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Converting Asset Holdings into Livelihood: An Empirical Study on the Role of Household Agency in South Africa

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Summary. — This paper analyzes the complexities of converting assets into livelihood and the role that agency constraints play. Drawing inspiration from the capabilities approach and using household data from South Africa, linkages between assets and agency are identified by decomposing asset endowments' impact on future livelihood. By employing a method of path analysis akin to early heritability of traits studies, theoretical asset-based studies of chronic poverty are bridged with capabilities literatures. The interaction between assets and agency is shown to be as important as asset-to-asset complementarities. The results have wide ranging policy implications.

Key words — poverty, capabilities, assets, South Africa, KwaZulu-Natal

1. INTRODUCTION

To understand the transmission of poverty, flow variables like income or consumption have only limited use. Asset stocks are more informative since they implicitly contain additional information on the future livelihood prospects of the economically disadvantaged. Asset endowments provide a cushion against income shocks, are a source of future income and consumption streams, and are generally indicative of future economic well-being. The inherent qualities of asset stocks thus offer a more predictive measurement of poverty than current income or consumption flows (Carter & Barrett, 2006). It follows that a central tenet of an asset-based view of poverty is that time is an ally of the poor so long as asset levels are sufficiently high; but what constitutes sufficiently high is not readily known. For example, in South Africa's most populated province of KwaZulu-Natal, time has not been an ally to many of the poor even when asset stocks are relatively high. During the 11-year period of 1993–2004, approximately half (51%) of the 750 households sampled had, on average, been living on less than two US dollars per day. Of that half, 21% were in the upper half of the entire distribution of initial asset endowments.[1] The take away message is that for some households, the critical minimum level appears to be higher than for others.

As with any measure of poverty, tradeoffs exist. Assets typically do not aggregate easily and are thus often reduced to an index or one choice asset to draw out the dynamics over time. Indeed there is a growing literature of livelihood mapping that attempts to map opulence well-being from asset space into a more policy familiar income or consumption space (for example see Adato, Carter, & May, 2006; Carter & May, 1999, 2001). Yet there exists a stark disconnect between asset-based approaches and the more multi-dimensional human development/capabilities (HD/C) perspectives of poverty measurement that view development in terms of expanding substantive freedoms rather than simply as commodity availability. Sen's pioneering work on capabilities describes how the commodity requirements of established patterns of behavior may vary between personal, social, and environmental factors (Alkire & Deneulin, 2009; Robeyns, 2007; Sen, 1999a, 1999b). The expanded capabilities view in combination with the South African experience suggests that asset levels alone are not enough to clearly identify vulnerable households.

Regarding theoretical work on critical minimum asset levels, there has been some work on the role of intrinsic ability as a determinant of poverty trap thresholds (Carter & Ikegami, 2007); however, what intrinsic ability may encompass has been understudied within the assets framework. The question then is how to empirically identify the fundamental linkages between particular asset holdings and intrinsic ability to better understand how assets can benefit the poor. This paper serves as a constructive critique of asset-based poverty studies by incorporating useful insights from the human development and capabilities approaches in an applied manner. The capabilities approach provides one such way of expanding upon intrinsic ability by way of household agencies. Agency is the ability to pursue goals that one values and has reason to value (Alkire & Deneulin, 2009). An agent is someone who acts and brings about change (Sen, 1999a: 19). It should be noted how agency is different from capabilities and functionings. Functionings are the various things a person may value doing or being (Sen, 1999a: 75). Capabilities refer to the various functionings (beings and doings) that a person can achieve and are thus a vector of functionings reflecting the person's freedom to lead one type of life or another (ibid). Deprivation in household agency can therefore be seen as a potential deprivation of capabilities.

Different personal, social, and environmental situations potentially impact an individual's or household's degree of agency with respect to converting asset holdings into economic livelihood or well-being[2]. This study draws out how household agencies interact with particular asset endowments and thus impact the conversion process of assets into economic livelihood. If borne out by empirical evidence, poverty reduction strategies could be made more effective by incorporating knowledge of how different agency variables interact with particular assets (such as human, productive, or financial capital) to either facilitate or constrain the process of converting those assets into livelihood.

Following a technique used in the heritability of genetic traits literature and employed by Bowles and Gintis (2002), this paper decomposes the impact of initial asset endowment on future livelihood into direct and indirect mechanisms.

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A direct conversion of asset endowments into future livelihood simply includes consumption of the asset or the direct use of it to produce incomes. The more complex indirect conversions are of two forms: via asset-to-asset complementarities and via the interaction of assets and household agency variables. Some examples of variables that possibly interact with assets and signal heterogeneity in agency may include social networks, trust, or time commitments stemming from care and/or subsistence activities, among others. Sections 3 and 4 have greater detail regarding the choice of methods and variables specific to this study.

The results suggest that although direct effects and asset-to-asset complementarities are important to the conversion process at the household level in South Africa's KwaZulu-Natal province, the degree of time deprivation from subsistence activities may condition poverty trap thresholds to a greater extent for households with higher levels of educated laborers, capital, and access to agricultural land. The results likely reflect the larger realities of macroeconomic conditions and underemployment in South Africa in which relatively well-resourced groups have the wherewithal to face binding micro-constraints, whereas households with few resources cannot overcome the constraints imposed by poor macroeconomic conditions. In terms of poverty policy, opportunities at the macroeconomic level and household agency at the microeconomic level both play an important role.

This study contributes to the prior literature in three primary ways. First, it extends and adds empirical robustness to prior theoretical work linking a latent concept of intrinsic ability with household-specific poverty trap thresholds. Second, it bridges the quantitative work on poverty traps with qualitative insights from the HD/C literature by identifying which particular asset holdings are associated with different household capability constraints via household agency variables. Lastly, it brings awareness to policy makers that though asset levels alone may be a necessary condition for poverty alleviation, knowledge of the sufficient condition of possessing the ability to convert assets into livelihood is equally important.

The rest of the paper is organized as follows. Section 2 outlines a bridged asset based-HD/C framework with particular focus on the relationship between household agency and poverty trap thresholds. Section 3 describes the empirical decomposition of asset endowments' impact on future livelihood into direct and indirect effects in an attempt to identify which asset holdings are associated with particular household agency variables. Section 4 describes the household data from KwaZulu-Natal and is followed by a discussion of the results, limitations, and possible extensions.

2. THEORETICAL FOUNDATIONS: ASSET HOLDINGS, INTRINSIC ABILITY, AND HOUSEHOLD AGENCY

One way of making poverty measurements more forward-looking and predictive than observed income or consumption flows is to follow the now prominent framework of asset-based poverty measures. Asset endowments provide a cushion against income shocks, are a source of future income and consumption streams, and are generally indicative of future economic well-being (Carter & Barrett, 2006; Lerman & McKernan, 2008). This section begins by outlining some of the basic features of the assets view with particular emphasis on the empirical and theoretical treatments of poverty trap thresholds[3]. Although the asset-based approach has well-grounded micro-foundations, it often lacks the qualitative dimensionalities of HD/C perspectives of poverty. Consequently, after laying out the theoretical aspects of poverty trap thresholds, the discussion turns toward inclusion of qualitative aspects from the HD/C literature in order to diagnose how structural characteristics that lead to household agency and empowerment play an instrumental role in converting particular asset holdings into economic livelihood.

(a) *Asset-based studies and empirical observations of critical thresholds*

In a now seminal paper titled, "The Economics of Poverty Traps and Persistent Poverty: An Asset-Based Approach", Carter and Barrett (2006) outline a microeconomic framework capable of explaining how households or individuals can persist over time at higher or lower welfare states (see also Barrett (2008) for a concise overview). The authors describe a situation in which if there are locally increasing returns to scale of asset holdings, then multiple equilibria may exist in which accumulation behavior bifurcates. Implicit in their discussion of multiple equilibria is a discussion of critical thresholds that define the boundaries between equilibria. A poverty trap threshold is defined as a critical minimum stock of assets that are needed for an individual or household to ensure increases in economic livelihood into the future. With few exceptions, the challenge within this literature to date has been not just to confirm the existence, but to identify how individual or group abilities condition these critical thresholds. This is complicated by the fact that thresholds, if they exist, are unobservable at the individual level.

Figure 1 is adapted from Carter and Barrett (2006) and illustrates a basic situation in which there are two production activities available to a particular household, $\mathcal{L}_1$ and $\mathcal{L}_2$. Activity $\mathcal{L}_2$ requires a higher level of fixed costs, but can ultimately generate a higher level of livelihood or welfare – measured on the vertical axis. For illustrative simplicity, one could interpret $\mathcal{L}_1$ as subsistence, in home production process of generating livelihood, whereas $\mathcal{L}_2$ might be formal labor in which the higher fixed costs stem from the opportunity cost of being outside the home. For now, assume assets are multi-dimensional and can be easily aggregated into one bundle, measured on the horizontal axis. The asset endowment level A^s identifies the level of assets in which it would be optimal to switch from process $\mathcal{L}_1$ to $\mathcal{L}_2$. Two equilibria emerge: a lower (L_L, A_L) and higher welfare state (L_H, A_H). The two equilibria correspond to where the marginal return on assets is equal across the two production processes. That is, the forward looking household in this simple

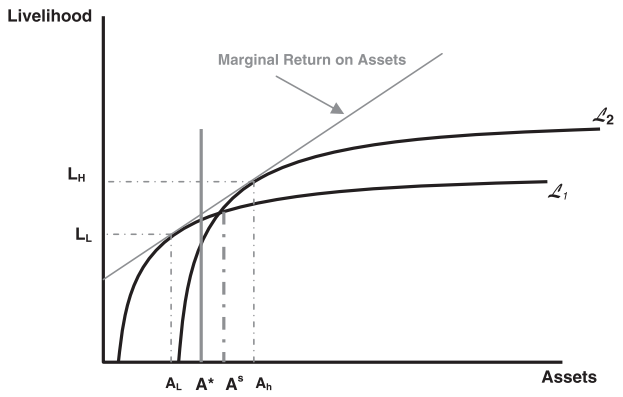

Figure 1. *Multiple equilibria.*