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RESILIENCE, NEAR POVERTY AND VULNERABILITY DYNAMICS

Evidence from Uganda and the Philippines

FEBRUARY 2019

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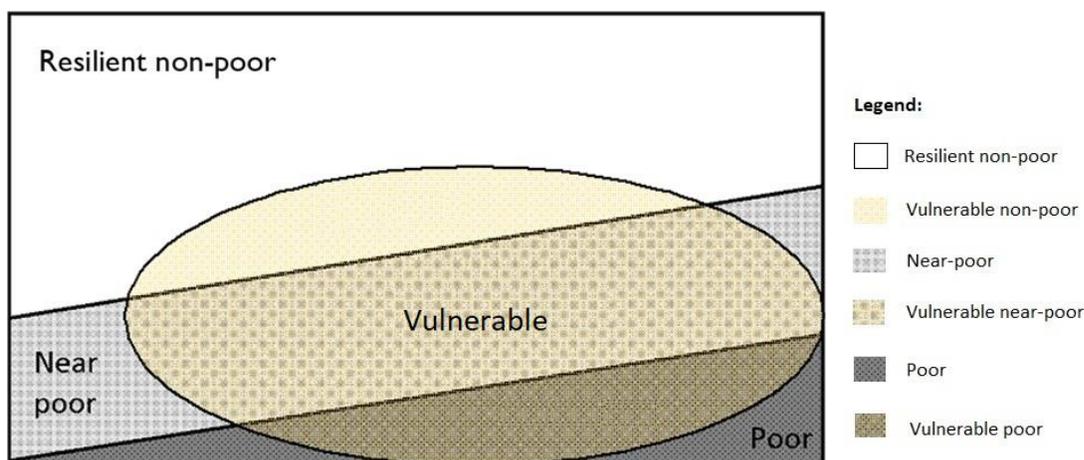
CONTENTS

EXECUTIVE SUMMARY	1
INTRODUCTION	3
CONCEPTUALIZING VULNERABILITY	4
CONTEXT: POVERTY, VULNERABILITY, AND RESILIENCE	6
UGANDA	6
PHILIPPINES	7
DATA AND EMPIRICAL STRATEGY	8
DATASETS	8
EMPIRICAL STRATEGY	9
NEAR-POVERTY AND VULNERABILITY DYNAMICS	11
POVERTY DYNAMICS	11
THE NEAR-POOR	11
ESTIMATING VULNERABILITY	12
DRIVERS OF RESILIENCE AMONGST THE NEAR POOR	14
UGANDA	14
PHILIPPINES	16
DISCUSSION AND CONCLUSION	17
REFERENCES	20
ANNEXES	23
TABLE A1. UGANDA, SUMMARY STATISTICS	23
TABLE A2. PHILIPPINES, SUMMARY STATISTICS	24
TABLE A3. UGANDA, CORRELATES OF POVERTY/ VULNERABILITY TRANSITIONS	25
TABLE A4. PHILIPPINES, CORRELATES OF POVERTY/ VULNERABILITY TRANSITIONS	28

EXECUTIVE SUMMARY

This research investigates the resilience of households above the poverty line in Uganda and the Philippines. It aims to isolate the extent to which being ‘near-poor’¹ makes households vulnerable to falling into poverty in the future. The study moreover explores whether the same sources of resilience that protect against transitory poverty escapes (escaping poverty but then falling back into poverty) and promote sustained escapes from poverty (escaping poverty and staying out of poverty over time) function in similar ways for the ‘near-poor’ and households vulnerable to future poverty (see figure 1). In particular, it investigates whether households that sustainably escape poverty also sustainably escape vulnerability, and if not, what are the drivers associated with these different trajectories that can help build resilience. **As sustained poverty escapers that also leave vulnerability behind are likely to have become more resilient, examining these sources of resilience even amongst the near poor is important in developing effective poverty reduction strategies.**

Figure 1: Links between resilience, poverty and near-poverty, and vulnerability



Analysis of the Uganda National Panel Survey from 2009/10-2013/14 and the Philippines Family Income and Expenditure Survey from 2003-2009 reveals that as much as **77% of households in Uganda and 55% of households in the Philippines had per capita income above the poverty line but under two times the national poverty line in at least one of the survey years. Vulnerability was also high, with as much as 59% in Uganda in 2013/14 and 51% in the Philippines in 2009 estimated as being vulnerable to poverty**, or more likely than the typical person to be poor in the subsequent period. In most cases, vulnerability status encompasses poverty status, meaning that poor households were also highly likely to be vulnerable, though there was a much larger share as well of households that were not poor yet vulnerable.

¹ Near poor households in this research are those with expenditures per capita over the national poverty line, yet under 1.5 and 2 times the poverty line, given its common usage in the literature and our country contexts (eg. World Bank, 2015; DeParle et al., 2011; Albert and Vizmanos, 2018).

The study suggests that policies should acknowledge the varied drivers of sustained escapes when measured by poverty but also vulnerability. This is because **an assessment of vulnerability dynamics can help identify resilience capacities of households, by considering future expected poverty in addition to present poverty dynamics.** Such an assessment suggests that there may be more drivers associated with sustained escapes from vulnerability than those for sustained escapes from poverty amongst the near-poor across countries. In Uganda, secondary education and some economic diversification from agriculture, particularly for households at higher levels of income, reduces vulnerability to poverty significantly. In the Philippines, a level of income which enables good use to be made of loans and enables greater health expenditure and increased dependency levels while avoiding impoverishment emerges as important in promoting resilience.

At the same time, there are factors that undermine these sustained escapes and processes of resilience-building. Regression results indicate factors like alcohol consumption in the Philippines, and urban residence in Uganda pose constraints to sustained escapes from vulnerability amongst the near-poor. **The fieldwork in both countries also indicated that transitory escapes from poverty and impoverishment is more often a result of multiple shocks, though some single shocks can also impoverish by impairing resilience capacities.** Examples range from high-intensity typhoons in the Philippines, to severe disability in Uganda. Cash transfers significantly help with recovery from such devastating shocks, though should not operate in isolation.

In this context, there are certain enabling conditions for the near-poor to continue to make progress and build resilience. These include a substantial formal sector, more commercialized agriculture, reduced dependency burdens, improved conditions for female-headed households, and assistance to poor and near-poor households. Assistance, whether in the form of cash transfers or remittances, is associated with increasing the likelihood of sustained escapes amongst the near poor in Uganda and the Philippines, respectively. However, at the moment, cash transfers remain mainly targeted to households that are already poor. A renewed focus on social protection and assistance for the poorest but also extended to households near the poverty line would do well in these contexts. At the same time, assistance in the form of remittances and help from relatives and friends is also about social capital and networks, reflecting **a social structural component of mobility that is critical in building resilience** and important to consider in programming. Supporting agency embedded within these kinship structures is a step towards improving resilient outcomes over time for near-poor households.

INTRODUCTION

Analysis of recent panel data in a selection of countries in sub-Saharan Africa and Asia reveals a high share of ‘near-poor’ households, with ‘near-poor’ status referring to living at a situation above but near the poverty line (see Box 1 for definitions). For example, a third of rural households in Cambodia surveyed were over the poverty line in 2017, yet with per capita expenditures less than 1.5 times the national poverty line (Bird et al., 2017). The rate of near-poor households was marginally higher at an earlier period in the Philippines (37% in 2009) (authors’ analysis). In some countries in sub-Saharan Africa where poverty rates were higher, near-poverty rates were lower using national poverty lines- for example, at 27% of households in 2014 in Niger, and 21% of households in 2013/14 in Uganda (authors’ analysis). A focus on the near-poor is thus an important area of policymaking and research, yet remains largely neglected in poverty and development discourses. It would benefit from more attention in the form of analysis of more countries, more up to date data, and further mixed methods research.

This research investigates the resilience capacities of households who are still quite close to but above the poverty line in Uganda and the Philippines, both countries with considerable attention being accorded to the near-poor in contemporary development discourse. It aims to isolate the extent to which being ‘near-poor’ makes households vulnerable to falling into poverty in the future. The study moreover explores whether the same sources of resilience that protect against transitory poverty escapes and promote sustained escapes from poverty function in similar ways for ‘near-poor’ and vulnerable households. In particular, we compare the drivers associated with sustained escapes from poverty amongst the near poor to sustained escapes from vulnerability. We do this because sustained poverty escapers that also leave vulnerability behind are likely to have become resilient, and so examining these sources of resilience even amongst the near poor is important in developing effective poverty reduction strategies. Box 1 outlines definitions used in this paper.

Box 1: Definitions used in the study

Near poor households in this research are those with expenditures per capita over the national poverty line, yet under 1.5 and 2 times the poverty line, given its common usage in the literature and our country contexts (e.g. World Bank, 2015; DeParle et al., 2011; Albert and Vizmanos, 2018).

Vulnerability is defined in this study as the probability of future poverty (among the poor or non-poor), estimated using regression-based methods. See the literature review below for a discussion of vulnerability to poverty, and Figure 5 and Table 2 for an exploration into overlap between these two groups.

Poverty dynamics trace households’ poverty status over survey years. For example,

- **Sustained poverty escapes** refer to individuals or households that escape poverty and subsequently remain out of poverty in subsequent survey years.
- **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.
- **Impoverishment** refers to the process of a person or household slipping into poverty.
- **Chronic poverty** is long-term poverty that persists over many years or even a lifetime and is often transmitted intergenerationally.

USAID defines **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, 2015). In the context of poverty dynamics, resilience may be viewed as a set of capacities enabling households to experience a sustained poverty escape, even in the face of shocks and stresses. **A more inclusive definition is imposed in this present study, where resilience is viewed as the set of capacities that can enable households to escape vulnerability (to future poverty) over the long term.**

This study offers insights into resilience capacities for households to not only sustain poverty escapes in the present day, but also minimize the ex-ante risk of vulnerability to future poverty. It builds on analysis by Albert and Vizmanos (2018) exploring vulnerability of households to income poverty in the Philippines. In this study, we undertake an analysis of drivers of vulnerability and poverty dynamics amongst the near-poor in the Philippines and Uganda.

Our study finds that the set of drivers for sustained escapes from vulnerability are more inclusive than those for sustained escapes from extreme poverty amongst households near the poverty line. In Uganda, for example, secondary education and some economic diversification from agriculture, particularly for households at higher levels of income, reduces vulnerability to poverty significantly. In the Philippines, a level of income which enables good use to be made of loans and enables greater health expenditure and increased dependency levels while avoiding impoverishment emerges as important in promoting resilience. In this context, poverty reduction policies and programs should acknowledge ex-post² poverty dynamics of near-poor households but also ex-ante vulnerability status, particularly for households near the poverty line who may be more susceptible to falling into poverty and less able or willing to make the risky investments to considerably improve welfare and build resilience over time. Both types of policies will be necessary to build resilience capacities of households and improve their present and future wellbeing.

The next section overviews the literature on vulnerability. Following sections provide context to growth and poverty reduction in Uganda and the Philippines; present the datasets and empirical model; present poverty dynamics and vulnerability estimates; explore drivers of poverty and vulnerability trajectories; discuss the findings and offer a brief conclusion.

CONCEPTUALIZING VULNERABILITY

The literature on poverty is, *prima facie*, concerned with households that at some point in time have been under the poverty line. The focus of such research is typically on drivers of poverty escapes or descents, or more recently on the drivers of specific poverty trajectories such as escapes that are sustained over time compared to those that are only transitory in nature.³ The measurement of poverty is typically done ex-post. Less attention is accorded in the poverty dynamics literature to households that are near the poverty line, many of which ex-ante may be particularly vulnerable to a transitory rather than sustained escapes from poverty. Estimating vulnerability to poverty could offer a pre-emptive way to ensure that households remain out of poverty and so are resilient in the face of shocks and stressors.

An exploration of the term ‘vulnerability’ in the Chronic Poverty Research Centre’s working papers by Prowse (2003) finds that vulnerability has been conceptualized in different settings as vulnerability to poverty, a symptom of poverty⁴, part of the multi-dimensional nature of poverty, and typically underlined by risk. Our conceptualization is one of ‘vulnerability to poverty’. It may be argued that this “reduces

² Ex-post, or “after the fact”, is used in our study in reference to poverty dynamics based on historic data, such as that derived from our panel surveys. Ex-ante, or “before the event” refers to future events. In this study, our measure of vulnerability to poverty estimates the probability today that a household is poor in the future.

³ For analyses of Uganda and the Philippines, see Scott et al., 2016, and Diwakar, 2018, respectively. For a more general analysis, see for example Diwakar and Shepherd, 2018,; and other papers on the CPAN website [here](#).

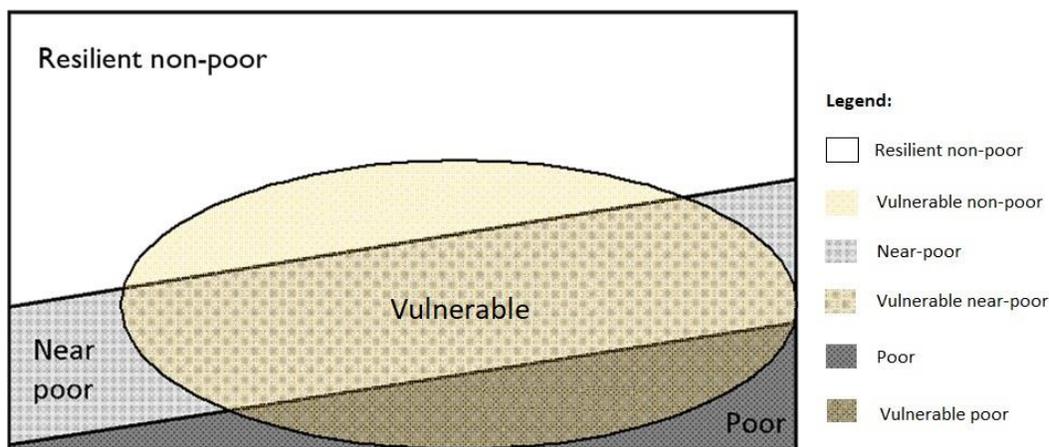
⁴ It is a component of poverty that helps explain while chronically poor people fail to escape poverty— they, too, are vulnerable to a loss of welfare. However, this paper focuses on vulnerability of those above the poverty line.

vulnerability to only being a cause of poverty, not a symptom or component of poverty” (Prowse, 2003). Nevertheless, this definition is useful in quantifying vulnerability such that it can be compared to poverty measures and accorded analytic and policy relevance (Pritchett et al., 2000). Moreover, though vulnerability has many definitions in the literature, there is a key underlying thread: “vulnerability is always more than mere exposure to risk– it is also about deprivation and shortfalls” (Calvo and Dercon, 2013). Investigations into vulnerability typically focus on modelling risks that can impact households’ consumption patterns and result in a loss of welfare (Townsend, 1994; Mace, 1991; Dercon and Krishnan, 2002; Chaudhuri et al., 2002; Calvo and Dercon, 2007).

Following the vulnerability to poverty approach, Heitzmann et al., (2002) provides a framework to analyze vulnerability through a “risk chain” which decomposes vulnerability into risks, responses, and outcomes. Others endow primacy to the enabling factors for wellbeing, and in turn the links between wellbeing, risk and vulnerability (e.g. Dercon, 2001; Bandyopadhyay, 2016). For example, in Dercon’s (2001) framework, human capital, returns to activities, transfers, savings, education, health, and other capabilities all provide individuals and households with assets, income and capabilities. However, risks to these intrinsic and instrumental drivers of wellbeing can render households vulnerable and are also included in his model. For instance, disasters can cause asset damage or falls in output, uncertain quality of public services in health and education can affect these capabilities, and weak contract enforcement could impact returns in the form of earned income (Dercon, 2001).

Vulnerability has been applied to various levels from nations down to the individual, but an understanding of vulnerability needs to take place at the level of the individual and the household because even where nations may not be considered vulnerable, individuals might still be (Dreze and Sen, 1989). Indeed, vulnerability of near-poor households may cause them to fall into poverty when faced with exposure to macro or micro-level risk, especially when without the ability or insurances with which to sufficiently smooth consumption. Moreover, in contexts of heightened vulnerability, households near the poverty line may opt for safer, but less profitable investments compared to those less at risk of poverty. This, in turn, would compromise their ability to build resilience and remain out of poverty over the long run. In this context, examining the vulnerability to poverty of near-poor households is critical for the analysis of poverty dynamics and the road to zero poverty.

Figure 2: Links between resilience, poverty and near-poverty, and vulnerability



Though explorations into vulnerability are not new, our research builds on the vulnerability literature to examine dynamics of both poverty and vulnerability amongst the near-poor, and framing escapes from vulnerability as constitutive of resilience. The concepts can be visualized in Figure 2. We explore whether drivers associated with poverty trajectories differ significantly from those for the subset of households

that at some point in time were near-poor on these trajectories, and whether these households are also vulnerable to future poverty. Our analysis stems from a recognition that to end current and future poverty, it is important to look not just at poverty dynamics, but poverty dynamics in the context of vulnerability amongst near-poor households. This is critical in developing resilience over the long term, since not all non-poor households possess high levels of resilience.

The next section provides an overview of poverty reduction and aggregate sources of vulnerability in Uganda and the Philippines, before investigating the extent and drivers of vulnerability in these countries.

CONTEXT: POVERTY, VULNERABILITY, AND RESILIENCE

This paper examines drivers and constraints to resilience amongst near-poor households in the Philippines and Uganda, through an examination of poverty and vulnerability dynamics. These countries were chosen given their geographic spread; the building discourse around near-poor and non-poor vulnerable households in very different contexts and with distinct growth and poverty reduction outcomes; the presence of volatility stemming from varied manifestations of conflict and climate risks; and the availability of nationally representative panel data. The Philippines has been a middle-income country for a long time, with a large and wealthy middle class, a huge metro-city in addition to other large cities that are considerably urbanized and industrialized, and with large-scale emigration for work. Uganda, in contrast, is still a lower-income country, predominantly rural, and without huge migration out-flows. There are also clearly different outcomes in terms of growth and poverty reduction in the two countries. Part of this stems from exogenous sources of volatility at the macro level. Uganda is a post-conflict state with climate change risks, and the Philippines continues to have subnational conflict in its southern territories of the Mindanao region and is also highly disaster-prone.

The purpose in this study is not to compare, but to start a process of understanding of near-poor and resilience across different contexts. As such, we employ national poverty lines in our analysis, not for country comparisons but instead for its primacy in national contexts, stemming in part from its estimation from a more relevant set of commodity bundle in each country. The analysis explores the factors which may affect vulnerability, poverty reduction, and relatedly the ability of near-poor households to be resilient and so remain out of poverty over the long term.

UGANDA

Uganda has experienced considerable poverty reduction, from 38.8% in 2002 to 19.5% in 2012 using national poverty lines, representing almost 2.9 million people pulled out of poverty (WDI, 2018).⁵ However, the poverty rate increased initially to 27% by 2016, an estimate that was later revised down to 21.4% (UBOS, 2017; UBOS, 2018). High economic growth rates fueled this initially positive snapshot of poverty reduction (UNDP, 2015). In addition, the post-conflict period has seen a peace dividend in the North, an increase in “more secure and productive forms of employment” (UNDP, 2015), macroeconomic stability, and pro-market reforms. This enabling environment has nurtured increased

⁵ The national poverty line in Uganda is between 72 and 82 percent of the international \$1.90 poverty line when converted into 2011 PPP. Using the international \$1.90 poverty line, the proportion of poor individuals dropped from 62.2% in 1992 to 34.6% in 2012 (WDI, 2018). The national rates presented, however, obscure important sub-national nuances and dynamics, such as high rates of chronic poverty in northern Uganda, as shown in Figure 3.

agricultural incomes and specialization, household economic diversification, and improvements in primary and secondary education completion rates that have contributed to continued poverty reduction (Scott et al., 2016).

A commitment to social protection for vulnerable segments is also seen in the country's development plans. The National Social Protection Policy provides the framework for social protection sector programs such as the Public Service Pension Scheme, National Social Security Fund, Social Assistance Grants for Empowerment (SAGE), Public Works Programmes, and Social Care and Support Services (Ministry of Gender, Labour, and Social Development, 2015). Some of these programs' beneficiaries implicitly cover the insecure non-poor. For example, SAGE has two targeting mechanisms, one which is based on a composite index including demographic indicators such as disability, age and orphanhood to measure vulnerability (OPM, 2015). While not its intention or explicit target, this could possibly also include near poor populations.

More generally, the government's Second National Development Plan (NDPII) 2015/16-2019/20 aims to propel Uganda to middle-income status by 2020 and reduce poverty to 14.2%. NDPII outlines three national priority growth opportunities in agriculture, tourism, oil and gas, and two development fundamentals in infrastructure and human capital development to achieve its vision (Government of Uganda, 2015). This provides the backbone of various poverty and vulnerability initiatives in these areas, which contribute to building multidimensional wellbeing and resilience. Non-exhaustive examples include:

- for agriculture, the Uganda Agricultural Insurance Scheme in 2016 and the Operation Wealth Creation intervention in 2015/16;
- with regards to disasters and climate change, the 2010 National Policy for Disaster Preparedness and Management and the 2013 National Climate Change policy;
- around skills and education, the Business, Technical and Vocational Education and Training Strategic Plan 2011-2020 and the introduction of universal secondary education in 2007;
- for the health sector, the National Health Policy 2010/11-2019/20 to work towards universal access to a minimum healthcare package and which establishes a National Health Insurance; and
- for conflict and security, the 2009 Peace, Recovery and Development Plan for the northern region.

The success of these programs and policies vary. In more recent years, poverty has even increased in Uganda to 21.4% by 2016, according to latest national estimates. Growth has decelerated following a series of shocks including drought, financial crisis, inflation, "aid disruptions... domestic policy slippages (such as increased election-related spending); and a waning growth dividend from the first spurt of reforms" (Scott et al., 2016; Duponchel et al., forthcoming). These shocks have rendered many Ugandan households vulnerable to poverty.

PHILIPPINES

Poverty in the Philippines has also reduced albeit marginally since the 2000s, dropping from 24.9% in 2003 to 21.6% in 2015 according to the national poverty line (WDI, 2018), which is higher than the Ugandan poverty line and the international \$1.90 line.⁶ Poverty reduction in recent years has been driven by

⁶ In the Philippines, the national line is considerably higher than international standards, and closer to the \$3/day poverty line. Poverty in the Philippines dropped from 26.6% in 1991 to 8.3% in 2015 according to the international \$1.90 poverty line (WDI, 2018).

economic growth averaging 5.4% between 2006-2015, including a rise in remittances, strong export sector, and growing transportation and communications infrastructure (World Bank, 2014; 2018). Additionally, the government's commitment to inclusive growth has manifested through its various social-protection programs including the KALAHI-CIDDS project established in 2003 to improve human development services, and the Conditional Cash Transfer program in 2008.

Other programs and policies that are conducive to poverty and vulnerability reduction have sprung up over the decades. Again, non-exhaustive examples include:

- for agriculture, the Agri-Pinoi Rice Program by the Department of Agriculture, and the Agricultural Infrastructure and Facilities Support Program;
- with regards to disasters and climate change, the Philippine Disaster Risk Reduction and Management Act in 2010, a National Strategic Framework on Climate Change in place from 2010-2022, and a National Greening Program in 2011 to provide income and livelihoods to poor communities in an environmentally-sustainable way;
- around education, most recently the introduction of free tertiary education in 2017;
- for the health sector, the National Health Insurance Program by PhilHealth; and
- for conflict and security, the Mindanao Peace and Development Framework Plan (2011-2030).

Yet decentralization in the Philippines means that disaster risk management and some other sectoral programs are devolved. The performance of local government thus becomes a critical variable. While decentralization has resulted in greater citizen participation in communities, and improved the involvement of civil society and the private sector in helping manage public affairs, concerns exist particularly around the internal revenue allotment creating a gap between local revenues and service delivery, and elite capture (Reyes, n.d.; Yusingco, 2015; Smoke, 2015; UN-HABITAT, 2012). Government effectiveness is thus also varied. For example, the National Health Insurance Program claims to cover 92% of the population (Padilla, 2016), yet concerns around estimation issues have emerged when some provinces have reported 166% coverage in past years (PIDS, n.d.; Lim, 2011; Silfverberg, 2013). In this context, “urgent political incentive to act decisively” is needed for government effectiveness in service delivery (Smoke, 2015).

However, even amidst these contextual and program enablers, the pace of progress on poverty reduction in the Philippines pales in comparison to other East Asian countries. Between 2006-2015, poverty rates in China, Indonesia, and Vietnam reduced by 2 percentage points annually, compared to just 0.9 percentage points in the Philippines (World Bank, 2018a). Moreover, the country's social protection and other efforts are targeted for households under the poverty line (Orbeta and Paqueo, 2016). There is little in existing policies and programs about explicitly helping the near-poor, many of whom may experience conditions and have needs very similar to households under the poverty line.

As a result, in the face of shocks such as disasters and conflict, many non-poor households have been pushed into poverty. For example, in 2009, the Philippines experienced 25 disaster events, the highest in the world. Regionally, the Autonomous Region in Muslim Mindanao (ARMM) had the most reported events of armed conflict in the country, which has also been associated with high poverty rates (Diwakar, 2018). These shocks contribute to impoverishment, particularly of families near the poverty line who may be particularly susceptible to poverty when faced with crisis.

DATA AND EMPIRICAL STRATEGY

DATASETS

Our investigation into resilience amongst near-poor households in Uganda and the Philippines employs analysis of two panel datasets:

- The **Ugandan National Panel Survey (UNPS)** is part of the World Bank’s LSMS-ISA program which seeks to collect household survey data in certain countries of Sub-Saharan Africa, with a focus on agriculture. It was carried out by the Ugandan Bureau of Statistics (UBOS), which typically undertakes national household surveys on average every three years. The first wave of the UNPS, in 2009/10, built on a subset of 3,123 households randomly selected from the 2005/06 Uganda National Household Survey. Subsequent waves were carried out in 2010/11, 2011/12, and 2013/14. Over time, decisions were made to re-survey a smaller selection of households, such that ultimately 1,398 households were surveyed across the five waves with consumption data available.
- The **Philippines Family Income and Expenditure Survey (FIES)** is a nationwide survey of households conducted by the Philippine Statistics Authority (previously the National Statistics Office) every three years. It is the main source of income and expenditure data in the country. The 2003, 2006, and 2009 rounds of the survey included a panel component, comprising 5,986 households interviewed in each round. Per capita income is used to estimate poverty status of households by the government in the country, and so our analysis employs the same measure.

EMPIRICAL STRATEGY

Theoretically, our analysis is underpinned by the capabilities approach, insofar as it explores livelihoods and endowments, assets, and the conversion factors at the individual, social, and macro-contextual level that can help reduce capability deprivation and increase the likelihood of sustained escapes from poverty (Shepherd and Diwakar, 2018). This framework, as it encapsulates both risks and enabling factors (Dercon, 2001), ties in to existing models around poverty dynamics and vulnerability referenced in Section 2.

In this paper, we explore drivers of poverty trajectories across our datasets, as well as poverty trajectories amongst households that were at some point in time near the poverty line. We then investigate drivers associated with sustained escapes from vulnerability. This allows us to explore whether households that sustainably escape poverty also sustainably escape vulnerability, and if not, what are the drivers associated with these different trajectories that can help overcome vulnerability and build resilience. We do this because sustained poverty escapers that also leave vulnerability behind are likely to have become resilient, and so examining these sources of resilience even amongst the near poor is important in developing effective poverty reduction strategies. Our empirical specification is outlined below in Box 2.

Box 2: Empirical specification used in this study

Vulnerability to poverty

A commonly used measure of vulnerability in the literature is the expected poverty approach, where vulnerability is concerned with the probability that an individual could fall into poverty (Ravallion, 1998; Chaudhuri et al., 2002). This definition is chosen as it is useful in quantifying vulnerability for comparison to poverty measures, thus deriving analytic and policy relevance (Pritchett et al., 2000). In this approach, following Chaudhuri et al. (2002), we first estimate a model of household consumption where:

$$\ln c_h = X_h * b + e_h \tag{1}$$

for $e_h \sim N(0, X_h \theta)$ and X_h is a vector of household characteristics including that of the household head, region of residence, and household-specific controls (see Tables A1-A2 in the Annex for list of variables). Then, we create a value for the expected log consumption and its standard deviation, and from this a measure of vulnerability to poverty per household:

$$\widehat{v}_h = \Pr(\ln c_h < \ln z | X_h) = cdf\left(\frac{\ln z - X_h a}{\sqrt{X_h \theta}}\right) \tag{2}$$

where *cdf* is the cumulative density function of the standard normal distribution. We then follow common convention to sort households into categories of:

- 1) Highly vulnerable households for a Vulnerability to Poverty Line $\widehat{v}_h > 0.5$, meaning that they have more than an even chance of being poor in the subsequent period (Pritchett et al., 2000);
- 2) Relatively vulnerable households for $\text{PHC} < \widehat{v}_h < 0.5$, where PHC is the poverty headcount rate, indicating that they are more likely than the typical person to be poor in the subsequent period; and
- 3) Non-vulnerable households for $\widehat{v}_h < \text{PHC}$

This identifies households that are vulnerable to poverty due to low expected consumption or highly variable consumption, and is important in the design of “forward-looking anti-poverty interventions” (Chaudhuri et al., 2002). It lays in contrast to interventions designed on past poverty outcomes alone, as could be derived from data on poverty dynamics and status.

Poverty and vulnerability dynamics amongst the near-poor

We also explore whether the same sources of resilience that protect against transitory poverty escapes, also function in similar ways for ‘near-poor’ households. To do this, we employ multinomial logistic regressions to investigate determinants of transitory poverty escapes and sustained poverty escapes. Our equation is similar to that employed in Scott et al. (2016), where:

$$\Pr(\text{Poverty Trajectory}_{i,t} = 1 \mid \beta, v_{i,t}) = F(\beta_0 + \beta_1 X_{i,t} + \beta_2 R_{i,t} + \beta_3 H_{i,t}) \quad (3)$$

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

where *Poverty Trajectory*_{*i*} is probability of the household *i* experiencing a transitory poverty escape, or sustaining a poverty escape,

X is a vector of variables defining the characteristics of the household head,

R is a set of dummy variables on household region, and if it is urban or rural, and

H is a vector of household specific controls.

Tables A3 and A4 present multinomial logit estimates of the probability of experiencing a transitory escape from poverty, or experiencing a sustained escape from poverty. Tables A3 and A4 also presents estimates where we regress our correlates on households that were near-poor at some point in time, where we define near-poor status, separately, as being over the poverty line but under 1.5 and 2 times the poverty line. Marginal effects are presented across results, which explores the associated impact of a one-unit change in the independent variable on the probability of being in one of the three states.

We also undertake a final specification where we construct vulnerability dynamics building on household vulnerability status identified in Equation 2, and examine the extent to which endowments and assets, activities, and shocks can prolong or build resilience against vulnerability amongst the near-poor. Our multinomial model is the same as in Equation 2, but with the vulnerability trajectory as the outcome. This allows us to examine drivers associated with sustained escapes from vulnerability for households that were at some point in time non-poor but less than 2 times the poverty line.

In all cases, our models are run on the balanced panel of households across both countries, excluding those within a 5% band above and below the poverty line to reduce measurement error. As noted earlier, we employ national poverty lines to guide this analysis, expressed in local currency units in constant 2005/06 prices for Uganda, and 2006 prices for the Philippines. Our analysis only comments on variables that are statistically significant at conventional levels (p-value<0.05; or otherwise marginally at p-value<0.10 where explicitly noted).

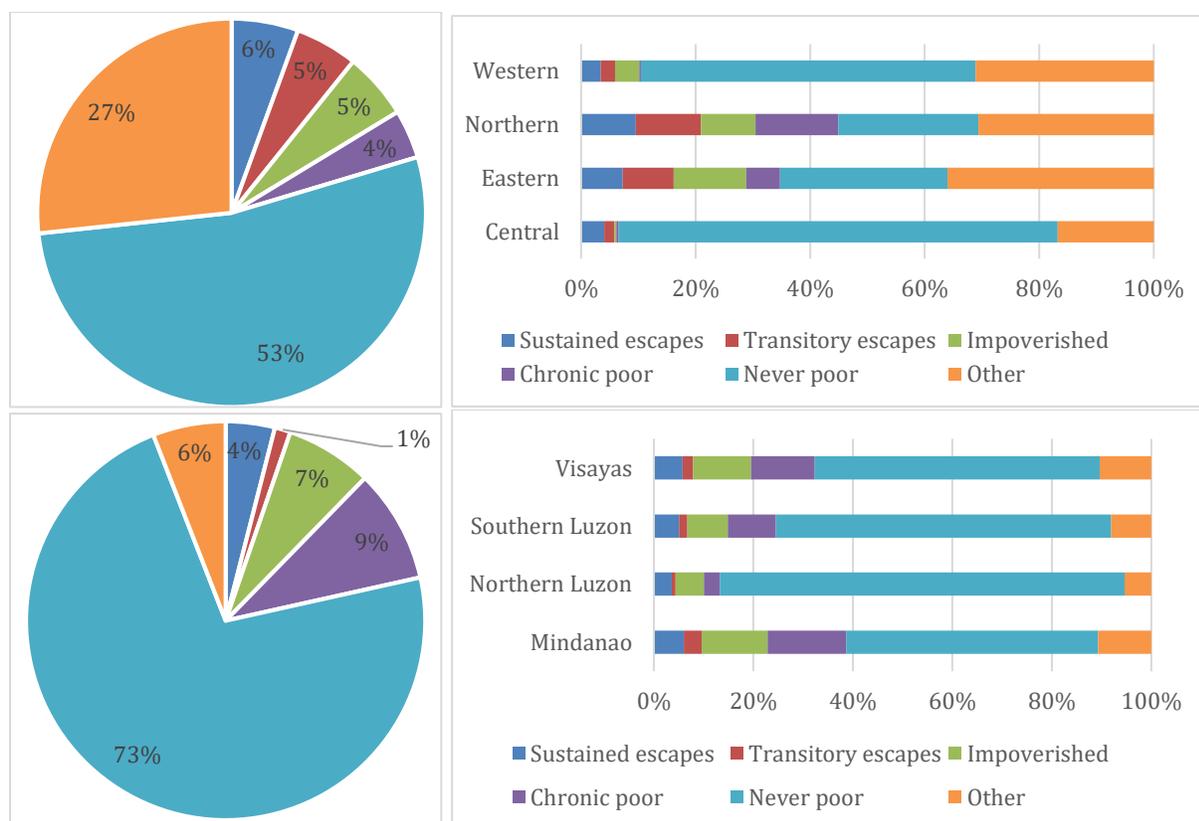
Having outlined our datasets and empirical specifications in this section, we next proceed to provide a descriptive overview of poverty dynamics, including amongst the near-poor, in Uganda and the Philippines. We also estimate vulnerability and examine near-poor status amongst vulnerable households.

NEAR-POVERTY AND VULNERABILITY DYNAMICS

POVERTY DYNAMICS

Analysis of poverty trajectories constructed from each dataset reveals a high rate of poverty mobility (Figure 3). In Uganda, 47% of households were poor during at least one of the survey years, with almost a third of that share (32%) either poor across the years (chronic poor), falling into poverty over time (impoverished), or escaping only to fall back into poverty (transitory poverty escapes). In the Philippines, the share of never poor is much higher when adopting national poverty lines, which are considerably higher than the Ugandan national lines. Even so, 27% of Filipino households were poor in at least one survey year, with almost two-thirds of that share (64%) comprising households that were chronic poor, impoverished, or experienced a transitory poverty escape. Of course, as noted earlier, these rates obscure the regional poverty dynamics, such as high levels of chronic poverty in northern Uganda and in the Mindanao region of the Philippines as indicated in Figure 3.

Figure 3: Poverty dynamics in Uganda 2005/06-2013/14 (top) and the Philippines 2003-2009 (bottom)



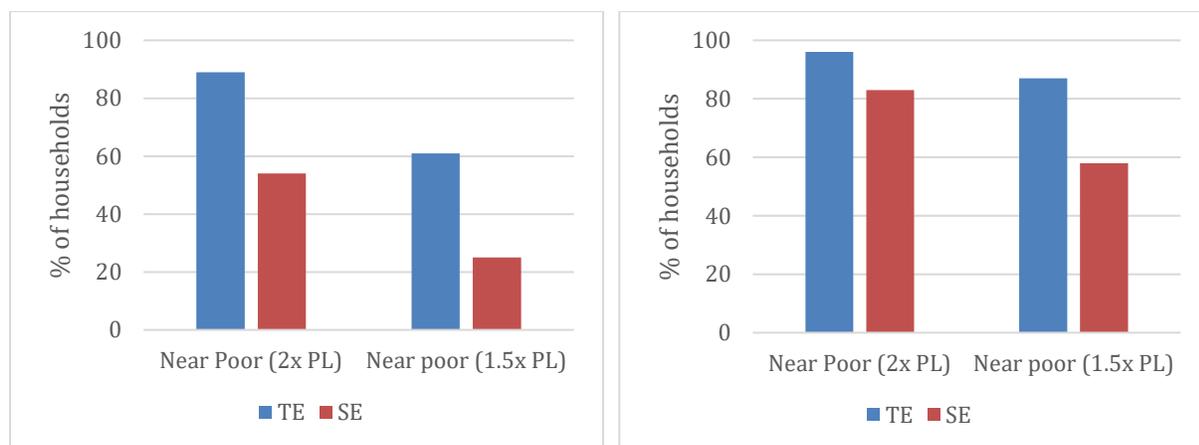
THE NEAR-POOR

We also examine near-poor status and poverty dynamics amongst near-poor households. **In both countries, the near-poor constitute a large share of households. As much as 77% of**

households in Uganda and 55% of households in the Philippines had per capita income above the poverty line but under two times (2x for simplicity) the national poverty line in at least one of the survey years. These figures drop to 59% in Uganda and 36% in the Philippines when examining households above the poverty line but under 1.5 times the poverty line. When exploring results by area and across survey years combined, in both countries, the near-poor, using the 2x definition, were more likely to be found in rural compared to urban areas. In the Philippines, near-poor households constituted around between 30-36% of households across regions. In Uganda, 29% of households in the Central region were near-poor, compared to 40% of households in Eastern and Western areas, reflecting the larger share of rural populations in these areas.

When disaggregating the share of near-poor by poverty trajectory, we observe that near-poverty status is more common amongst transitory escapers compared to sustained escapers in their first year of escape (Figure 4). For example, 89% of transitory escapers in Uganda remained near poor in their first year of escaping poverty, compared to just 54% of sustained escapers. Intuitively, this result is sound, as households with higher expenditures would be able to invest in building their resilience to negative shocks over time that can in turn help prevent descents back into poverty and promote sustained escapes. An implication is that programmatic support would be particularly important in the early years of a poverty escape to prevent a fall back, though this level of support can be decreased over time as households stabilize. The difference between trajectories is even greater at the lower level of welfare (1.5 times the poverty line). This suggests that many sustained escapers are able to increase their incomes significantly beyond the poverty line.

Figure 4: Near-poor status in the first year of escaping poverty, amongst transitory and sustained escapers in Uganda (left) and the Philippines (right)



ESTIMATING VULNERABILITY

Information on vulnerability, or expected future poverty, can be derived from a household’s poverty status today only if households are chronically poor. This assumes that poverty today is the key determinant of future poverty. However, the high poverty mobility over time evidenced in Figure 3 indicates that chronic poverty, while prevalent, is rarely the norm. So, we also examine vulnerability to poverty by constructing vulnerability estimates following the definition within the expected poverty approach outlined earlier in Equation 2. This measures the probability that a household will fall into poverty.

Figure 5 provides an illustration to scale of the overlap between vulnerability and poverty in both countries in the latest survey year. **While 18-20% of households were poor using national poverty lines in both countries, as much as 59% in Uganda in 2013/14 and 51% in the Philippines in 2009 were**

vulnerable to poverty. In most cases, vulnerability status encompasses poverty status. In other words, the definition of vulnerability is broader, and more households are at risk of falling into poverty than currently are under the poverty line. A proportion of households are also at risk of remaining poor because of hazards, an absence of coping capacities, and other drivers of chronic poverty. Even so, the fact that some poor households are not vulnerable in both countries reflects their low probability of being poor in the future. In these cases, households' current poverty status could be transient, due to shocks temporarily pushing them under the poverty line even though their future predicted consumption renders them non-poor.

Figure 5: Overlap between poverty and vulnerability in Uganda (left) and the Philippines (right), latest survey year

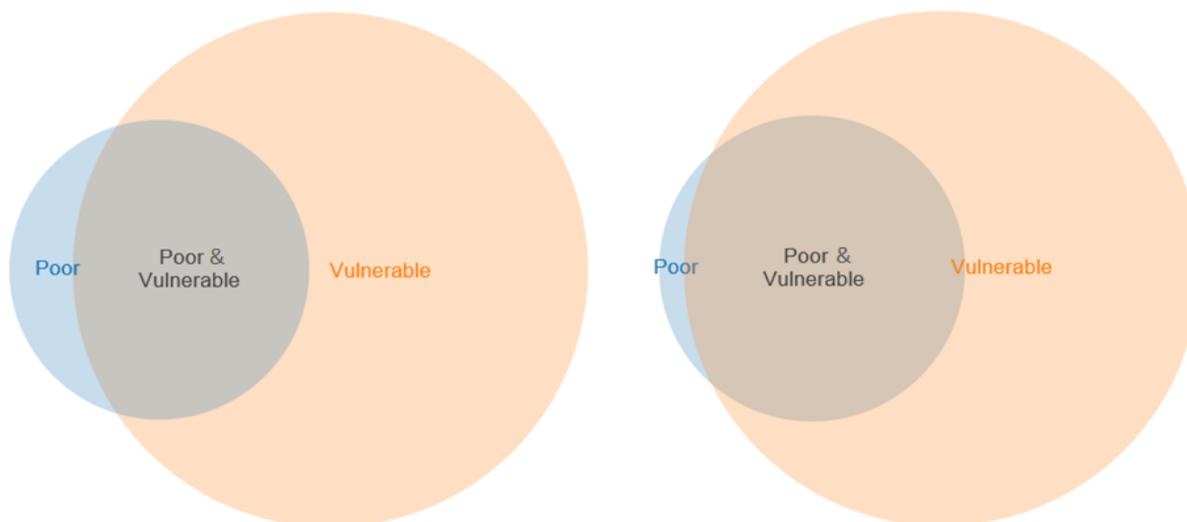


Table 2 next disaggregates vulnerability, and examines the share of vulnerable households amongst the poor, near-poor, and other households. Recall from the definitions outlined in Equation 2 that highly vulnerable households are those that have more than an even chance of being poor in the subsequent period, relatively vulnerable households were more likely than the typical person to be poor in the subsequent period, and non-vulnerable households had a vulnerability estimate lower than the poverty headcount (Pritchett et al., 2000). We observe that 73% of poor Filipino households were highly vulnerable to poverty across survey years, suggesting that vulnerability to poverty is a useful indicator of future actual poverty. In Uganda, 55% of poor households were also highly vulnerable over the survey years. **Out of households that were near-poor, 75% were either highly or relatively vulnerable across years in the Philippines, and 62% in Uganda.**

Table 2: Poverty and vulnerability averages in Uganda and the Philippines

Poverty status	Uganda				Philippines			
	High Vuln.	Relative Vuln.	Not Vuln.	Total	High Vuln.	Relative Vuln.	Not Vuln.	Total
Poor	54.72	28.32	16.96	100	72.77	24.87	2.36	100
Near-poor (1.5x)	31.73	39.58	28.70	100	32.86	51.50	15.64	100
Near-poor (2x)	30.54	29.69	38.43	100	26.18	49.3	24.52	100
Other households	14.13	20.25	65.62	100	5.67	18.01	76.32	100

Exploiting our panel data, we can also examine the extent to which vulnerable households experienced a transitory or sustained escape from poverty. Amongst sustained and transitory escapers that had initially escaped poverty in the Philippines, 96% of transitory escapers remained vulnerable to poverty in their first year out of poverty, compared to 86% of sustained escapers. In Uganda, the figures are slightly lower at 67% of transitory escapers and 53% of sustained escapers, using national poverty lines.

The analysis in this section suggests that near-poor status is a good indicator of vulnerability to poverty (especially at the level of 1.5 times the poverty line), and that overall, vulnerability is larger than poverty and near poverty status. It also suggests that vulnerability is slightly more closely tied to households experiencing transitory rather than sustained escapes from poverty.

We next explore the extent to which near-poor households can develop resilience to this vulnerability, and whether the same sources of resilience that protect against transitory poverty escapes, also function in similar ways for ‘near-poor’ households.

DRIVERS OF RESILIENCE AMONGST THE NEAR POOR

This section explores the drivers of sustained and transitory escapes from poverty of households in Uganda and the Philippines. It compares this to drivers of poverty trajectories amongst the subset of the near-poor. It finally also compares drivers of sustained escapes from poverty to sustained escapes from vulnerability amongst the near-poor to assess what may be responsible for building resilience amongst this group. As noted earlier, examining sources of resilience even amongst the near poor is important in developing effective poverty reduction strategies, because sustained poverty escapers that also leave vulnerability behind are likely to have become resilient. The list of drivers examined are presented in Tables A1 and A2 in the annex.

Regression results are presented in Tables A2 and A3 in the annex, and are discussed below for the specification where near poverty is defined as households that at some point are above the poverty line but less than twice the poverty lines. However, in both countries, we also undertake sensitivity tests to examine whether the findings are similar when defining near-poor households as those over the poverty line but less than 1.5 times the poverty line. Results are largely similar and available in Tables A2 and A3 also in the annex.

UGANDA

Near poverty dynamics

In Uganda, various factors affect the likelihood of sustained escapes from poverty for households near the poverty line. In spite of the increased agricultural incomes and specialization noted earlier, **engagement in agriculture alone reduces the probability that households sustain their poverty escapes.** Past fieldwork in Uganda found that a change in behaviors was needed to help ensure success in crop agriculture, and specifically for rural smallholders to move away from being ‘reluctant farmers’, not always willing to try new varieties and consider market arrangements in the choice of crops, and instead move towards seeing farming as a business enterprise (Scott et al., 2016).

However, **livestock accumulation, as a specific type of agricultural activity, remains a useful strategy in increasing the probability of a sustained escape from poverty.** Livestock can provide insurance and act as a smoothing mechanism for welfare, so offering households an effective safety net in times of distress and heightened vulnerability. Other forms of safety nets include assistance received, even remittances. These can mitigate the negative effects of shocks, contribute to human capital formation, and

may also reflect strong social networks from which to draw in times of crises. **In the regression analysis, receipt of assistance is associated with an improved likelihood of a sustained escape from poverty.**

There are also key differences when examining poverty dynamics amongst the near-poor compared to the full sample. **An increase in asset value is associated with a higher likelihood of a sustained escape only in the full sample;** it lacks statistical significance when restricting analysis to households that were near-poor at some time. However, this definition of assets is confined to consumer durables. As noted above, livestock remains an important type of asset for near-poor households to experience sustained escapes from poverty.

Vulnerability dynamics amongst the near-poor

As noted in our empirical specification, and given the large share of vulnerable near-poor households, we also compare the results above with a similar exercise in which we examine the drivers of sustained escapes from ‘vulnerability’ for households that in at least one survey year are not vulnerable but less than twice the vulnerability threshold. These households were also near the poverty line in at least one survey year. Recall that the vulnerability threshold is placed at the poverty headcount ratio, such that it captures the probability that the household is more likely than the typical household to be poor in the subsequent period. Escaping vulnerability sustainably thus is an indicator of household resilience.

On household attributes, **education is associated with an increased likelihood of escaping vulnerability sustainably, with the probability increasing for higher levels of education.** For these households that were at some point in time near-poor yet managed to also sustainably escape vulnerability, we observe that a large share had completed primary level of education (41%) and many had completed levels beyond primary school (34%). In contrast, near-poor households that did not escape poverty sustainably only had 27% complete primary education, and 21% with levels beyond primary schooling. The descriptive and regression results suggest that **completion of at least the full seven years of primary school may be necessary to escape vulnerability in the long term.**

Moreover, given the higher per capita incomes of households that are not vulnerable, it could be that these benefits of education accrue to households with higher endowments to begin with, that might also be more likely to have “social connections [and] access to information on job opportunities” (Scott et al., 2016). Indeed, other research in the country has found that household income is positively associated with access to social capital or group participation (Hassan and Birungi, 2011). These associated characteristics for initially richer households might enable education to translate into strong labor market links and opportunities, so enabling their sustained escape from vulnerability. In this context, **it is both the completion of at least primary education, coupled with strong social connections that has enabled some households to reach a level of resilience that could prevent future poverty and ensure sustained escapes from vulnerability.**

In contrast to the poverty dynamics analysis, **non-farm enterprises are effective in increasing the likelihood of escaping vulnerability sustainably.** Again, the importance of higher income and endowments amongst households that escape vulnerability, relative to sustained poverty escapers, could drive this finding, where capital constraints at these higher income levels may be less of an issue. The absence of statistical significance with regards to sustained escapes from poverty could reflect constraints households face when venturing into non-farm businesses, including limited markets, lack of access to start-up capital, and inadequate integration of the poor into market systems (Scott et al., 2016). As an enabler of these activities, **electricity is associated with an increased likelihood of sustained escapes from vulnerability amongst the near-poor subset.** Finally, **households residing in**

urban areas are less likely to escape vulnerability sustainably, reflecting less accessible services and safety nets, and possibly weaker community support.

PHILIPPINES

Near poverty dynamics

In the Philippines, too, various factors affect the likelihood of sustained escapes from poverty for households near the poverty line. **An increase in assets is associated with an increased likelihood of sustained escapes.** On intangible assets, heads with only primary education have a lower probability of sustaining a poverty escape, but **those who have completed secondary education or higher experience a lower probability of a transitory poverty escape.** In the fieldwork, secondary and tertiary education paved the way for better employment opportunities, where heads with at least secondary education were more likely than others to be government officials, professionals, clerks, service workers, traders, and machine operators (Diwakar, 2018).

Other attributes of heads of near-poor households also matter. For example, **an increase in the age of the household head is associated with an increased likelihood of a sustained escape, though this is a benefit that trails off as the household head ages particularly into post-productive periods.** The same is true for the full sample (Diwakar, 2018).

Even for households with favorable asset profiles, shocks could reverse their gains especially if they escape poverty only to remain near the poverty line. Exogenous shocks such as **high-intensity typhoons lower the chances of sustaining poverty escapes amongst the sample of near-poor households.** Rapid-onset, high-intensity typhoons have had a catastrophic impact on wellbeing in the country, and in past fieldwork, life history respondents noted it to devastate public infrastructure, homes, schooling, and livelihoods (Diwakar, 2018). Intense, rapid-onset disasters are thus a single shock in the context of the Philippines that can prevent sustained escapes, compared to the comparable impact of multiple smaller shocks observed in Uganda. Cash assistance and loans have been important in “building back better” in these contexts. Like in Uganda, **cash assistance increases the likelihood of sustained escapes amongst the near-poor**, reinforcing the importance of safety nets in times of heightened insecurity.

Again, there are key differences between drivers of poverty dynamics across the subset of the near-poor households and the wider population. **An increase in household size is associated with a higher likelihood of a transitory poverty escape only in the full regression sample**, reflecting the burden that dependents can exert on household welfare over time. Cash transfers can have an important role to play as safety nets in these contexts. **Households which receive cash assistance experience an increased likelihood of sustained escapes only amongst the subset of households that were near-poor.** However, **loans are associated with a higher likelihood of transitory escapes for the entire sample**, but the result is not statistically significant for the subset of near-poor. Qualitative analysis of fieldwork data in the Philippines found several instances of households drowning in debt for education, or loans being taken to pay of pre-existing loans in a vicious cycle (Diwakar, 2018). Debt might also accumulate in response to health shocks in the household.

Vulnerability dynamics amongst the near-poor

Vulnerability dynamics amongst the near-poor also reveal some key drivers of sustained escapes and resilience. On activities, in contrast to Uganda, **household heads engaged in agriculture are more likely to experience a sustained escape from vulnerability.** In a separate analysis of poverty dynamics in the Philippines, Diwakar (2018) found that it was not agriculture per se that contributed to the ability of a few households to sustainably escape poverty, but rather the intensity of diversification

within agriculture and beyond. Here, too, the defining factor for leaving vulnerability behind and building resilience in this process could be diversifying into various types of farming and livestock income-generating activities, and more importantly also beyond agriculture into rural non-farm activities. However, there is likely to also be a macro factor in play here, where farming in the Philippines is more commercialized than in Uganda. In contrast, agriculture in Uganda still needs to be commercialized to drive economic growth and poverty reduction in the country (World Bank, 2018b).

As in Uganda, various attributes also affect the ability of households to escape vulnerability sustainably in the Philippines. **Household size is associated with a reduced probability of a sustained escape from vulnerability**, reflecting the increased burden that can accompany larger households particularly with more children or elderly people. **Female headship is associated with a higher probability of sustainably escaping vulnerability**. This may appear surprising given research which indicates that Filipino women continue to face constraints for example in the agriculture sector, related to services that favor male farmers, and less involvement in decision making in agriculture households (Pandey et al., 2010, Hwang et al., 2011). However, the ability to sustainably leave vulnerability behind might stem from characteristics like better budgeting by women that was witnessed in recent qualitative fieldwork in the country, where some men entrusted their monthly savings to mothers or wives to manage (Diwakar, 2018). This finding also is mimicked in earlier studies which have confirmed that Filipino women often manage household finances and so are more inclined to find ways to save (Ashraf et al., 2006). They are also less likely to engage in certain adverse social behaviors that could impede resilience-building. For example, **alcohol consumption, predominantly a male activity observed in the fieldwork, is associated with a lower probability of experiencing a sustained escape from vulnerability in the regression results**.

DISCUSSION AND CONCLUSION

The results presented above suggest that some households near the poverty line are resilient, while others are not and remain vulnerable to future poverty. It highlights differences between vulnerable and near-poor households, and between households on various trajectories depending on whether they are at some point near the poverty line. The research reveals that a large share of near-poor households remains vulnerable to poverty. However, many social protection programs tend to assist merely the poor, without acknowledging the various risk profiles of near-poor households who may be equally vulnerable to future poverty. A focus on addressing near poverty is needed to reduce these sources of vulnerability and building longer-term resilience.

Resilience through sustained escapes from poverty and vulnerability

A key message emerging from this research is that there appears to be critical periods or points at which resilience is most viable in both country contexts. **In Uganda, completing the full cycle of primary education and some economic diversification from agriculture, particularly for households at higher levels of income, reduces vulnerability to poverty significantly. In the Philippines, a level of income which enables good use to be made of loans, and enables greater health expenditure and increased dependency levels while avoiding impoverishment emerges as important in promoting resilience.**

While the fieldwork in both countries indicated that transitory escapes from poverty and impoverishment is more often a result of multiple shocks, some single shocks can also impoverish by impairing resilience capacities. Examples range from high-intensity typhoons in the Philippines, to severe disability in Uganda. Cash transfers significantly help with recovery from such devastating shocks.

The analysis also indicates some commonalities across countries when comparing poverty dynamics with ‘near-poor’ poverty dynamics, and also when comparing poverty and vulnerability dynamics amongst the subset of near-poor. Table 3 presents a summary of these results for the findings around sustained escapes specifically, where near poor status is defined as consumption that is over the national poverty line but less than twice the poverty line.

Table 3: Drivers of sustained escapes from poverty and vulnerability, summary of statistically significant results

	Drivers of sustained escapes from <u>poverty</u> , full sample	Drivers of sustained escapes from <u>poverty</u> , near-poor households	Drivers of sustained escapes from <u>vulnerability</u> , near-poor households
Uganda	Assets*** + Livestock*** + Female head* + Head in agri*** - Assistance*** +	Livestock** + Head in agri* - Assistance*** +	Electricity* + Primary educ of head** + Sec educ of head*** + Non-farm enterprise** + Urban** -
Philippines	Assets*** + Age of head*** + Age-squared*** - Primary educ of head** - Spending on health*** + High-intensity typhoon*** -	Assets* + Age of head*** + Age-squared*** - Primary educ of head* - Assistance** + Spending on health** + High-intensity typhoon*** -	Household size*** - Age of head* + Female head** + Head in agri** + Spending on health** + Alcohol consumed*** -

Note: bold text refers to variables containing overlap in at least two of three samples; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Our study indicates that **policies should consider how far above the poverty line households escape poverty. Comparing sustained escapers across the full sample to the subset of near-poor households, the latter have few endowments** that can drive their sustained escapes from poverty. Moreover, our analysis not only reveals varying factors driving sustained poverty escapes amongst the near-poor and the wider population, but also varied drivers of sustained escapes when measured by poverty compared to vulnerability. On the latter, **the set of drivers associated with sustained escapes from vulnerability are larger than that for escaping poverty sustainably amongst the near-poor across countries.** In the Philippines, female headship and engagement in agriculture also positively affected the likelihood of sustainably escaping vulnerability, while alcohol consumption undermined this development of resilience. In Uganda, non-farm enterprise and electricity was positively associated with sustained escapes from vulnerability amongst the near-poor, while urban residence undermined it. In Uganda, vulnerability rather than extreme poverty could thus be a useful lens for policy on urban deprivation. In both contexts, acknowledging vulnerability dynamics is a step towards improving resilient outcomes over time for households that were once poor or near-poor.

Enabling conditions for the near-poor to make progress

Certain meso- and macro-level enabling conditions for the near-poor are also needed to continue to make progress. **Assistance, whether in the form of cash transfers or remittances, is associated with increasing the likelihood of sustained escapes amongst the near poor in Uganda and the Philippines, respectively.** It is especially telling that this safety net operates in both contexts with very different shock profiles and poverty lines. Though our study indicated that cash transfers appear to have a significant impact on recovery from shocks, at the moment these remain mainly targeted to households that are already poor. Does insurance against shocks need to be extended to the near poor? This is an

important policy question prompted by the research. A renewed focus on social protection and assistance for the poorest but also extended to households near the poverty line would do well in these contexts.

At the same time, assistance in the form of remittances and help from relatives and friends is also about social capital and networks. **There is a social structural component of mobility here that is critical in building resilience.** It is not just a matter of household strategies, attributes and resources, but also what the wider social network can supply. This was particularly evident in the Philippines, where relatives were instrumental in funding children's education, defraying hospital costs, and providing other forms of assistance that freed up resources for families to enable sustained escapes from poverty (Diwakar, 2018).

Other meso or macro-level enabling conditions for the near-poor include, for example, a substantial formal sector, demographic change to reduce dependency burdens, and progressive gender norms. On the former, in the Philippines, people with education have been getting formal sector jobs, and these are often more secure. A commercialized agriculture evidenced more in the Philippines compared to Uganda, also provides a better environment for the development of resilience out of agriculture and related activities alone without necessarily diversifying into non-farm sectors. Demographic change which reduces dependency burdens would also enable more escapes from poverty to be sustained. Family planning programs retain their importance in these contexts. Finally, improved conditions for female-headed households, around laws, inheritance, access to assets, and social norms, would make a difference for them. However, this is a very contested area of policy in Uganda, but not in Philippines, where there are no great differences by gender in the ability to sustain a poverty or vulnerability escape.

A final note on vulnerability and resilience

More generally, **the policies to sustain poverty escapes would be markedly different from policies needed to reduce vulnerability to poverty.** Targeting vulnerability to build resilience according to this analysis requires a wide range of efforts beyond a focus on safety nets, including for example improving capacities and activities of the household head but also mitigating the adverse effects of negative shocks for the household. In this context, **an assessment of vulnerability dynamics offers a sound basis for identifying resilience capacities of households,** by considering future expected poverty in addition to present poverty dynamics.

Eliminating extreme poverty is a noble commitment for developing countries and the wider international community, but it is by no means an end to the development discourse. As our study reveals, many households may escape poverty but remain vulnerable or continue to hover near the poverty line. A better understanding of the varied poverty and vulnerability profiles and dynamics of households near the poverty line is needed in these contexts.

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ANNEXES

TABLE AI. UGANDA, SUMMARY STATISTICS

Mean values reported for latest survey year (2013/14)

Variable	Definition	Full sample				Near poor (PL < PCE < 2*PL)			Near poor (PL < PCE < 1.5*PL)			Vulnerable near poor
		TE	I	CP	SE	TE	I	SE	TE	I	SE	SE
Log(asset value)	Logarithm of asset value of household	13.25	13.85	12.96	14.07	13.45	13.90	15.56	13.09	13.59	14.33	14.91
Electricity	Households with electricity (%)	0.00	0.00	0.00	0.03	0.00	0.00	0.13	0.00	0.00	0.00	0.12
Cultivable land	Amount of cultivable land owned	1.89	2.12	1.95	1.85	1.88	2.17	1.59	1.43	1.91	1.79	1.74
Livestock	Share of livestock > median in year (%)	0.22	0.31	0.11	0.33	0.19	0.06	0.38	0.17	0.19	0.31	0.18
Household size	Household size	6.78	7.34	7.21	5.48	6.97	7.53	5.75	6.55	6.30	4.97	4.94
Age	Age of household head	50.50	50.05	52.58	52.58	49.86	46.47	47.63	50.72	51.89	50.66	52.06
Female head	Female heads of households (%)	0.65	0.75	0.53	0.65	0.69	0.82	0.75	0.69	0.74	0.66	1.00
Primary education of head	Heads who have completed primary education (%)	0.19	0.23	0.11	0.28	0.19	0.12	0.38	0.24	0.19	0.34	0.41
Secondary education of head	Heads who have completed secondary education (%)	0.01	0.06	0.00	0.05	0.03	0.00	0.25	0.00	0.04	0.03	0.29
Head in agriculture	Heads employed in agriculture (%)	0.82	0.77	0.68	0.68	0.86	0.88	0.38	0.93	0.81	0.69	0.29
Non-farm enterprise	Ownership of non-farm enterprises by household member (%)	0.53	0.37	0.46	0.44	0.53	0.65	0.50	0.62	0.26	0.48	0.71
Assistance	Household receipt of remittance or other assistance (%)	0.21	0.20	0.18	0.37	0.17	0.06	0.63	0.17	0.15	0.34	0.24
Number of shocks	Number of shocks between surveys	0.63	0.71	0.93	0.39	0.56	0.82	0.25	0.52	0.56	0.31	0.41
Presence of shock	Presence of shock between surveys (%)	0.47	0.49	0.65	0.34	0.44	0.53	0.25	0.38	0.44	0.31	0.24
Log(health spending)	Logarithm of household expenditures on health	3.82	4.99	2.67	5.42	4.07	4.54	6.15	2.90	3.75	6.31	5.77
Disabled member	Presence of disabled member in household (%)	0.19	0.12	0.07	0.23	0.14	0.06	0.25	0.10	0.15	0.21	0.35
Urban residence	Households residing in urban areas (%)	0.11	0.03	0.05	0.06	0.03	0.00	0.13	0.07	0.04	0.10	0.24

TABLE A2. PHILIPPINES, SUMMARY STATISTICS

Mean values for latest survey year (2009)

Variable	Definition	Full sample				Near poor (PL < PCE < 2*PL)			Near poor (PL < PCE < 1.5*PL)			Vulnerable near poor
		TE	I	CP	SE	TE	I	SE	TE	I	SE	SE
Asset index	Share of ownership of list of consumer durables (%)	0.15	0.18	0.11	0.27	0.15	0.18	0.32	0.15	0.18	0.30	0.41
Livestock	Ownership of livestock	0.19	0.13	0.19	0.17	0.18	0.16	0.12	0.19	0.16	0.13	0.12
Electricity	Households with electricity (%)	0.66	0.73	0.51	0.82	0.67	0.71	0.83	0.66	0.71	0.86	0.94
Household size	Household size	5.45	5.64	6.45	4.61	5.52	5.70	4.07	5.61	5.64	4.67	3.49
Age	Age of household head	50.95	50.68	46.65	53.64	51.25	49.67	55.07	50.64	50.14	54.61	53.96
Female head	Female heads of households (%)	0.17	0.17	0.08	0.19	0.18	0.14	0.27	0.13	0.17	0.24	0.19
Primary education of head	Heads who have completed primary education (%)	0.62	0.60	0.69	0.53	0.63	0.62	0.49	0.64	0.63	0.59	0.38
Secondary education of head	Heads who have completed secondary education or more (%)	0.27	0.35	0.22	0.40	0.26	0.31	0.44	0.24	0.31	0.33	0.62
Head in agriculture	Heads employed in agriculture (%)	0.62	0.52	0.69	0.51	0.60	0.57	0.49	0.66	0.57	0.48	0.32
Non-farm enterprise	Ownership of non-farm enterprises by household member (%)	0.42	0.43	0.42	0.50	0.41	0.43	0.53	0.39	0.44	0.47	0.53
Assistance	Household receipt of remittance or other assistance (%)	0.56	0.62	0.69	0.62	0.53	0.64	0.53	0.52	0.62	0.61	0.55
Receipt of loans	Share of households where any member has a loan (%)	0.22	0.26	0.24	0.40	0.22	0.26	0.41	0.24	0.24	0.42	0.26
Log(health spending)	Logarithm of household expenditures on health	4.08	4.28	3.75	4.91	4.05	4.20	5.10	4.05	4.20	4.79	5.67
PhilHealth recipient	Household with PhilHealth recipient members (%)	0.23	0.27	0.23	0.26	0.25	0.24	0.17	0.24	0.26	0.23	0.51
Alcohol consumption	Households consuming any alcohol (%)	0.75	0.68	0.79	0.74	0.74	0.68	0.75	0.75	0.71	0.76	0.68
High-intensity typhoon	Presence of high-intensity (level>3) typhoon in area of residence (%)	0.27	0.40	0.24	0.35	0.26	0.38	0.34	0.25	0.41	0.43	0.41
Rural residence	Households residing in rural areas (%)	0.79	0.74	0.87	0.76	0.79	0.77	0.73	0.81	0.78	0.70	0.54

TABLE A3. UGANDA, CORRELATES OF POVERTY/ VULNERABILITY TRANSITIONS

*Multinomial logit estimates, marginal effects presented; Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1*

VARIABLES	Poverty dynamics, full sample	Poverty dynamics amongst near poor (PL < PCE < 2*PL)	Poverty dynamics amongst near poor (PL < PCE < 1.5*PL)	Sustained escapes from vulnerability, (PL < PCE < 2*PL)
Log(asset value)				
Transitory escapes	-0.0201 (0.0217)	-0.0170 (0.0278)	0.0280 (0.0349)	
Sustained escapes	0.0555*** (0.0187)	0.0301 (0.0225)	-0.00546 (0.0265)	-0.00856 (0.0192)
Electricity				
Transitory escapes	-1.233 (591.3)			
Sustained escapes	2.191 (305.1)			0.225* (0.121)
Cultivable land				
Transitory escapes	0.00482 (0.0120)	0.00917 (0.0150)	0.0442 (0.0286)	
Sustained escapes	0.00505 (0.0110)	-0.00113 (0.0134)	-0.0271 (0.0244)	-0.00147 (0.0111)
Livestock>median				
Transitory escapes	-0.139* (0.0779)	-0.161* (0.0952)	-0.0805 (0.120)	
Sustained escapes	0.183*** (0.0662)	0.163** (0.0771)	0.134 (0.102)	-0.0137 (0.0543)
Household size				
Transitory escapes	0.0105 (0.0119)	0.0147 (0.0154)	0.0121 (0.0211)	
Sustained escapes	-0.0128 (0.0113)	-0.00386 (0.0141)	0.0159 (0.0174)	-0.0112 (0.0114)
Age of head				
Transitory escapes	0.00759 (0.0130)	-0.00213 (0.0160)	0.000792 (0.0247)	
Sustained escapes	0.00405 (0.0104)	0.00850 (0.0122)	0.00626 (0.0193)	-0.00790 (0.0101)
Age-squared				
Transitory escapes	-7.21e-05 (0.000132)	1.35e-05 (0.000163)	-4.08e-05 (0.000270)	
Sustained escapes	-1.37e-05 (0.000105)	-4.82e-05 (0.000123)	-5.70e-05 (0.000205)	8.26e-05 (0.000106)
Female head				
Transitory escapes	-0.00644 (0.0781)	0.0667 (0.0980)	0.180 (0.126)	
Sustained escapes	0.118* (0.0659)	0.0879 (0.0781)	0.0851 (0.103)	-0.0514 (0.0703)
Primary education of head				
Transitory escapes	-0.0439 (0.0880)	-0.0166 (0.109)	-0.0166 (0.130)	
Sustained escapes	0.0480 (0.0803)	-0.0717 (0.0984)	0.0307 (0.112)	0.141** (0.0574)
Secondary education of head				

Transitory escapes	-0.0679 (0.209)	1.100 (93.27)	-3.693 (691.6)	
Sustained escapes	-0.166 (0.217)	-2.060 (139.9)	-1.378 (473.2)	0.283*** (0.0694)
Head in agriculture				
Transitory escapes	0.0726 (0.0945)	0.0647 (0.112)	-0.0337 (0.134)	
Sustained escapes	-0.309*** (0.0942)	-0.183* (0.104)	0.00488 (0.113)	0.0783 (0.0594)
Non-farm enterprise				
Transitory escapes	0.0108 (0.0689)	0.0125 (0.0850)	0.0774 (0.110)	
Sustained escapes	0.0411 (0.0611)	0.0498 (0.0713)	0.114 (0.0928)	0.101** (0.0478)
Assistance				
Transitory escapes	-0.0882 (0.0660)	-0.0368 (0.0799)	0.112 (0.106)	
Sustained escapes	0.168*** (0.0599)	0.186*** (0.0670)	0.174** (0.0868)	0.0300 (0.0539)
Number of shocks				
Transitory escapes	0.00755 (0.0247)	-0.00192 (0.0303)	0.00744 (0.0435)	
Sustained escapes	-0.0412 (0.0290)	-0.0436 (0.0341)	-0.0348 (0.0397)	-0.0354 (0.0316)
Presence of shock				
Transitory escapes	-0.0385 (0.0668)	0.00426 (0.0794)	0.0434 (0.103)	
Sustained escapes	0.00696 (0.0593)	-0.0422 (0.0677)	0.00125 (0.0887)	0.00792 (0.0480)
Log(health spending)				
Transitory escapes	-0.00934 (0.00772)	-0.00507 (0.00930)	-0.00636 (0.0117)	
Sustained escapes	0.00530 (0.00709)	-0.00172 (0.00767)	-0.00175 (0.00973)	-0.00277 (0.00514)
Disabled member				
Transitory escapes	-0.0624 (0.0858)	-0.0398 (0.107)	0.0274 (0.150)	
Sustained escapes	-0.0524 (0.0777)	-0.0834 (0.0939)	0.00608 (0.122)	0.0807 (0.0589)
Urban residence				
Transitory escapes	0.0384 (0.156)	0.0356 (0.191)	1.676 (153.1)	
Sustained escapes	0.198 (0.124)	0.220 (0.136)	0.810 (57.25)	-0.230** (0.110)
Eastern region				
Transitory escapes	0.131 (0.0965)	0.0124 (0.136)	-0.187 (6.577)	
Sustained escapes	-0.499*** (0.0880)	-0.374*** (0.125)	-0.275 (7.076)	-0.101 (0.0636)
Northern region				
Transitory escapes	0.147	0.0685	-0.0477	

	(0.0918)	(0.134)	(6.577)	
Sustained escapes	-0.325***	-0.273**	-0.265	-0.0400
	(0.0885)	(0.125)	(7.075)	(0.0715)
Western region				
Transitory escapes	-0.0457	-0.208	-0.354	
	(0.114)	(0.150)	(6.578)	
Sustained escapes	-0.239**	-0.102	0.0540	-0.140**
	(0.120)	(0.155)	(7.077)	(0.0625)
Observations	210	159	97	185

TABLE A4. PHILIPPINES, CORRELATES OF POVERTY/ VULNERABILITY TRANSITIONS

*Multinomial logit estimates, marginal effects presented; Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1*

VARIABLES	Poverty dynamics, full sample	Poverty dynamics amongst near poor (PL < PCE < 2*PL)	Poverty dynamics amongst near poor (PL < PCE < 1.5*PL)	Sustained escapes from vulnerability, (PL < PCE < 2*PL)
Asset index				
Transitory escapes	-0.116 (0.0969)	-0.0921 (0.108)	-0.0273 (0.132)	
Sustained escapes	0.329*** (0.119)	0.223* (0.131)	0.477*** (0.147)	0.166 (0.118)
Livestock enterprise				
Transitory escapes	0.0815*** (0.0274)	0.0870*** (0.0302)	0.108*** (0.0364)	
Sustained escapes	0.0204 (0.0420)	0.0354 (0.0450)	0.0264 (0.0482)	0.0352 (0.0437)
Electricity				
Transitory escapes	0.0112 (0.0291)	0.0234 (0.0324)	0.0317 (0.0403)	
Sustained escapes	-0.0106 (0.0442)	0.0367 (0.0469)	0.0170 (0.0524)	0.137 (0.0885)
Household size				
Transitory escapes	0.0116* (0.00672)	0.00923 (0.00757)	0.00658 (0.00951)	
Sustained escapes	-0.0116 (0.00938)	-0.0126 (0.0101)	-0.0119 (0.0113)	-0.0635*** (0.0124)
Age of head				
Transitory escapes	-0.0103* (0.00562)	-0.0103* (0.00607)	-0.0103 (0.00757)	
Sustained escapes	0.0584*** (0.00961)	0.0625*** (0.0101)	0.0615*** (0.0117)	0.0152* (0.00915)
Age-squared				
Transitory escapes	9.46e-05* (5.49e-05)	9.57e-05 (5.89e-05)	0.000101 (7.41e-05)	
Sustained escapes	-0.000539*** (9.34e-05)	-0.000578*** (9.80e-05)	-0.000587*** (0.000116)	-0.000117 (8.79e-05)
Female head				
Transitory escapes	0.0131 (0.0407)	0.00828 (0.0447)	-0.0275 (0.0594)	
Sustained escapes	-0.00889 (0.0532)	0.00228 (0.0568)	0.0290 (0.0645)	0.114** (0.0449)
Head with primary education				
Transitory escapes	-0.0780 (0.0492)	-0.0851 (0.0531)	-0.110* (0.0625)	
Sustained escapes	-0.185** (0.0861)	-0.149* (0.0883)	-0.110 (0.0924)	0.00481 (0.169)
Head with at least secondary education				
Transitory escapes	-0.119** (0.0545)	-0.126** (0.0591)	-0.172** (0.0702)	
Sustained escapes	-0.131 (0.0913)	-0.0818 (0.0940)	-0.0567 (0.0986)	0.205 (0.168)
Head employed in agriculture				

Transitory escapes	0.0264 (0.0285)	0.0249 (0.0309)	0.0482 (0.0386)	
Sustained escapes	-0.0215 (0.0392)	-0.00842 (0.0406)	0.00114 (0.0444)	0.0778** (0.0389)
Non-farm enterprise				
Transitory escapes	-0.0348 (0.0253)	-0.0432 (0.0279)	-0.0428 (0.0347)	
Sustained escapes	-0.0487 (0.0351)	-0.0354 (0.0368)	-0.0353 (0.0412)	0.0287 (0.0337)
Assistance				
Transitory escapes	0.0242 (0.0251)	0.0170 (0.0273)	0.00368 (0.0330)	
Sustained escapes	0.0425 (0.0350)	0.0723** (0.0361)	0.0686* (0.0400)	-0.0421 (0.0344)
Receipt of loan				
Transitory escapes	0.0477* (0.0253)	0.0405 (0.0280)	0.0477 (0.0344)	
Sustained escapes	0.0306 (0.0356)	0.0295 (0.0374)	0.00535 (0.0415)	0.0252 (0.0360)
Log(health spending)				
Transitory escapes	-0.00121 (0.00811)	0.00398 (0.00899)	0.00872 (0.0111)	
Sustained escapes	0.0303*** (0.0112)	0.0249** (0.0121)	0.0341** (0.0138)	0.0229** (0.0113)
PhilHealth recipient				
Transitory escapes	-0.0217 (0.0275)	-0.0165 (0.0296)	-0.0113 (0.0364)	
Sustained escapes	-0.0225 (0.0376)	-0.0237 (0.0392)	-0.0480 (0.0435)	0.0558 (0.0350)
Alcohol consumption				
Transitory escapes	0.0247 (0.0311)	0.0158 (0.0337)	0.0203 (0.0415)	
Sustained escapes	-0.000453 (0.0401)	0.0274 (0.0428)	0.0139 (0.0477)	-0.123*** (0.0387)
High-intensity typhoon				
Transitory escapes	-0.0448* (0.0271)	-0.0558* (0.0307)	-0.0586 (0.0384)	
Sustained escapes	-0.159*** (0.0365)	-0.181*** (0.0392)	-0.172*** (0.0447)	-0.0356 (0.0407)
Rural residence				
Transitory escapes	-0.0143 (0.0309)	-0.00896 (0.0336)	-0.0357 (0.0418)	
Sustained escapes	0.0522 (0.0411)	0.0249 (0.0428)	0.0145 (0.0488)	-0.0544 (0.0363)
Mindanao (non-ARMM) region				
Transitory escapes	-0.0305 (0.0709)	-0.0323 (0.0748)	-0.0477 (0.0912)	
Sustained escapes	0.189*** (0.0527)	0.134** (0.0642)	0.173*** (0.0624)	0.323*** (0.0803)
Northern Luzon and Metro Manila region				

Transitory escapes	-0.0447 (0.0752)	-0.0379 (0.0802)	-0.0473 (0.0980)	
Sustained escapes	0.356*** (0.0639)	0.334*** (0.0763)	0.318*** (0.0776)	0.178*** (0.0687)
Southern Luzon region				
Transitory escapes	-0.0574 (0.0761)	-0.0632 (0.0798)	-0.0875 (0.0967)	
Sustained escapes	0.379*** (0.0662)	0.379*** (0.0780)	0.353*** (0.0805)	0.0517 (0.0684)
Visayas region				
Transitory escapes	-0.0375 (0.0727)	-0.0330 (0.0769)	-0.0620 (0.0922)	
Sustained escapes	0.227*** (0.0565)	0.187*** (0.0675)	0.194*** (0.0648)	0.0860 (0.0647)
Observations	675	597	460	507