by participants of the women's FGD in Makueni; "never rely on a single income source as it might collapse". Taken at face value, Figure VI below, illustrates that households on all poverty trajectories have diversified their activities and sources of income.

Figure 6: Income diversification among households on different poverty trajectories



Source: data pooled from the 2000, 2004, 2007 and 2010 rounds of the Tegemeo panel

Some households also have a female member, usually the wife, who runs a small business located in the local community. In their interviews, many women spoke about 'opening a business' or 'starting a shop', particularly during times when the household was under economic stress. When the nature of the 'shop' is looked at closely, however, the activity usually was very *ad hoc* and small scale; e.g., selling a small amount of produce from their own *shamba* or buying in a small amount of produce or goods for resale from a rudimentary lean-to construction beside the road. While not wanting to denigrate these endeavors, they are not full-blown businesses that are part of a conscious, thought-through strategy, but rather informal attempts to raise additional cash, often reactive to the household's need or desperation. They can provide an alternative income source but are small scale.

While the fortunes of individual households can vary widely depending on their luck (avoiding or experiencing shocks) and upon circumstances such as receiving assets from the previous generation either as gifts or inheritance, the most reliable way both to move out of poverty and to stay permanently above the poverty line after it has been crossed is to have an as widely diversified set of income sources as possible. **Diversification of income sources can be achieved either through having multiple earners, both spouses if they are living plus adult children, or through a variety of *types* of income source – paid formal employment, the sale of agricultural produce and livestock, formal businesses and small *ad hoc* shops.** (Note that in the two areas studied here casual agricultural labor is neither salaried formal employment nor a form of diversification but instead a means to eke out some additional income for those with insufficient land to support themselves.) The next sub-sections explore some of these pathways, drawing from evidence and analysis of the qualitative fieldwork.

STRATEGY 1: A PREDOMINANTLY AGRICULTURAL LIVELIHOOD

For households with sufficient land, it can be possible to experience a sustained poverty escape through agricultural activities – crop cultivation and livestock. For this to be a viable pathway, the

qualitative and quantitative research point to the **importance of investing in agricultural assets, including improved seeds, as well as, in the case of Makueni, irrigation facilities to enable crops (particularly vegetables) to be grown throughout the year.**

Crop agriculture, however, is not without its risks and because of this **successful households diversify their crops** – in Makueni maize (just one crop a year) alongside more drought-resistant crops such as cow peas or sorghum - while in Vihiga maize (where the weather allows two crops per year) intercropped with beans, napier grass, trees and, if space allows, vegetables. Only a couple of the life history respondents were currently growing cash crops (tea, in the case of Vihiga, though interviewees pointed out that their bushes are very old), though the FGDs highlighted previous engagement in coffee production, which had since been neglected due to the collapse of coffee cooperatives.

Equally important as consideration of agricultural production for this strategy to work is consideration of markets. In Makueni, the female FGD points-out that some people are trapped in chronic poverty because they are exploited by middlemen when they sell their vegetables. This includes both theft as well as middlemen setting low prices for produce. Meanwhile, those households that are able to sustain escapes sell their produce directly to the market, sometimes in groups, rather than selling through a middleman.

For agriculture to support sustained poverty escapes, households also diversify their incomes beyond crop diversification. This can be either through livestock rearing or engagement in a small business. Frequently the female household head will engage in these activities while the male household head focuses on crop production, particularly if the land is a distance from the homestead.

STRATEGY 2: MIGRATION OF THE MALE HOUSEHOLD HEAD TO AN URBAN CENTRE COMBINED WITH AGRICULTURAL INVESTMENTS

The main driver of sustained escapes evidenced in the fieldwork was migration (rather than agricultural-based activities). As discussed above, in both Makueni and Vihiga, interviewee comments reflected views that crop farming as the preeminent source of household income has experienced an eclipse. Nowadays, according to analysis of the pathways experienced by many sustained poverty escapers, the most reliable pathway for the sustained escape would be a reasonably well-paid salaried job in the formal economy, preferably with a pension. Aside from teaching, such jobs have been rare in rural areas, potentially reflecting the lack of statistical significance in the regression analysis between salaried income and sustained poverty escapes.[31] Instead, salaried work is mainly located in urban areas. This has led to the strategy, noted above, of male breadwinners who spend the majority of their prime working years away from their families in Nairobi or a town and who remit the bulk of their salaries back to their families. Sometimes wives would attempt to live with their husbands in the towns, but this was rare and tended not to last.

Another related source of remittances from urban areas in the fieldwork was that of small businesses or laboring in the informal economy. There are risks and difficulties that small businesses are more prey to, such as losing stock through theft or being the victim of a robbery, people who buy on credit and then do not repay or delay payment threatening liquidity, and the lack of adequate insurance. It is understandable in this context that receipt of credit in the regression analysis, as noted earlier, is associated with an increased risk of impoverishment relative to sustaining an escape from poverty. It could also be that the credit is taken to stave of a particularly severe descent into poverty. Moreover, analysis of the panel dataset also reveals that the share of remittances as a total of household income is much higher amongst the subset of transitory escapers (18%) compared to sustained escapers (12%) across years, with the difference statistically significant. Together, these results qualify the fieldwork findings by highlighting that **1) credit may**

[31] With the devolution of government activities to the counties from 2013 under the 2010 Constitution, a second avenue for regular salaried employment in rural areas may be opening.

not be a 'golden goose' for poverty escapes, and 2) an overreliance on remittances may not necessarily contribute to a sustained escape from poverty.

Risks aside, there are relatively few opportunities for small business in rural areas due to the limited purchasing power of those living there. It also takes a special set of aptitudes (e.g., being entrepreneurial and recognizing opportunities), skills (e.g., financial management) and resources (i.e., capital). Few small business proprietors make arrangements for their own cash pension stemming from the proceeds to their business; the more likely alternative being the previously-noted 'African pension' of using the business' proceeds to purchase land that will be a resource for later in life.

A key component of this strategy is that the female household head, remaining in the village with the children, is able to build an improved house and purchase land as investments for old age. Meanwhile, to support the family farming for own consumption and livestock rearing both to provide additional support for the family and also as investments for old-age, a key financial tool that women use are 'merry-go-rounds' (*nzangule).*

Nzule[32], in Makueni, describes the pathway of their household's sustained escape from poverty. Their sustained escape pathway starts with migration to Nairobi, purchase of land and then engagement in crop agriculture and livestock rearing following return to the village;

> *I was born in this village in 1965 in a family of eight; four boys and four girls. I went to in a mixed day school, completed in 1993 and after completing fourth form, I went to Mombasa to look for a job. At that time, the government was doing recruitment (ya watu wa army) so I went to Machakos for that exercise but I did not qualify and I decided to proceed to Mombasa… I did not return home. I did not know anybody there but I just went. I had some money which I knew would sustain me for at least a month. I had saved some money, Ksh.5000. While in high school we would farm kales with a friend, sell the produce and share the proceeds and each time, I would save my share.*
>
> *I got a casual job after seven days at the cereals board (NCPB) and I was earning Ksh.90 per day. I worked for less than a year and quit the job then I came to my relatives in Nairobi to ask them to help me secure a job. I left because the job wasn't consistent; sometime we would go for two weeks without being called, and they were doing this so that we had no ground of claiming permanent positions so I saw no future there; and also because that particular contract ended.*
>
> *I stayed for a year in Nairobi before getting a job; then I got a job with AFCO (doing vibaru ndogo ndogo tu) and there I was earning Ksh.75 per month… I worked there for ten years and there were increments in salary and by the time I was leaving, I was earning Ksh.6000 per month. I got married in 1988 when I was still working in Nairobi but we met here at home. We got six children; three girls and three boys. Four of them have completed secondary school while two are still in school.*
>
> *I used to send my wife money while I was working in Nairobi. When I came back she told me she had bought three acres of land over time for Ksh. 10,000 per acre. She was primarily farming for subsistence. She earns money from dairy farming and he concentrates on a farm. She also used the money to pay for this house and bought a cow. In 2001 my father died. I inherited one acre of land.*
>
> *I was transferred to Eldoret and worked there for four years; the bus fare home was too much so I quit and I've been living here (at home) since then. I farm vegetables, kales and tomatoes on the three acres bought with the money I sent home and then I am farming this little piece here at home for maize and beans. My wife looks after our dairy cattle (improved) and we also do sell avocadoes; we have ten productive trees. I enjoy the work am doing now and I wouldn't want to be employed.*
>
> *I can produce vegetables throughout the year. Water is not a problem here, we connect pipes from the river… up there… points up a hill… there is a pipe from there and then anyone can connect.*

[32] Sampled from the panel data as PNN. Biographical trajectory PNN.

Sometimes it reduces so when one is not using, you can connect from their pipe nobody refuses. The water flows by gravity and it never dries up.

Compared to other villagers, I can say I am prosperous (tajiri kiasi); there are poor people here and some are so rich they can even employ 10 casuals per day; to work in the farm, livestock. I sometimes employ 2 people to help me do plough and manure application.

Under this pathway, **small-scale agriculture has become feminized. Rather than staying on the land for their whole lives, men leave to work in urban areas where jobs are located and the women stay on the *shamba*, working the land** (sometimes with labor assistance) primarily for subsistence rather than for sale. (Many interviewees' account did not consider this as 'work'; it is just what women do.) The money earned elsewhere is remitted to the household and used for daily expenses or possibly to buy more land for old age. *If all goes well*, the man returns towards the end of his working life (and if all does not go well, the *shamba* can be a refuge). There is still a strategy of accumulation across the lifetime that can involve the accumulation of land, but the driver now is a surplus generated by remittances rather than by agriculture.

STRATEGY 3: EDUCATION OF CHILDREN TO MAINTAIN WELFARE GAINS IN OLD AGE

This strategy operates in tandem to the previous two strategies. As mentioned previously, remittances from children residing in urban areas, alongside owning land, can act as an important support in old-age. Meanwhile, **there is a belief that educating children is the best way to ensure that they are able to earn money.** However, as with the previous strategies, this one is also not guaranteed. Participants of the Makueni female FGD note that some people are PNP because they have made sacrifices to educate their children, including selling land and livestock and these children have then never remembered to help their parents.

STRATEGY 4: SOCIAL RELATIONSHIPS TO SUPPORT SUSTAINED ESCAPES

Social relationships have often been critical: borrowing land or livestock; widows being allowed to continue farming on their former husband's family land; allowing extended periods for dowry or bride price payment; supporting the education of siblings or grandchildren as well as children; extended family contributions to meeting the costs of ill health – all of these feature especially in the stories of people escaping poverty who then stay out of it. Remittances from children can be critical to preventing a sustained escape turning into a transitory one in old age.

Good marital relationships also support sustained escapes from poverty – this was mentioned in several life history interviews, and by women in FGDs. Examples included husbands who supported wives starting businesses; a husband who paid the NHIF premium, which was then able to pay for his wife's caesarean operation. A woman without a supportive husband, or whose husband was effectively less able due to long term illness or alcoholism; a husband whose wife died, were less able to escape poverty or to remain out of poverty having escaped.

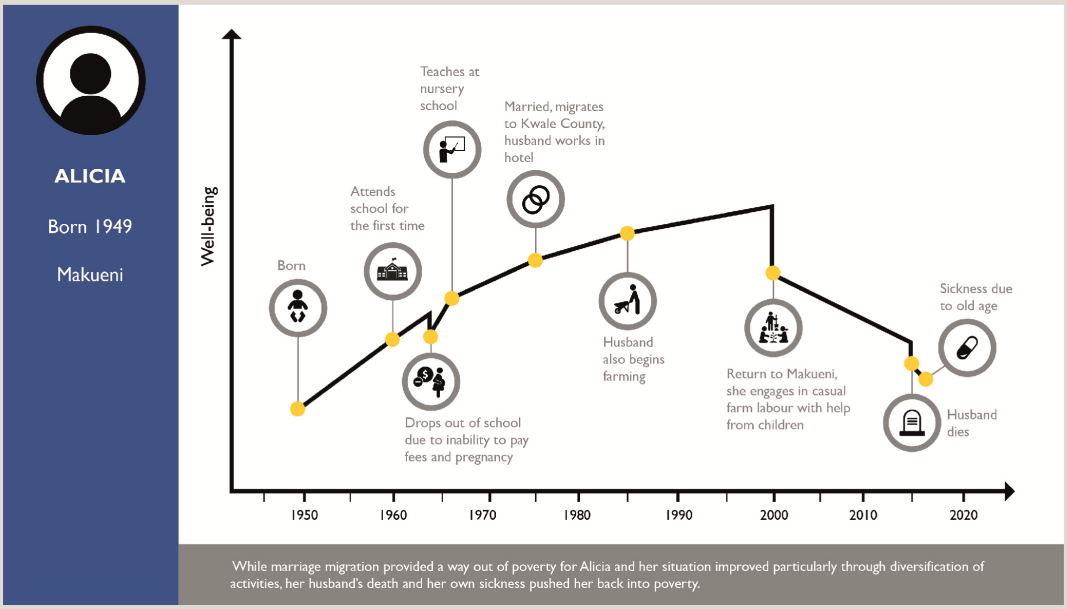
The comparative absence of such 'social capital' is then associated with chronic poverty, though social relationships are still important for survival there. For example, in the Tegemeo survey, the chronically poor often relied on friends and relatives for borrowing, whereas people making sustained or even temporary escapes were more likely to rely on SACCOs or Commercial Banks.

CONCLUDING REMARKS

To further improve the pace of poverty reduction in Kenya going forward, efforts should acknowledge the various poverty trajectories that households may experience, and the drivers responsible for sustaining an escape from poverty as well as the combinations of strategies that can be adopted to successfully build household resilience, as outlined in the preceding section. The low level of sustained escapes and the importance of social capital in sustaining escapes suggests that policy could play a much greater role. There are several current policy initiatives which suggest that this has been recognized. The accompanying brief discusses the policy implications of results presented in this study.

Figure 7: Life histories, rural Kenya

LIFE HISTORIES
KENYA



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ANNEXES:

ANNEX A: RESULTS OF QUANTITATIVE ANALYSIS

Table of definitions

Variable	Binary or continuous	Definition
Distance to electricity	Continuous	Distance in km to nearest electricity supply
Distance to piped water	Continuous	Distance in km to nearest piped water source
Log(asset value)	Continuous	Logarithm of asset value
Household size	Continuous	Number of household members
Dependency ratio	Continuous	Share of children and elderly as a total of household size
Age	Continuous	Age of household head
Age-squared	Continuous	Age-squared of household head
Female head	Binary	Whether the household head is female (=2, and 1 otherwise)
Head with primary education	Binary	Whether the household head has completed primary education but not secondary
Head with secondary education	Binary	Whether the household head has completed secondary education
Non-farm enterprise	Binary	Whether the household owns a non-farm enterprise
Share of income from salaried employment	Continuous	Share of income of the household deriving from salaried employment
Improved cattle	Continuous	Number of improved cattle that the household owns
Local cattle	Continuous	Number of local cattle that the household owns
Sheep and goat	Continuous	Number of sheep and goats that the household owns
Feathered livestock	Continuous	Number of feathered livestock (chicken, duck, geese) that the household owns
Acres of crop	Continuous	Acres in total land holding that the household has cropped
Received credit	Binary	Whether the household has received credit in the year preceding the survey
Received remittances	Binary	Whether the household has received remittances in the year preceding the survey
Member of assistance group	Binary	Whether anyone in the household is a member of any co-operative or a group
Eastern Lowlands	Binary	Whether the household resides in the Eastern Lowlands
Western Lowland	Binary	Whether the household resides in the Western Lowland
Western Transitional	Binary	Whether the household resides in the Western Transitional zone
High Potential Maize Zone	Binary	Whether the household resides in the High Potential Maize Zone
Western Highlands	Binary	Whether the household resides in the Western Highlands
Central Highlands	Binary	Whether the household resides in the Central Highlands
Marginal Rain Shadow	Binary	Whether the household resides in the Marginal Rain Shadow zone

Summary statistics

	Chronic poor	Impoverished	Transitory escaper	Sustained escaper
Distance to electricity (km)	1.90	1.88	1.48	2.31
Distance to piped water (km)	6.05	4.83	3.95	4.56
Log(asset value)	3.70	5.77	5.21	7.89
Household size	6.81	6.58	6.64	4.85
Dependency ratio (%)	42.41	43.05	42.12	37.52
Age	59.52	59.28	61.31	59.42
Age-squared	3710.26	3710.60	3916.19	3690.51
Female head	0.43	0.29	0.33	0.20
Head with primary education	0.59	0.55	0.55	0.59
Head with secondary education	0.10	0.22	0.15	0.24
Non-farm enterprise	0.62	0.62	0.62	0.64
Salaried work, income share	0.07	0.28	0.05	0.03
Improved cattle	0.76	1.25	1.29	3.55
Local cattle	1.59	2.49	2.60	1.31
Sheep and goat	3.26	4.18	6.64	5.24
Feathered livestock	15.69	14.16	16.82	11.76
Acres of crop	2.71	3.19	3.21	3.93
Received credit	0.20	0.26	0.23	0.30
Received remittances	0.22	0.34	0.30	0.36
Member of assistance group	0.55	0.61	0.61	0.74

Regression results

VARIABLES	Chronic poor	Impoverished	Transitory escape
Distance to electricity	1.050	0.985	1.016
	(0.0336)	(0.0263)	(0.0325)
Distance to piped water	0.961*	0.977	0.942**
	(0.0229)	(0.0201)	(0.0246)
Log(asset value)	0.889**	1.012	0.980
	(0.0417)	(0.0449)	(0.0467)
Household size	1.153**	0.771***	0.837***
	(0.0724)	(0.0481)	(0.0559)
Dependency ratio	1.037***	1.034***	1.033***
	(0.00863)	(0.00776)	(0.00860)
Age	1.227**	0.989	1.186*
	(0.123)	(0.0704)	(0.113)
Age-squared	0.998**	1.000	0.999
	(0.000879)	(0.000598)	(0.000807)
Female head	1.659	2.593**	3.996***
	(0.793)	(1.151)	(1.908)
Head with primary education	0.828	2.284*	2.719**
	(0.364)	(0.985)	(1.263)
Head with secondary education	0.395	2.640*	2.217
	(0.238)	(1.472)	(1.432)

Non-farm enterprise	0.919	1.680	2.399**
	(0.336)	(0.582)	(0.964)
Share of income from salaried employment	0.726	6.288***	2.604
	(0.567)	(4.393)	(2.074)
Improved cattle	0.906	0.988	0.980
	(0.0552)	(0.0338)	(0.0427)
Local cattle	0.959	1.027	1.043
	(0.0496)	(0.0418)	(0.0430)
Shoat	0.983	1.042*	1.018
	(0.0271)	(0.0231)	(0.0243)
Feathered livestock	1.000	1.001	1.006
	(0.0104)	(0.0103)	(0.0105)
Acres of crop	0.915	1.144**	1.121*
	(0.0647)	(0.0653)	(0.0681)
Received credit	0.704	2.092*	1.321
	(0.316)	(0.833)	(0.608)
Received remittances	0.637	0.876	0.696
	(0.249)	(0.311)	(0.272)
Member of assistance group	0.727	0.918	0.728
	(0.282)	(0.343)	(0.297)
Eastern Lowlands	0.610	0.120**	0.155**
	(0.562)	(0.104)	(0.144)
Western Lowland	1.273	0.0832***	0.237*
	(1.083)	(0.0694)	(0.204)
Western Transitional	0.572	0.374	0.200*
	(0.509)	(0.310)	(0.182)
High Potential Maize Zone	0.799	0.204**	0.247*
	(0.672)	(0.162)	(0.209)
Western Highlands	2.273	0.488	0.991
	(2.261)	(0.463)	(1.001)
Central Highlands	0.226	0.0590***	0.0273***
	(0.242)	(0.0567)	(0.0329)
Marginal Rain Shadow	0.419	0.0227***	0.153*
	(0.483)	(0.0260)	(0.174)
Constant	0.00285*	0.791	0.000580**
	(0.00878)	(1.952)	(0.00180)
Observations	531	531	531

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

ANNEX B: APPROACH TO PARTICIPATORY WEALTH RANKING

Approach to historical wealth ranking (estimated time 2.5 hours):

1. Assemble a focus group of 15–25 participants. Explain the purpose of exercise – stress that this is research and there will be no direct benefits coming from this exercise.

2. Introduce the focus groups to different wealth categories, which have already been determined by previous research (see table below). Ask FGD participants their opinion on those different wealth categories (these categories were slightly adapted during each FGD). Display the wealth categories and talk through them.

Wealth categories for participatory wealth ranking (households do not have to have all characteristics).

Maskini sana
Don't produce a surplus to sell from land
Engaged in petty trading or day labour
Eat one or two meals per day
House in need of repair or has a thatched roof
Children don't complete secondary education
Own chickens
Own sheep or goats
Maskini
Own local cattle
Able to improve housing and buy furniture
Children can complete secondary school
Buy or lease land
Use some improved agricultural inputs
Ability to invest in water storage
Tajirikasi
Own dairy cattle
Buy land/ plots
Construct permanent house
Expand business (e.g. shop)
Use improved agricultural inputs and fertiliser
Tajiri
Employ people throughout the year (either on land or in business)
Children attend boarding schools
Mechanised agriculture
Loans money

NB: poverty line between maskini sana and maskini

For the purposes of identifying households which are transitory escapers, the poverty line is set between the level of medium and poor households in the above table. A separate table with characteristics of urban areas is also created for FGDs in urban areas.

3. Ask those households present to assign their current situation to a particular wealth category by attaching post-it notes to the large piece of paper.

4. Then ask them about their situation five years ago and ask them to assign themselves to a category for that time period.

5. Explain to the focus group how households are on different wealth trajectories and start a discussion about the reasons behind impoverishment and upward mobility between over the last five years. Start to fill in a table.
6. Do the same exercise for 10 years prior.
7. Explain to the focus group how households are on different wealth trajectories and start a discussion about the reasons behind impoverishment and upward mobility between five and ten years ago. Continue to fill in a table.
8. Ask if they know of any households in the community on PNN or PNP trajectories? Write those names on post-its and stick on the large paper.
9. Investigate if there are any differences in reasons for impoverishment across the two time periods (e.g., opening of a health center may have resulted in a fall in health shocks, climatic conditions, etc.).
10. Have a discussion about the different types of support/program involvement for households on the different trajectories. Ideally, we can then conduct life histories with households receiving different types of support (e.g. stipends, being in farmer organizations).

ANNEX C: LIFE HISTORY TEMPLATE

In each household, a life history interview will be collected with just one household head[33] - either male or female. Ideally, they will be the person who took part in the participatory wealth ranking in the FGD. If that is not possible, then the life history will be undertaken with whichever of the male or female household heads who i s available.

There will also be a strategy of undertaking a second life history with another member of the household if it seems likely that this may yield significant information (e.g. possible different views about the household, different life experiences of different people etc.)

Overall, in each research site – roughly half of the life history interviews with sustained escapers, with transitory escapers and with the chronically poor will be with women and half will be with men.

WHILE THIS GUIDE INCLUDES QUESTIONS FROM ACROSS THE LIFE COURSE PLEASE FOCUS PARTICULARLY ON THE PERIOD SINCE 2000

Overview of the approach:

The outputs of the life history interview will be:
1) a narrative of the respondent's life; and
2) a life history map (see end of document for an example)
During the interview, map the life of the respondent against the pre-determined wealth categories.

Life periods are (though not all may be relevant to every respondent):

- o Childhood: 0 – 12 years
- o Youth: 13 years to marriage/start of own household OR 20 years (whichever is relevant)
- o Young adulthood: Marriage/start of own household or 20 years– 40 years
- o Late adulthood: 40 years – 60 years
- o Old age: 60 years +

Ensure you identify well-being levels in 2007, 2011 and 2017 and at these points:

- o Childhood
- o Just before start of own household/marriage
- o Just after start of own household/marriage
- o Now

Focus on upward and downward mobility and reasons for these changes (why the upward or downward mobility in well-being).
The predominant focus will be on the period since 2000 and particularly the last 10 years.

Introduction, focus and consent

• When you arrive at the household, introduce yourself and the research
• Explain the purpose of the research: in as much depth as you need to – that you want to understand changes in assets and well-being during their life and to learn more about why such changes happened. Positive and negative events. Explain to them that at five different points in their lives you will be asking questions about; what has enabled them to improve their lives? If they have fallen back then why have they done this? If they were able to manage in the face of shocks then how were they able to do this?

[33] Household head is used here to refer not just to an individual, but also to a couple.

• Obtain informed consent- i.e. ensure that the respondent agrees to take part in the interview.
• The interview will be anonymous – it won't have their name on it.
• You are going to take notes and record the interview - these notes will only be seen by other members of the research team. The recording will only be made available anonymously to the people who will be transcribing the interview.
• You will write short stories from the interview – some of these (without their name) will be seen by other people.
• Ask permission to take a photograph (if you will do so)
• Other people will see their photograph (without their name)

Getting started
• Write down interviewee's name, age, gender, (interviewer's name).
• Note down individual's appearance and demeanour (happy, sad, anxious, etc).
• Describe house and compound.

Genealogy/demographic
Note sex/ages of the household members (nuclear household or, if there are other family members living on the same homestead, include those members); include multiple spouses; level of education of each household member (especially the person being interviewed, and the spouse). Are there other family members living nearby? How many children do they have? Where do they live and what do they do?
If it's a female-headed household, ask how it got there (for example, death of husband or migration or…?)
Focus on people within the household.

Livelihoods and assets now
[Note for researchers: You can choose whether to do this now or do this chronologically].
[Note to researchers: Interested in physical assets which may include land, livestock, Implements – hoes, trailers, cart, plough, tractors, number of houses, 'state' of houses (i.e. tin roof?), clothes/household items, mode of transport, consumer durables (e.g. mobile phone). Get as accurate estimate as possible, but rough magnitude is better than no magnitude at all e.g. more than 5 cows but less than 20].

• Can you rank the livelihoods activities of household members now? (i.e. primary, secondary, tertiary activities in terms of income and food security).

> *So this includes a discussion of the IGAs of all the different household members, not just the respondent. IGAs include: livestock rearing, crop agriculture, casual labour, remittances, petty trading, salaried work, small business.*

• What productive assets do you have in the household (livestock (including number), land (including size), agricultural implements (any mechanised implements?), transport (motorbike?, condition of housing)? Does your house have electricity? Do you have a mobile phone?
• Do you own the land you work on/ If you had to sell it, whose decision would it be? (Sharecropping, leasing, mortgaging- which type? Or are you working off someone else's land?
[Note to researcher: This is a good point to locate the respondent on Y-axis of the life history diagram].

Childhood – approximately 0 to 12 years old

THIS SECTION REQUIRES THE LEAST DETAIL AS WE ARE PRIMARILY INTERSETED IN THE PERIOD SINCE 2000.
[Note to researcher: at this point we are getting at parent's livelihood and assets].

- When and where were you born?
- Parents: Where are your parents from? (Origins of the family - in the case of migration from another place, when did they move and why? Probe around if the family had a medium-/long-term strategy in moving here).
- Education: What level of education did your parents have?
- Livelihood of parents: What was the main occupation of your parents? What was their second occupation/ source of income? What was their third occupation/ source of income? Probe around whether their paretns had salaried employment, livestock rearing, crop agriculture, petty trading, informal non-farm work, or small shop.
- If involved in crop agriculture, which crops and why? What land did they use? Did you inherit any land from them?
- Who were the crops sold to? Who did they get agricultural inputs from? Who worked on the land? Did they hire casual labourers?
- Assets of parents: what assets did your parents have? How many cattle? How much land did they own? Did they own a non-farm business?

Ask about the house and compound:

- Describe your house and compound where you were a small child (e.g. at age 8 years old)
- building materials,
- How did it compare with other compounds in your village?
- How did it compare with the house that you live in now (much better, better, the same, worse, much worse)?

[Note to researcher: This is a good point to locate the respondent during childhood on Y-axis].

<u>Youth – approximately 13 years to marriage (or 20 years old, whichever is more appropriate)</u>

DEPENDING ON THE AGE OF THE RESPONDENT, THIS MAY NOT NEED MUCH DETAIL AS WE'RE PRIMARILY INTERESTED IN THE PERIOD SINCE 2000

- When did you leave school?
- Probe around if, when and why respondent left school? Was the cost of education a factor? What type of education did you receive?

- Livelihoods: What livelihood activities (e.g. crop agriculture, livestock, salaried job, small shop, petting trading) did you and your family engage in and can you rank them from the most important to the less important in terms of income?
- Did you family stop any livelihood activities when you were a youth? If so, why did they stop?
- If your family was involved in crop agriculture, which crops and why? Approximately how much land did they cultivate? Where did you get agricultural inputs from? Who were the crops sold to? Did your family stop cultivating any crops during this period? If so, do you know why they stopped?

- What was your first job/ enterprise/ livelihood activity?
- How did you get this job/ start this enterprise/ move into this livelihood activity? Did you get help from anyone? Why did you decide to undertake this work? Was this work profitable? If not, why not? What were the main difficulties in ensuring that this work was profitable?
- If you migrated away from the village, did you have a job before you went? How did you find this job? How did you send money back to your family?

- What were your aspirations when you were a youth? Do you feel that you've achieved these? If not, why not? Do you think the aspirations of youth today are different to those when you were in your youth? If so, why do you think that this may be so?

- Looking back over your youth are there any difficult events or periods that stand out? (e.g. drought, parent losing their job, having to leave school). How did you manage or cope with this?
- Looking back over your youth are there any positive events or periods that stand out? (Use this question to probe opportunities, investments, resilience)

Young adulthood

FOR MANY RESPONDENTS YOU WILL NEED TO ASK THESE QUESTIONS IN A LOT OF DETAIL AND GET A LOT OF INFORMATION IN CHANGES IN WELL-BEING AND LIVELIHOODS OVER TIME AS WE ARE PRIMARILY INTERESTED IN THE PERIOD SINCE 2000

Ask about their marriage:
- Are you married?
- How did you meet your husband/ wife?
- Parent's/ family's views of the match?
- How much was the bride price? Was all of it able to be paid? What was the source of the bride price and where did it go?
- Move to your spouse's village – feelings about that/ problems; setting up home; relationship with in-laws/ extended family/ community; relationship with spouse.

Ask about their assets:
- Assets at marriage – in particular productive assets – livestock, agricultural implements, land, motorbike. What was the source of these assets? Did they come from the family/ parents? Were they purchased with the previous earnings of you/ your partner?

Ask about their children:
- Age now
- How have you financed the education of your children? Has the cost of education been a barrier to sending your children to school? For which level(s) of schooling has cost been a particular barrier?

- What livelihood activities (e.g. livestock, crop agriculture, casual labour, salaried job, petty trading/ small shop, migration) did you and other household members engage in and can you rank them from the most important to the less important in terms of income and food security?

Probe around the following livelihoods activities to see if any members of the household were engaged in them during this period. If they were involved in the activities follow-up about those activities. If not, ask why they didn't engage in these activities:

<u>Were members of your household involved in livestock rearing?</u>

- If involved in livestock rearing: why did you decide to engage in this? Approximately how many cattle and small ruminants did you have? Who was involved in rearing livestock?
- How did you acquire livestock (e.g. from selling, breeding)?
- What was the profitability of livestock rearing?
- What are the constraints and risks of livestock rearing (probe weather, disease, market access, veterinary services)?
- Did you lose any livestock during this period? Why?
- Did you stop livestock rearing during this period? If so, why?

<u>Were members of your household involved in crop agriculture?</u>

- If involved in crop agriculture: why are you farming? Which crops are you farming? Who is involved in the farming (did you employ casual labourers)?
- Who owns the land which you farm on? If sharecropping/ leasing what are the arrangements of this? Is it easy to find land to sharecrop/ lease here? Approximately how much land did you farm? Is this all the land that you have access to? If not, why did you not farm all the land that you could (e.g. lack of labour)?
- How and where do you sell your crops (if they do)? Did you feel that you got a fair price for the different crops that you sell (does it cover the production costs)? If not, why not? How do you know if you're getting a good price?
- Did price changes of agriculture goods (either inputs such as seeds or the sales price for crops) affect you during this period? How?
- Was crop farming profitable? Which crops were more profitable than others? Why was this so? What were the major risks of crop farming during this period (e.g. weather, market access)? Were some crops that you cultivated more risky then others? Why was this so? How did you try and minimise the risks of crop farming?

<u>Did you, or other household members engage in casual labour during this period?</u>

- If involved: Who was involved in it? What type of casual labour was this (agricultural, non-agricultural, specify, in this village)? Why were they involved in casual labour?
- How easy was it to find casual work during this period? Was it available all year around? Was casual labour profitable?
- How did you find this type of work? Did undertaking casual labour make it more difficult to pursue your other livelihoods activities (e.g. cultivating your own crops)?
- What are the risks of engaging in casual labour (e.g. injury, exploitation)? How do you manage these?

<u>Did anyone in the household have a (salaried) job during this period?</u>

If so – who had the job? What type of job was it (teacher, bank clerk…)? How did they get that job (role of education, social networks)? Was this job profitable?

<u>Did you receive any remittances or did anyone from the household (e.g. older children) engage in migration during this period?</u>

- If so – where did they migrate to? Why did they decide to migrate? Did they have a job before they migrated? How did they find out about/ access a job (did social networks play a role)?
- How did they fund the costs of migrating (did they need to take out a loan)?
- What job did they undertake? Just one job or different jobs?
- Was the migration profitable? If not, why not?
- How did they send money back to the household? What was this money used for?
- Did this migration impact on other household livelihoods activities (e.g. being unable to farm as not enough labour)?

<u>Was anybody in your household engaged in petty-trading (including of crops) or in a small business (e.g. shop, masonry, airtime kiosk, brewing)?</u>

- If so, what type of activity were they engaged in? Why did they decide to engage in this activity?
- How did they finance this activity? Was this activity profitable? If not, why not?
- What were the main risks associated with this activity? How did they try and overcome those risks?

- Did any household members stop certain income generating activities during this period, why did they stop?

- Did the profitability of any of the livelihoods activities increase or decrease during this period? Why was this?
- Did your household have any outstanding debts at the end of this period? Who were these debts with? Why did you take out these debts? What were the interest rates? Did you think that you'd be able to repay these?

Ask about the health of family members:
- Health of interviewee and family?
- Impact on household well-being?
- Were you a member of the NHIF? If not, why not?
- Were there any periods of sickness during young adulthood? If so, of who and where did you or they go for treatment? How much did it cost and how did you or your family find that money?

- Did you household participate in government/ NGO programmes? e.g. old age pension; for people with severe disabilities. How important is this for your household? When/ in what event has it been especially important?
- Looking back over your early adulthood are there any difficult events or periods that stand out? (e.g. loss of livestock, health shock, land dispute, declining price of agricultural produce, drought). How did you manage or cope with this event/ shock?
- Looking back over your early adulthood are there any positive events or periods that stand out? (use this question to probe opportunities, investments, aspiration, resilience)
- Overall, do you feel that your well-being went up or down during early adulthood? Why was this?

Late adulthood (40-60 years of age)

FOR MOST HOUSEHOLDS YOU WILL NEED TO ASK THESE QUESTIONS IN A LOT OF DETAIL AS WE ARE VERY INTERESTED IN THE PERIOD SINCE 2000.

- Ask the individual to compare their household situation at late adulthood to that at marriage – was their situation better or worse? Why is this?
- Which assets does the household have at late adulthood?
- Did the livelihoods activities of household members change in late adulthood from those of young adulthood? Why was this?
- What livelihood activities (e.g. livestock, crop agriculture, casual labour, salaried job, petty trading/ small shop, migration) did you and other household members engage in during late adulthood and can you rank them from the most important to the less important in terms of income and food security?

Probe around the following livelihoods activities to see if any members of the household were engaged in them during this period. If they were involved in the activities follow-up about those activities. If not, ask why they didn't engage in these activities. If there are changes in livelihoods activities followed by household members since young adulthood, ask why:

Were members of your household involved in livestock rearing?
- If involved in livestock rearing: why did you decide to engage in this? Approximately how many cattle and small ruminants did you have? Who was involved in rearing livestock?
- How did you acquire livestock (e.g. from selling, breeding)?
- What was the profitability of livestock rearing?
- What are the constraints and risks of livestock rearing (probe weather, disease, market access, veterinary services)?
- Did you lose any livestock during this period? Why?
- Did you stop livestock rearing during this period? If so, why?

Were members of your household involved in crop agriculture?

- If involved in crop agriculture: why are you farming? Which crops are you farming? Who is involved in the farming (did you employ casual labourers)?
- Who owns the land which you farm on? If sharecropping/ leasing what are the arrangements of this? Is it easy to find land to sharecrop/ lease here? Approximately how much land did you farm? Is this all the land that you have access to? If not, why did you not farm all the land that you could (e.g. lack of labour)?
- How and where do you sell your crops (if they do)? Did you feel that you got a fair price for the different crops that you sell (does it cover the production costs)? If not, why not? How do you know if you're getting a good price?
- Did price changes of agriculture goods (either inputs such as seeds or the sales price for crops) affect you during this period? How?
- Was crop farming profitable? Which crops were more profitable than others? Why was this so? What were the major risks of crop farming during this period (e.g. weather, market access)? Were some crops that you cultivated more risky then others? Why was this so? How did you try and minimise the risks of crop farming?

Did you, or other household members engage in casual labour during this period?

- If involved: Who was involved in it? What type of casual labour was this (agricultural, non-agricultural, specify, in this village)? Why were they involved in casual labour?
- How easy was it to find casual work during this period? Was it available all year around? Was casual labour profitable?
- How did you find this type of work? Did undertaking casual labour make it more difficult to pursue your other livelihoods activities (e.g. cultivating your own crops)?
- What are the risks of engaging in casual labour (e.g. injury, exploitation)? How do you manage these?

Did anyone in the household have a (salaried) job during this period?

If so – who had the job? What type of job was it (teacher, bank clerk…)? How did they get that job (role of education, social networks)? Was this job profitable?

Did you receive any remittances or did anyone from the household (e.g. older children) engage in migration during this period?

- If so – where did they migrate to? Why did they decide to migrate? Did they have a job before they migrated? How did they find out about/ access a job (did social networks play a role)?
- How did they fund the costs of migrating (did they need to take out a loan)?
- What job did they undertake? Just one job or different jobs?
- Was the migration profitable? If not, why not?
- How did they send money back to the household? What was this money used for?
- Did this migration impact on other household livelihoods activities (e.g. being unable to farm as not enough labour)?

Was anybody in your household engaged in petty-trading (including of crops) or in a small business (e.g. shop, masonry, airtime kiosk, brewing)?

- If so, what type of activity were they engaged in? Why did they decide to engage in this activity?
- How did they finance this activity? Was this activity profitable? If not, why not?
- What were the main risks associated with this activity? How did they try and overcome those risks?

- Did any household members stop certain income generating activities during this period, why did they stop?
- Did your household have any outstanding debts at the end of this period? Who were these debts with? Why did you take out these debts? What were the interest rates? Did you think that you'd be able to repay these?
- Has there been any change in the profitability of different livelihoods activities between early adulthood and late adulthood (e.g. changes in land fertility in input and output prices over time)?
- Has the nature of shocks facing any of these livelihoods activities changed over time? If so how (e.g. is drought more/ less frequent)?

Ask about the health of family members:
- Health of interviewee and family?
- Impact on household well-being?
- Were they enrolled in the NHIF and did it support this treatment? If not, why not?
- Were there any periods of sickness? If so, of who and where did you or they go for treatment? How much did it cost and how did your family find that money?

- Did your household participate in government/ NGO programmes during late adulthood? e.g. old age pension; for people with severe disabilities. How important is this for your household? When/ in what event has it been especially important?
- Looking back over your late adulthood are there any difficult events or periods that stand out? (e.g. loss of livestock, health shock, land dispute, declining price of agricultural produce, drought). How did you manage or cope with this event/ shock?
- Looking back over your late adulthood are there any positive events or periods that stand out? (use this question to probe opportunities, investments, aspiration, resilience)
- Overall, do you feel that your well-being went up or down during late adulthood? Why was this?

Older age

- How is life during older age?
- Working or not work? Are you able to support yourself? If not, who is supporting you?
- Health? Were there any periods of sickness? If so, of who and where did you go for treatment? How much did it cost and how did you find that money? If you are taking regular medication, where do you get this from?
- Widowhood: age when spouse died; implications; feelings; change in status
- Relationships with others: responsibilities; support from children; role in community; status?
- Have you given any inheritance to your children? Has this affected your well-being, how?
- Any participation or engagement in social safety nets? This includes support from families, neighbours, remittances or support from the government as through cash transfers e.g. old age pension; for people with severe disabilities. How important is this for your household? When/ in what event has it been especially important?
- Looking back over your older age are there any difficult events or periods that stand out? (use this question to probe shocks, coping strategies, channels of support [relatives, friends, NGOs, church, moneylender etc], changes in asset levels, changes in livelihood strategies)
- Looking back over your older age are there any positive events or periods that stand out? (use this question to probe opportunities, investment, acquisition, aspiration, resilience)