CSAE WPS/2011-03

# BEYOND FATALISM - AN EMPIRICAL EXPLORATION OF SELF-EFFICACY AND ASPIRATIONS FAILURE IN ETHIOPIA

Tanguy Bernard*, Stefan Dercon†, Alemayehu Seyoum Taffesse‡

February 2011

**Abstract**
Fatalism is considered pervasive, not least within many poor communities. In this paper, we explore whether 'fatalistic' beliefs have implications for the attitudes and behaviour of poor rural households towards investment in the future. We first explore the idea of fatalism drawing inspiration from theories in psychology focusing on the role of locus of control and self-efficacy, and from the theoretical framework of aspiration failure as developed in recent economic literature. Using survey data from rural Ethiopia, we find evidence of fatalistic beliefs among a substantial group of rural households, as well as indicators consistent with a small aspiration gap and low self-efficacy. We also find that such beliefs consistently correlate with lower demand for credit, in terms of loan size, repayment horizon and productive purposes.

**Affiliations**
*International Food Policy Research Institute, t.bernard@cgiar.org
†University of Oxford, stefan.dercon@economics.ox.ac.uk
‡International Food Policy Research Institute, a.seyoumtaffesse@cgiar.org

**Address for correspondence:**
Corresponding Author: Alemayehu Seyoum Taffesse, International Food Policy Research Institute, P.O. Box 5689, Addis Ababa, Ethiopia.

**Acknowledgements:**
This paper is an output from research funding by the UK Department for International Development (DFID) as part of iiG, a research programme to study how to improve institutions for pro-poor growth in Africa and South Asia. http://www.iig.ox.ac.uk/. Bernard and Taffesse would also like to acknowledge support from the IFPRI Development Strategy and Governance (DSG) and the Markets, Trade, and Institutions (MTI) divisions.



Centre for the Study of African Economies
Department of Economics · University of Oxford · Manor Road Building · Oxford OX1 3UQ
T: +44 (0)1865 271084 · F: +44 (0)1865 281447 · E: csae.enquiries@economics.ox.ac.uk · W: www.csae.ox.ac.uk

# I. INTRODUCTION

Fatalism is customarily, if not always formally or explicitly, attributed to Ethiopians - particularly to those who are poor. The apparent intention, in such instances, is to characterise the lack of proactive and systematic effort to better one's own life, and the implied acceptance of their circumstances, that a lot of Ethiopians seem to display. Some even go further and identify fatalism as a key factor that explains the rather slow socio-economic transformation in the country. This view certainly appears consistent with the language used by the disadvantaged to describe their life and difficulties thereof. For instance, Rahmato and Kidanu (1999) report the following expressions:

> *'We live only for today'* - portrays a life style based only on the present. There is no planning ahead or thinking about the future. It is a clear indication that people have given up on life, and just don't know or don't want to think about what will happen tomorrow. It describes the state that people are reduced to living a day to day life with no future.
>
> *'It is a life of no thought for tomorrow'* - is a common expression, particularly in urban areas, to indicate that whatever is 'found' today is for today and whatever will be 'found' tomorrow will be for tomorrow.
>
> *'Waiting to die while seated'* - expresses the state of being that hinges on giving up on life altogether. In the absence of alternatives, impending death is seen as solution to the problems people are facing.
>
> *'We have neither a dream nor an imagination'* - is another common term used to state desperation and hopelessness. This expression reveals that people are reduced to watching others eat."

These expressions of 'helplessness', combined with claims noted earlier, imply a need for systematically exploring the nature and significance, if any, of fatalism in Ethiopia. This paper responds to that implication by addressing the following questions: Is it *feasible* or helpful to examine the nature and role of fatalism directly? Are there *concepts or constructs* that capture qualitatively the same beliefs associated with fatalism but are more amenable to analysis and influence? And are there *characterizations* of qualitatively the same outcomes attributable to fatalism but are more amenable to analysis and intervention?

It subsequently deploys survey data from Ethiopia to uncover some evidence that indicate the presence of these beliefs and outcomes.

# II. PERSPECTIVES

## What is Fatalism?

There is considerable controversy regarding what fatalism is and whether it is an analytically useful concept.[1] Summarising the various meanings linked with fatalism Whelan (1996) state:

> "... (fatalism's) potential range of meanings varies from the strict sense of a system of beliefs which holds that everything has an appointed outcome which cannot be altered by effort or foreknowledge, to a sense of resignation based on the realities of a difficult life-situation, to a

[1] The link between fate and fatalism is another aspect of the debate. For example, according to Solomon (2003) "(f)ate is not the same as fatalism, although most conceptions of the former imply the latter. Fate is the explanation. Fatalism is a doctrine." Solomon (2003) provides a critical review of the philosophical literature.

more imprecise set of connotations covering cynicism towards established values of work and order."

Consider the strictest meaning: 'a system of beliefs which holds that everything has an appointed outcome which cannot be altered by effort or foreknowledge'. This characterisation neither needs causal explanation nor allows any room for proactive behaviour (individually or collectively). It is thus a dead-end if the aim is to find ways of deliberately fostering change. On the other hand, alternative meanings that allow less preordained outcomes (such as resignation or cynicism) are in principle explicable via 'experiences' and 'circumstances'. Indeed, as will be seen below, there are concepts capturing qualitatively the same beliefs and/or outcomes but linked with well developed analytical frameworks and greater room for initiating improvement or change. These later concepts are potentially more useful for understanding and influencing poverty at a deeper level. This is the route the paper pursues below with a less strict definition of fatalism – a sense of helplessness that a person may feel with regard to proactively modifying his/her future.

**Perspectives from Outcomes**

From an economic perspective, and to the extent that it relates to current action and its impact on future outcomes, fatalism is equivalent to not making the necessary 'investments' to better one's well-being. It may thus be the case that people refrain from making well-being-enhancing investments because they believe, in a boundedly rational way, that such investments are either infeasible or would not lead to significant changes.[2]

In fact, the phenomenon of low investment while returns to investment are and/or appear to be high is not unique to Ethiopia. There is indeed sufficient micro-level evidence showing that people often fail to invest even though returns are positive (and sometimes very high). For instance in their study of farmers in Southern Ghana, Goldstein and Udry (2006) find that despite rates of real returns ranging between 250% and 300% compared to 30-50% in well-established food crop cultivation, only 18% of the land is used for pineapple growing. In Kenya, Duflo, Kremer and Robinson (2003) report that less than 15% of a sample of Maize farmers used fertilizers despite rates of returns greater than 100%. In the same region, Miguel and Kremer (2003) calculated that the pick-up rate of free de-worming pills (which was also shown to greatly improve children's health and school performance) was only 57%. In India, Munshi and Rozensweig (2006) show that despite rapid increase in the returns to English education during the 1990s, enrolment of boys from lower castes has not converged to the enrolment rate of boys from higher castes, while that is not true for girls. The same evidence also shows that such behaviour is often even more acute among poorer populations (see Banerjee and Duflo (2003) and Banerjee and Duflo (2007) for reviews). The key message is that the poor can and do make choices and that these choices may not coincide with those implied by standard economic reasoning.

A variety of mostly complementary explanations have been forwarded over the years. In a first class, investments do not occur – at least as much as predicted by standard economic theory – because one's expectations of privately appropriable returns are simply too low. The problem here arises primarily from the individual's environment. More specifically, limited availability of investment opportunities (such as no schools) and/or low access to investable resources (such as lack of credit) restrict investment. Missing/thin markets (such as credit, insurance, and labour markets) are usually responsible for such

[2] This characterisation also allows for the possibility that people may be unable to see where such investments lead to and/or how they lead to where they lead to.

outcomes since they constrain the set of economic choices with positive expected returns. Asymmetric information, weak incentives, and difficult enforcement in turn explain missing/thin markets. There are also situations in which investment opportunities with positive (and potentially high) returns that are not being exploited due to lack of information/knowledge about the opportunities/returns. Note that the lack of information can also be a lack of *sufficient* information. As in Yamaushi (2006), people often need to observe a wide variety of cases to make a decision.

Finally, social constraints may, independently or jointly with market failures, dampen the economic attractiveness of investment opportunities. Examples include egalitarian norms (Platteau (2000)) and excessive government taxation and regulations (Hausmann, Rodrik, and Velascoy (March 2005)). In this case, returns to individual effort are undermined by the necessity to share the benefits with other members or organisations in the community. In such cases, while adequate returns may be available, limits to private appropriation causes the apparent under-investments.

The explanations thus far assume, not always explicitly, that the underlying logic of poor people's decision-making is essentially consistent with standard economic reasoning but respectively identified external constraints thwart them from making the corresponding 'correct' choices. In contrast, a second class of explanations may be found in recent theoretical and empirical developments shifting the focus away from external constraints and towards the *manifested attributes* of decision makers. A number of sub-sets can be highlighted.

*Identity issues*: People's choices are conditioned by their sense of self. For example, in the experiment of Hoff and Pandey (2004) in India, the test performance of lower caste children declined due to the public revelation of caste status at the beginning of the test. Hoff and Pandey (2004) argue that individuals readily assume caste (or more generally stereotype) roles since they expect others to treat them according to these roles. Or, as in Munshi and Rosenzweig (2005), where lower caste families continue to send their sons to local language schools whereas globalization has made English language training more rewarding.[3]

*Psychological issues*: A sub-set of reasons originate from the behavioural economics literature and focus on, among others, impatience, commitment, and psychological barriers. Bertrand, Mullainathan, and Shafir (2001) summarise some of the relevant propositions including: the role of minor situational details called "channel factors"; loss aversion and the consequent preference for the status quo (or the "endowment effects"); and compartmentalized wealth and spending.[4] They also argue reasonably that these effects can be more significant for the poor in light of the rather small manoeuvre room that they have.

The present study adopts a perspective akin to both classes of explanations in that it attempts to blend external constraints that the poor face with the potential effect these constraints may have on the internal logic governing choice by these people.[5] The argument can be informally stated as follows. Decision-making by individuals crucially rely on the set of beliefs and perceptions (or mental models) they have regarding their physical and social

[3] The recent work on identity in economics aims to provide theoretical underpinnings for these phenomena. See Akerlof (1997) Akerlof and Kranton (2000, 2002), and Fang and Loury (2005).

[4] Many real life examples fit into this. The experiment by Ashraf, Karlan, and Yin (2004) shows exactly this. In addition the ROSCAS (Iqub in Ethiopia) can be seen as such a commitment device.

[5] This perspective is in line with that developed in Banerjee, Benabou, and Mookherjee (2006). See particularly, Part III of that book.

environment - a set that evolves with learning through experience and reflecting motivation and information.

More specifically, poverty may lead individuals to construct mental models that uniquely diminish the significance of some features of the environment and magnify others. If an individual believes that she has little, if any, ability to impact on her wellbeing, then she would have inadequate incentives to become informed about or explore pathways into better wellbeing. Moreover, she would have little motivation to allocate resources (including cognitive ones) to modify her beliefs and perceptions.[6] As a consequence, the set of beliefs about her inability to bring about positive change would be perpetuated. Thus, information, credit, insurance, or other resources/opportunities may be available (albeit with some cost), they remain unexploited by the agent because she is convinced that her actions will not make a difference.

**Perspectives from Beliefs**

In the psychological literature, these beliefs are akin to the concept of locus of control (Rotter, 1966). This concept refers to an individual's perception or belief about the underlying main causes of events in his/her life: do they believe that one's life outcomes are controlled by oneself (internal locus of control) or by external forces, such as powerful others, fate, or luck (external locus of control). Fatalism could then be an expression of an external locus of control. Indeed, the dictionary definition of fatalism is "the doctrine that all things are determined or arbitrarily decreed by fate"[7]. There is plenty of work in developed economies to show that locus of control matters for job performance (Judge and Bono, 2001), and most relevantly, for schooling decisions, employment, and occupational choice (Heckman, Stixrud, and Urzua, 2006). In general, it predicts economic success in both the short and long run (Judge and Hurst, 2007). There is also a close link between internal locus of control and subjective life satisfaction and well-being (Peterson, 2003).

Another and related link in the psychological literature is with the concept of self-efficacy (Bandura 1977). Locus of control concerns general beliefs about control across situations, while self-efficacy concerns beliefs in one's capability to act so as to achieve desired outcomes: one's ability to cope, perform, and be successful (Judge and Bono, 2001). For example, a musician may believe that much daily practice would result in an improved performance, but not believe that she is capable of practicing that hard.

In economics, with inspiration from anthropology and psychology, this perspective affords also an alternative characterisation of what appears to be fatalism, namely, aspirations failure (Appadurai (2001), Ray (2006)). In psychology, aspirations can be understood as the presence of forward-looking goals or targets, and a preference to attain them (Locke and Latham, 2002). Accordingly, a weak capacity to aspire can translate into low or no investments and that may pass for fatalism. This weak capacity to aspire could stem from an external locus of control (linked to beliefs that own effort is not *likely* to lead to anything) and/or from low self-efficacy (beliefs that one is not *capable* to achieve much).

The psychological literature, building on control theory (Lord and Hanges, 1987), suggests that performance below expectations may lead to lowering aspirations (Judge and Bono, 2001). Skinner, Zimmer-Gembeck and Connell (1998) suggest that self-efficacy is strongly influenced by the home environment from childhood. Krishnan and Krutikova

[6] Motivation defined as "Activation to action. Level of motivation is reflected in choice of courses of action, and in the intensity and persistence of effort." Bandura (1994).

[7] Oxford English Dictionary, Second Edition (1989), accessed at http://dictionary.oed.com/

(2010) similarly find close links between parental and their children's self-efficacy and aspirations as adolescents.

In most recent economic research on aspirations, the emphasis has been on the process of acquiring aspirations, emphasising social processes. Inspiration comes from Appadurai (2001), who emphasised how social mobilisation can lead to exchanges of ideas and experiences on future oriented activities, raising aspirations. In the theoretical construct by Ray (2006), peer-group comparisons of achievements and attitudes feed aspirations. Macours and Vakis (2009) focus on how aspirations, broadly defined as attitudes towards the future, are formed via social interactions, using data from Mexico.

In this paper, we explore the role of fatalism in determining well-being and future oriented activities. We use the aspirations perspective and elements of locus of control and self-efficacy, and their links to observed behaviours in rural Ethiopia. In particular, we use recently collected data in rural Ethiopia to examine whether we can uncover basic correlations predicted by the aspiration failure framework. Based on evidence that it is so, we conclude with some of the empirical challenges to further test these models.

The rest of the paper is organized as follows. Section III outlines more extensively the conceptual framework adopted, focusing on fatalism as aspirations failure, outlining some of the key elements to understand its origins and correlates. The findings of our empirical analyses conducted using data collected from a survey are reported in Sections IV and V. The final section describes the way forward.

## III. FATALISM, ASPIRATIONS FAILURE AND SELF-EFFICACY

A dictionary definition of the word 'aspiration' is 'a desire or ambition to achieve something'.[8] The word thus signifies some aim or target and a preference or wish to attain it. The meaning also suggests, rather implicitly, that some effort would be exerted to realize the desired aim/target. Thus, aspirations have two distinctive aspects. First they are *future-oriented*, i.e., they are goals that can only be satisfied at some future time. Aspirations are not about immediate gratification. For example, a hungry person may aim to get some food to satisfy his immediate hunger and exert some effort to achieve that aim. This would not count as an aspiration. In contrast, the goal to be food secure in the future would represent an aspiration. Note also that holding a certain aspiration may generate some satisfaction in itself. This, however, is different from the aspiration held. Second, they are *motivators*, i.e., they are goals individuals are willing, in principle, to invest time, effort or money in to attain (in contrast to idle daydreams and wishes). Nevertheless, the 'willingness to invest' is 'potential', or 'conditional'.

In short, aspirations combine or summarise the preferences held, the expectations and beliefs formed, and the constraints acknowledged by an individual with respect to the future. Viewed as such, the broad concept of fatalism, as a failure of aspirations and self-efficacy, is not new to economics.

Perhaps the most familiar variant relates to the concept of satisficing that Herbert Simon initially elaborated fifty years ago.[9] Simon argues that the complex environment they function in and their limited cognitive and information-processing capabilities make full rationality beyond the reach of economic agents. Instead, he characterises decision-making

[8] Oxford English Dictionary, Second Edition (1989), accessed at http://dictionary.oed.com/.

[9] See, for instance, Simon (1977) and Selten (1999).

by such agents as search for alternatives which meets or exceeds specified criteria or aspiration levels – a process that does not necessarily lead to the choice of a unique or best alternative. In other words, economic agents engage in 'satisficing' rather than 'optimising'.

Moreover, these aspiration levels are modified depending on circumstances – a process referred to as aspiration adaptation. In fact, Selten (1999) argues that the three central elements of Simon's original view of bounded rationality are: search for alternatives, satisficing, and aspiration adaptation. Indeed, the 'aspiration adaptation theory' summarized in Selten (1999), may provide an ingredient to a model of the dynamics of aspirations. However, little explicit consideration seems to be given to how aspirations are formed. As put by Selten (1999) himself:

> "Decision makers do not always know what they want. In new situations goals must be formed. Where does the aspiration scheme come from? Often only a finite number of decision alternatives is considered, even if in principle infinitely many are available. How is this selection made? If quantitative or qualitative expectations about goal variables need to be formed, how is this done? Aspiration adaptation theory leaves processes of goal formation, construction of alternatives and expectation formation largely unmodelled."

In psychology, social cognitive theory (building on social learning theories, Miller and Dollard, (1941)) posits that goals and aspirations come about from self-efficacy: for example, self-efficacy regulates students' aspirations, motivation and, in the end, achievements (Bandura, 1993). In this framework, self-efficacy stems from at least four sources: mastery experiences (learning from success and failure), vicarious experiences (learning from social models), social persuasion (responding to encouragement) and emotional strength (stamina or raising ability to respond to stress). Many proponents of this theory, and not least Bandura himself, explicitly identify vicarious experiences as the route to self-efficacy, raised aspirations and success.

> "The [...] way of creating and strengthening self-beliefs of efficacy is through the vicarious experiences provided by social models. Seeing people similar to oneself succeed by sustained effort raises observers' beliefs that they too possess the capabilities to master comparable activities required to succeed. By the same token, observing others fail despite high effort lowers observers' judgments of their own efficacy and undermines their efforts." (Bandura, 1994)

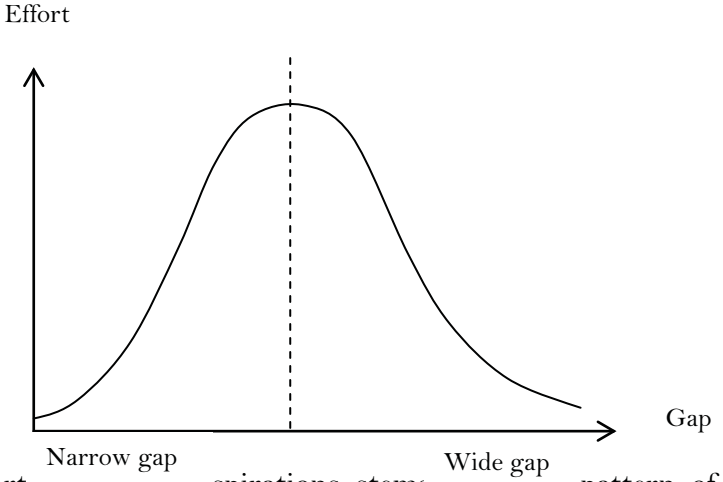
The emphasis is on learning from social role models, but also on the importance that the peers are relevant and sufficiently similar to emulate: this is not simply 'social learning' but requires role models that are similar. To quote Bandura (1994):

> "The impact of modeling on perceived self-efficacy is strongly influenced by perceived similarity to the models. The greater the assumed similarity, the more persuasive are the models' successes and failures. If people see the models as very different from themselves their perceived self-efficacy is not much influenced by the models' behavior and the results its produces. Modeling influences do more than provide a social standard against which to judge one's own capabilities. People seek proficient models who possess the competencies to which they aspire. Through their behavior and expressed ways of thinking, competent models transmit knowledge and teach observers effective skills and strategies for managing environmental demands. Acquisition of better means raises perceived self-efficacy. Seeing people similar to oneself succeed by sustained effort raises observers' beliefs that they too possess the capabilities to master comparable activities required to succeed."

The issue of aspirations and their significance, in versions with parallels to social cognitive theory, has found expression in the framework outlined by Ray (2006),[10] who attempts to characterise aspirations as well as the process of their formation. Three concepts are central to that framework - aspiration window, aspiration gap, and aspiration failure. Aspirations reflect an individual's cognitive world, his/her zone of 'similar', 'attainable' individuals, labelled by Ray (2006) as that individual's aspiration window. This aspiration window is determined by the individual's observations of his/her peers to form comparisons, as well as of the information and economic opportunities of the local environment.

Ray (2006) argues that one additional concept is required before the link between aspirations and individual behaviour can be established. This he refers to as the aspiration gap - the difference between a person's contemporaneous 'standard of living' and the 'standard of living' she aspires to. It is this gap, not aspirations as such, that conditions future-regarding behaviour. The behavioural response of individuals to their respective aspiration gap may take the form of an aspiration failure. Aspiration failure occurs as lack of pro-active behaviour (or under-investment in explicitly economic terms) towards filling the aspiration gap. Given the fact that deliberate action would be costly, it is reasonable to expect very small and very large aspiration gaps to induce little or no effort to fill them. It is not only necessary that individuals have aspirations, but also that they have the kind of aspirations that are feasible and rewarding to act upon.

**Figure 1. Aspiration gap and effort**




The importance of the aspirations stems from the pattern of their distribution in society and the attendant consequences. In this regard, summarising Appadurai (2001), Ray (2006) emphasises that, being a socially determined capacity, aspirations are not evenly distributed between rich and poor. Furthermore, this uneven distribution has intrinsic as well as instrumental consequences. The intrinsic consequence is that the "terms of recognition" are adversely tilted against the poor, stripping them of voice and dignity. The instrumental consequence is that the poor thereby lack "the (aspirational) resources to contest and alter the conditions of their own poverty". Note that this does not mean the poor have no capacity to aspire, it rather means that their opportunity to explore the linkages among means and ends is much more limited than those who are more affluent – in Ray's terms, that they are confronted to narrow aspiration windows. As a result, they have a more restricted and weaker capacity to aspire (Appadurai (2001), Harriss (2005). As put by Appadurai (2001):

[10] The next three paragraphs are essentially a synoptic summary of Sections 2-3 in Ray (2002, 2006). See Ray (2002, 2006) for further details.

"The capacity to aspire is thus a navigational capacity. The more privileged in any society simply have used the map of its norms to explore the future more frequently, more realistically and share this knowledge with one another more routinely than their poorer and weaker neighbours. The poorer members, precisely because of their lack of opportunity to practice the use of this navigational capacity (in turn because their situations permit fewer experiments and less easy archiving of alternative futures), have a more brittle horizon of aspirations.

This difference should not be misunderstood. I am not saying that the poor cannot wish, want, need, plan, or aspire. But part of poverty is a diminishing of the circumstances in which these practices occur. If the map of aspirations (continuing the navigational metaphor) is seen to consist of a dense combination of nodes and pathways, relative poverty means a smaller number of aspirational nodes and thinner, weaker sense of the pathways from concrete wants to intermediate contexts to general norms and back again. Where these pathways do exist for the poor, they are likely to be more rigid, less supple and less strategically valuable, not because of any cognitive deficit on the part of the poor but because the capacity to aspire, like any complex cultural capacity thrives and survives on practice, repetition, exploration, conjecture and refutation. Where the opportunities for such conjecture and refutation in regard to the future are limited (and this may well be one way to define poverty) it follows that the capacity itself remains relatively less developed."

Viewed in this light, aspirations become a valuable analytical device and a critical entry point for policy relevant to poverty reduction and ultimate socio-economic transformation: the poor may have a narrow aspiration window which may lead to a very narrow/wide aspiration gap and subsequently to aspiration failure. The ultimate consequence of this chain is the perpetuation of poverty.[11] More specifically, aspirations can help answer why entrepreneurship appears to be limited, both in spread and dynamism, in poor countries and thus what avenues are open to stimulate greater frequency and depth of entrepreneurial activity in such countries.

The capacity to aspire, in turn, is a cultural capacity that relates to the manner in which people visualise the future and engage in forward-looking behaviour (Appadurai (2001), Rao and Walton (2002)). Being a cultural capacity identifiable with individuals, it not only captures group-level characteristics, but also allows for the possibility of each individual breaking-out (i.e., individually deviant behaviour). It thus proves a useful handle on the individual-group symbiosis that seems to be a key to economic growth and socio-economic transformation. It is reasonable to posit that present-day rich countries were once poor by today's standards. It is also reasonable to assume that they achieved transformation through a process that combines individual initiative, effort and growing collective opportunities (and/or weakening resistance to change) working in a positive feedback loop.

While rooted in very different disciplinary and conceptual frameworks, there are striking common elements between social cognitive theory with its emphasis on self-efficacy and the theories of aspiration failure in economics. In particular, they both share the importance of goals and aspirations in determining success. They both emphasise the role of social comparisons and learning from peers, but in ways that go beyond simple social learning (which emphasises that *information* is the main constraint and that this can be learned from peers): just observing aspirations, and success and failure of peers is not enough. They both emphasise that just having aspirations is not enough to determine success. Social cognitive theory emphasises the role of mental (cognitive) models that allow people to act on information acquired from others: self-efficacy which encompasses an internal locus of control (success is not fundamentally determined by fate or luck), with a capability to act to achieve aspirations. Information acquired from relevant peers (social models) can boost self-efficacy. Bandura (1994) emphasises the importance of the similarity of the social models, so that they are 'competent' models, allowing one to act on the

[11] It is possible to view the 'development as self-discovery' characterisation (of Hausmann and Rodrik (2003)) at the individual/community level from this perspective.

information acquired. Aspirations failure in poor settings, as limited effort to achieve better goals and outcomes in relation to where one is now, is consistent with both an external locus of control (with beliefs that fate, luck or powerful forces determining outcomes) and/or low self-efficacy (beliefs of a lack of capability to achieve).

Consistent with social cognitive theory, aspiration gaps come about in part from observing social comparisons. Both emphasise the importance of learning from *relevant* social models and peers to lead to success or at least actions to foster a higher standard of living. In particular, only specific aspiration gaps lead to higher aspirations and actions to achieve success. If the gap is too small, it will not lead to actions and effort for improvement in outcomes – or to put it in the context social cognitive theory, the social model is relevant, but not much is to be learned from it, so self-efficacy is not increased. If the gap is too large, it will also not lead to higher aspirations and success: the social models are not *competent* (or relevant) to learn from and raise self-efficacy. While by no means trying to argue that these theories are equivalent (they are not), in terms of their empirical predictions, there are considerable parallels. In any case, they are both worthwhile to explore in empirical analysis.

## IV. DATA AND MEASUREMENT

In January 2007, an opportunity arose to add a module to a rural household survey being implemented in poor areas of Ethiopia targeted by the national-level Productive Safety Net Program (PSNP). The sample covered approximately 24 households per village, in 54 villages of nine districts chosen for their broad representativeness of various physical and human (or livelihood) conditions in Ethiopia, totalling 1192 households. In each household standard demographics, health, education, income, consumption and expenditure information were collected.[12]

A number of variables were collected that shed light on people's locus of control, aspirations and self-efficacy, and its consequences for future-oriented behaviour. In this section, we introduce these and their links. Measuring people's goals and ambitions is not an easy task; in line with our discussion in the previous section, it is also not the appropriate perspective. Aspirations are not only the wants and preferences of individuals, their beliefs and calculations regarding the feasibility of those wants and preferences critically matter for behaviour, as well. In view of the links with concepts such as locus of control and self-efficacy, we focus on simple sets of questions. Typically these questions are used in work on establishing the locus of control, going back to Rotter (1966), and usually also a core sub-set in the assessment of self-efficacy. In particular, we asked:

*For each of the following, please tell me which of the two propositions you most agree with:*

*a.* *1: "Each person is primarily responsible for his/her success or failure in life"*
*2: "One's success or failure in life is a matter of his/her destiny"*

*b.* *1: "To be successful, above all one needs to work very hard"*
*2: "To be successful, above all one needs to be lucky"*

[12] The aspirations-related module was itself administered to two adults per household. For ease of interpretation however, and because certain of the covariates used were only available at the household-level, only household heads are kept in the sample used below. Note though that all estimations were also performed at the individual-level with equivalent – in fact, sometimes stronger – results.

Consistent with our framing related to fatalism, both questions contrast success through own effort with success through luck and fate. Note that in the measurement of locus of control, more elaborate and arguably careful instruments have been proposed (for example, Levenson (1981)). However, for our purposes, the questions above appeared to be simple enough, given the poor rural setting, while providing helpful insights.

The resulting binary responses were deemed informative about the extent to which individuals feel in control of their own future. Overall, in the present sample, 31 percent of the respondents agree that *"One's success or failure in life is a matter of his/her destiny"*, while 32 percent of them believe that *"To be successful, above all one needs to be lucky"*. Indeed, the responses to these questions are quite consistent with each other: 82 percent of those who agreed with the statement that "One's success or failure in life is a matter of his/her destiny" also agreed with the statement that "To be successful, above all one needs to be lucky". Given its obvious links with fatalism, only the results obtained using the destiny-related indicator are reported in subsequent paragraphs.[13] We use this indicator in the analysis below as a crude gauge of people's self-efficacy and aspirations in this setting.

As a first step, we explore whether answers to this question were broadly consistent with other characteristics we could reasonably expect them to correlate with. Poverty is one obvious example: in very poor settings, it is likely that many of the poor would also display a limited sense of ability to control their destiny. As a first consistency test, we relate this indicator to a measure of self-assessed wealth and poverty, controlling for age, gender, and literacy status of the respondent, as well as village-level characteristics. The self-assessed poverty indicator is captured via the following question: [14]

> *Just thinking about your own household circumstances, would you describe your household as:*
> *(i) Destitute, (ii) Poor, (iii) Never have quite enough, (iv) Can manage to get by, (v) Comfortable, (vi) Rich*
> *(vii) Very rich*

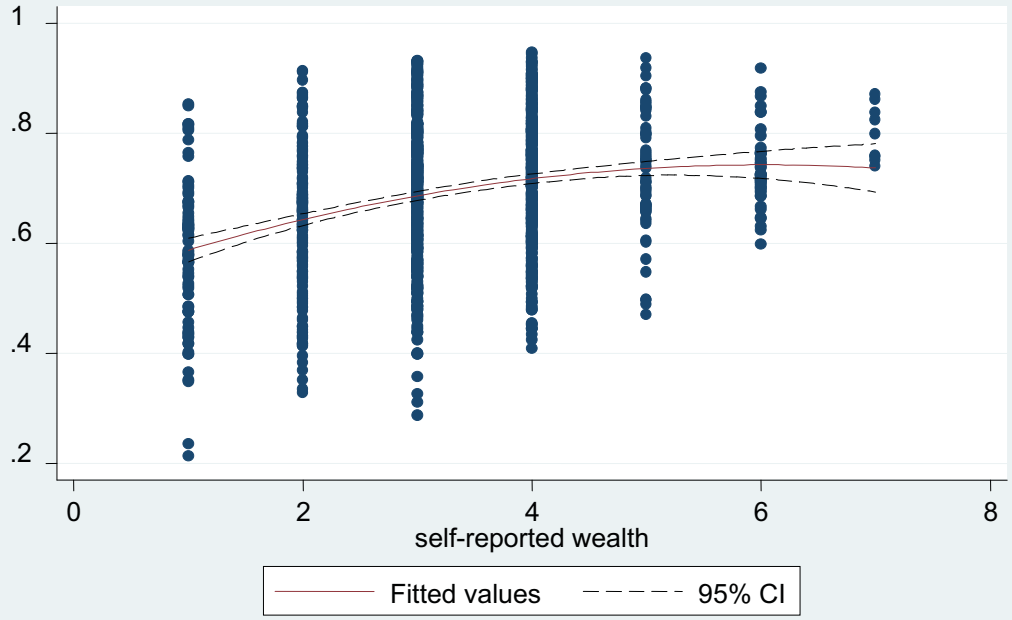
While 90 percent of the answers fell within the first four categories (recall that the sample was explicitly selected from among the poorest districts in Ethiopia), the distribution nevertheless offers enough variations to investigate its relationship with the aspiration indicator described above. We do this using a logit model, and the results are reported in Figure 2, in which on the X-axis, '1' signifies the lowest category of perceived wealth ("destitute") and '7' is "very rich"; the Y-axis gives the predicted probability to have an internal locus of control.[15] As expected, the figure displays a positive relationship between perceived wealth and internal locus of control – although with significant heterogeneity in the predicted probability of having an internal locus of control at each wealth category. Note that the result does not tell us anything about causality between locus of control and wealth; theory would in any case suggest mutually reinforcing processes. Below we will use responses to the destiny question for further analysis.

[13] Note however that all the tests reported were also performed using the luck-related indicator and that comparable results were obtained.

[14] By using a self-assessed wealth indicator, we may well capture a broad definition of poverty, beyond current material welfare.

[15] The regression itself is reported in the appendix. Note that 'internal locus of control' refers to the agreeing to Item 1 in the destiny-related indicator, i.e., *"Each person is primarily responsible for his/her success or failure in life"*.

Figure 2: Locus of control and poverty




Predicted probability are based on a logit estimation with dependent variable one's aspirations (proxied by the respondent's belief more in own repsponsability than in fate to improve one's lot), and independent variables age (linearly and squared), gender, literacy status, self-reported wealth and Kebele-level fixed effects. A 95% confidence interval is shown.

**Role models and the Aspiration Window**

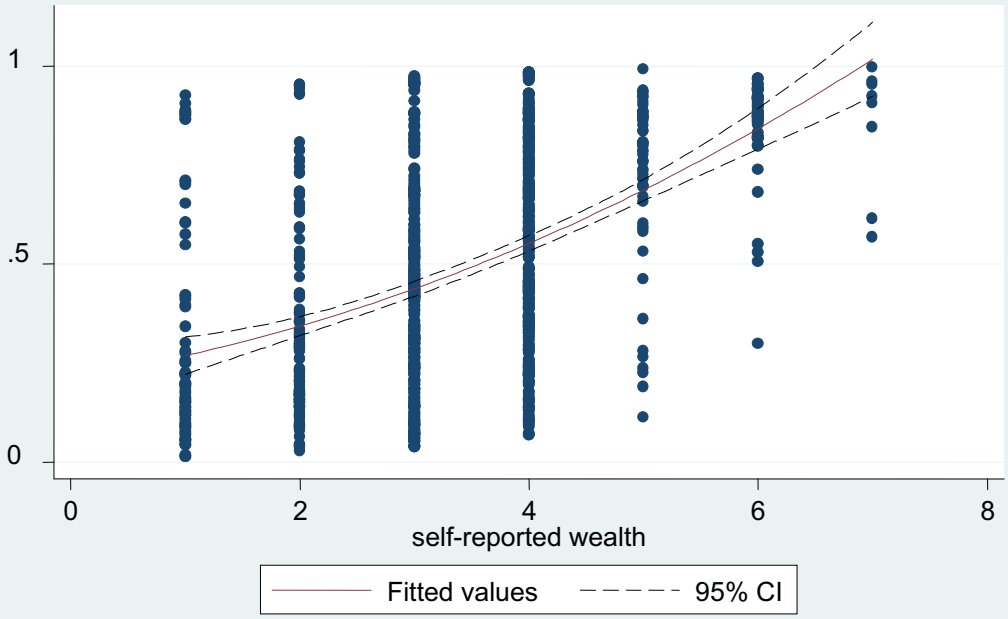
According to the discussion in Sections II-III, a person's aspirations and self-efficacy are affected by the person's observation of his/her peers to form comparisons, as well as of the information and economic opportunities of the local environment. Accordingly, poorer households are expected to have lower aspirations and self-efficacy because of narrower windows to observe from.

The data used here give a relatively strong support to this hypothesis. For instance, for 89 percent of the respondents their 'role model' lives in the same Kebele (although there is no close family link between the two individuals). Indeed, several relatively successful individuals are likely to be found in each Kebele. As put by respondents to an interview in Holte Kebele: "We have successful individuals who are a model for others in their activities to improve their food security status". Nevertheless, the fact that the vast majority of the respondents' role models are their more or less immediate neighbours indicate to a rather limited access to outside information.

The respondents' limited exposure to the rest of the world is further reflected in the fact that: 92 percent of all the household heads in the sample were born in the village they are currently living in, and more than 70 percent of responding household heads declare that both their first language and their religion is the same as that of the successful person or role model they have chosen.[16] In addition, while 57 percent of the respondents reported listening to the radio less than once a year, one-third did not have regular contact with at least one person outside of her village, and 56 percent did not have such contacts with individuals outside their district.

[16] The fractions are even higher for speakers of specific languages (almost a 100 percent for Afar, Oromiffaa, and Tigrigna speakers) and followers of specific religions (above 90 percent for Orthodox Christians). The exceptions are Siltie speakers and Protestants.

**Figure 3. Aspiration window (contact with peers outside community) and poverty**




Predicted probability are based on a logit estimation with dependent variable whether the respondent ever talks with individuals outside his/her district, and independent variables age (linearly and squared), gender, literacy status, and Kebele-level fixed effects. A 95% confidence interval is shown.

Our data also suggest that poorer people have little exposure to potential role models from outside the village, potentially contributing to lower aspirations and self-efficacy. In Figure 3, we report similar estimates as those in Figure 2, only this time we assess the probability that one may have regular contacts outside his/her district as a function of his/her self-assessed poverty status, again using a logit model in which the dependent variable is whether the respondent ever talks with individuals outside his/her district, and as independent variables, besides self-reported wealth, age of the respondent and squared age, gender, literacy status, and Kebele fixed effects, i.e. dummy variables controlling for each 'village'.[17] Here also, the results tend to support the idea of narrower windows for poorer individuals.

In line with our framework above, locus of control appears to be correlated to these indicators of the 'window' made up of potential role models. Table 1 reports simple tests of difference. At this stage, again these results may not be interpreted as causality. For instance, one's window can itself be the result of a higher aspiration/external locus of control individual's choice to seek more information, or of a third factor (or set of factors) influencing both one's window and locus of control. Nevertheless, they do suggest that larger windows are linked to an internal locus of control.

[17] The regression itself is reported in the appendix.

**Table 1. Locus of Control, Peers and Aspiration windows**

| | (1) Total | (2) Internal locus of control (own effort) | (3) External locus of control (destiny and fate) | Difference (2)-(3) (p-value) |
|---|---|---|---|---|
| Communicate regularly with at least one person outside the Village? (%) | 66.5 | 68.0 | 63.3 | 0.14 |
| Communicate regularly with at least one person outside the District? (%) | 44.2 | 46.4 | 39.6 | 0.05 |
| Listen to radio more than once a year (%) | 57.3 | 61.7 | 47.2 | 0.00 |
| Role model lives in same village (%) | 88.6 | 88.8 | 88.0 | 0.68 |

***Source***: Own computation from the Path to Self-resiliency Survey (2007).

## Indicators of Aspiration Gap and Self-Efficacy

The desire to capture the distance between what is aspired to and what the current state is underlies the idea of the aspiration gap. According to the theory above, it is this gap which determines the level of 'effort' displayed by individuals to better their future. Importantly, and as shown in Figure 1, the same level of 'effort' can be obtained for narrow and wide aspiration gaps.

Several, albeit partial, indicators can be used to characterize the aspiration gap. First, we note that 73 percent of the respondents believe that they could become as successful as their respective role model within five years. These results overall suggest that, for most respondents, the distance between aspired and current states is not perceived to be very wide. This is further supported by the respondents' low desire for change. Indeed, only 45 percent of them were ready to change their main income earning activity (predominantly farming), and 28 percent were willing to move to somewhere else even when this would lead to improved standard of living – recall that all respondents were sampled from districts considered amongst the most deprived areas of Ethiopia. Overall, these results indicate a narrow aspiration gap for most.

In Table 2, we assess the relationship between these indicators and locus of control. Despite there being evidence of a low aspirations gap in general, there is a clear significant link: those with an external locus of control are more likely to have beliefs of limited self-efficacy and thus more likely to be unable to be as successful; they also have little appetite for change.

**Table 2. Aspiration gap and Locus of Control**

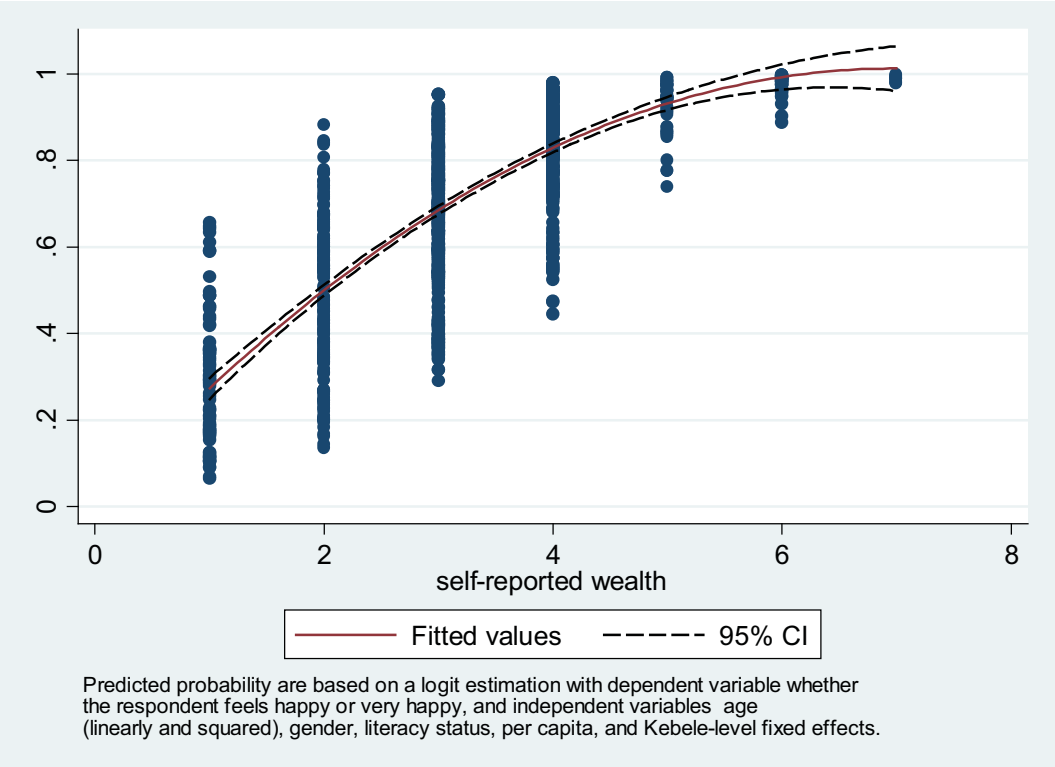
| | (1) Total | (2) Internal locus of control (own effort) | (3) External locus of control (destiny and fate) | Difference (2)-(3) (p-value) |
|---|---|---|---|---|
| 1. Can become as successful as role model within five years | 72.8 | 75.2 | 66.8 | 0.00 |
| 2. Would like to change main income earning activity | 45.5 | 47.7 | 40.5 | 0.02 |
| 3. Is willing to move to improve standard of living | 28.0 | 29.9 | 23.9 | 0.03 |
| 4. Is happy or very happy (instead of unhappy or very unhappy) | 71.3 | 74.7 | 63.9 | 0.00 |

***Source***: Own computation from the Path to Self-resiliency Survey (2007).

Overall, these results do support the claim that fatalistic individuals are likely to be the ones with lower aspiration gaps, thereby more prone to aspiration failures.

In Table 2, we also report on a link between an internal locus of control and happiness. It is rather striking that more than 70% of the respondents indicated that they were either happy or very happy, while less than 30% said otherwise. Despite widespread poverty, such levels of 'happiness' have been observed in many developing countries (see Duflo and Banerjee, 2005). Consistent with other findings in the literature of richer economies, we find nevertheless that an internal locus of control and happiness is significantly related (Peterson, 2003). Figure 4 suggests a reason why in these data this should not come as a surprise – happiness in these data is very strongly related to concepts of self-perceived wealth and poverty, which was already shown to be correlated with locus of control.[18] This figure is again based on a logit model with controls, using being 'happy' or 'very happy' as the dependent variable.[19]

**Figure 4. Happiness and poverty**




## V. ASPIRATION FAILURES AND FUTURE-ORIENTED BEHAVIOUR

Building on aspirations failure theories, the hypothesis enunciated in Section III states that narrow aspiration windows engender very narrow or very wide aspiration gaps and ultimately lead to aspirations failure, in the form of limited effort towards future-oriented behaviour to improve living standards. External locus of control and low self-efficacy, possibly linked to limited 'competent' social models, would similarly predict limited action to

[18] The regression itself is reported in the appendix.

[19] A large body of research spanning both developed and developing countries (Di Tella, MacCulloch, and Oswald (2002), Layard (2003), and Graham, Eggers, and Sukhtankar (2004), Stutzer (2006)) has studied the links between happiness and wealth. The link in figure 4 appears stronger than many of the other studies.

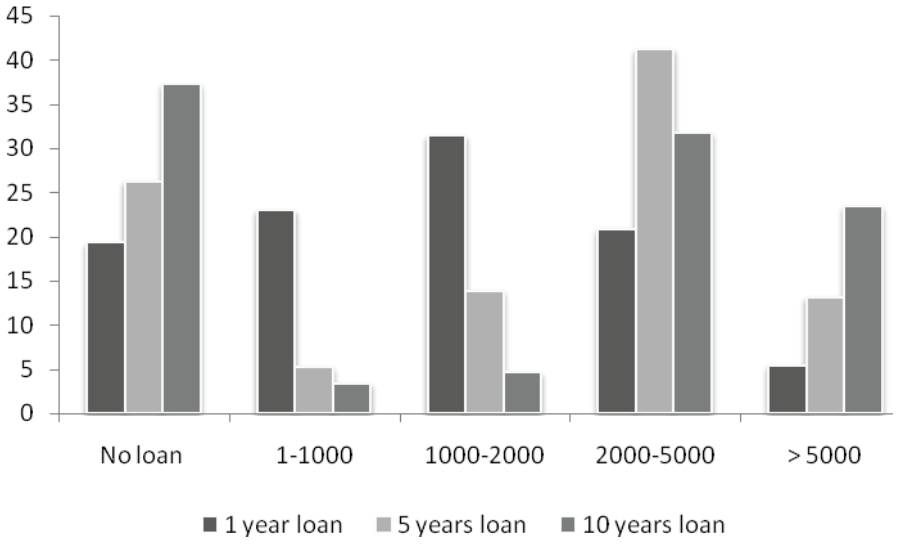
improve one's lot. Narrow aspiration gaps appear to characterise the sample used. In this section, we explore this further. In particular, we explore whether there is a link between forward-looking behaviour, in this case demand for credit, and measured locus of control. In particular, respondents were asked a set of questions regarding credit, as this is by definition future oriented behaviour:

*Q 21: A banker came to you and offered to lend you any amount of money you ask…*[20]

*a. 1: How much would you ask for if the loan was payable in 1 year?*
*2: What would you use this money for?*
*b. 1: How much would you ask for if the loan was payable in 5 years?*
*2: What would you use this money for?*
*c. 1: How much would you ask for if the loan was payable in 10 years?*
*2: What would you use this money for?*

Figure 5 presents the distribution of answers to the first part of each question. Note that the amounts that would be borrowed remain relatively small, even for a 10-year repayment period (as a rule of thumb, one USD is roughly equal to 10 Birr at the time of the survey). These amounts however increase with the length of the repayment period.[21] It is notable that a large proportion of individuals (17 %) are not interested in taking any loans,[22] and that it increases as the time horizon expands, suggesting a fear of commitment probably due to uncertainties about future economic status.

**Figure 5 : Demand for credit, by length of repayment period**




In Table 3, the average loan amounts demanded are linked to the respondents' locus of control. The results are rather clear, showing that a person would borrow significantly more if he/she feels in control of his/her life. Those with internal locus of control are significantly more willing to take a loan for one-year and ten-year maturity periods.

[20] This formulation of the credit demand question was intended to make credit market imperfections in principle inoperative.

[21] This is consistent with the finding that loan size is quite responsive to changes in loan maturity. See Karlan and Zinman (2005).

[22] This is even more striking since the hypothetical scenario would likely encourage respondents to overstate their willingness to borrow.

The types of investment the respondent would make if he/she were lent the money were considered next. To this end, answers were classified into three categories. The first category groups all short term uses such as expenditure immediate food consumption and household consumables. The second category groups what are identified as medium term investments. Specifically, investments aimed at enhancing the respondent's capacity within his/her present activity are included. Purchases of farm implements of all kind, oxen and other cattle fall into this category. Finally, the third category captures investments that are meant to help people break-out of their current socio-economic status. Such investments encompass education (respondent's own or his/her kids') or the start of a new business. The next question considered is whether fatalistic individuals (with external locus of control) would invest in shorter term activities more than their not fatalistic counterparts. The results are relatively clear in that very few individuals would invest in immediate consumption in both cases, although those with internal locus of control individuals would invest significantly more often in long term activities (Table 4).

**Table 3. Fatalism and Borrowing (1)**

| | (1) Total | (2) Internal locus of control (own effort) | (3) External locus of control (destiny and fate) | Difference (2)-(3) (p-value) |
|---|---|---|---|---|
| Amount borrowed for one year | 2055 | 2131 | 1883 | 0.07 |
| Amount borrowed for 5 years | 3051 | 3074 | 3001 | 0.67 |
| Amount borrowed for 10 years | 3561 | 3699 | 3248 | 0.03 |

***Source***: Own computation from the Path to Self-resiliency Survey (2007).

**Table 4. Fatalism and Borrowing (2)**

| Use of hypothetical loan | (1) Total | (2) Internal locus of control (own effort) | (3) External locus of control (destiny and fate) |
|---|---|---|---|
| Short term investment (immediate consumption) | 3.95 | 3.79 | 4.37 |
| Medium term investment (farm implements, oxen) | 42.82 | 40.44 | 48.81 |
| long term investment (Education, new business) | 53.22 | 55.77 | 46.93 |
| | | Person Chi-square(2) = 5.8039, Probability = 0.05 | |

***Source***: Own computation from the Path to Self-resiliency Survey (2007).

As a further step towards a more rigorous testing strategy, determinants of the amount a respondent would borrow if he/she were offered a loan were investigated econometrically. Using the same control variables as before (age, age squared, gender, literacy, self-reported wealth[23] and village fixed effects), we explored whether the measured destiny indicator (locus of control) contributes to explaining borrowing intentions. Figure 5 has shown that a number of individuals indicated that they would rather not take a loan if it was offered to them. A Tobit estimator is used to account for this censoring of the data.[24] The estimation was run for each of the three proposed repayment periods: one year, five

[23] Self-reported wealth is used in this regression as a continuous variable, taking on 7 values, increasing in wealth. Alternative specifications, in which the underlying categorical variable is transformed in dummy variables, did not change the findings.

[24] Individuals who responded that they would not take any loan if it was offered to them may indeed be more willing to save. As such, their answers would have been negative and the zero values observed therefore support the use of a Tobit estimator.

years, and ten years. The marginal effects, calculated at the means of the independent variables, are reported in Table 5.

**Table 5. Fatalism and Borrowing (3)**

| | One year loan | | | Five years loan | | | Ten years loan | | |
|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| No Fatalism =1 (0/1) | 337.28 | 267.81 | 227.34 | 184.32 | 73.80 | 54.59 | 534.80 | 432.54 | 471.91 |
| (internal locus control) | (2.73) | (2.18) | (1.96) | (1.05) | (0.42) | (0.32) | (2.35) | (1.90) | (2.14) |
| | ** | * | * | | | | * | + | * |
| Woman=1 (0/1) | | -491.17 | -659.41 | | -456.10 | -606.20 | | -5.53 | -288.20 |
| | | (3.16) | (4.51) | | (2.05) | (2.75) | | (0.02) | (0.99) |
| | | ** | ** | | * | ** | | | |
| Age | | -6.30 | -4.04 | | 45.90 | 60.56 | | 73.18 | 96.24 |
| | | (0.26) | (0.18) | | (1.32) | (1.78) | | (1.59) | (2.14) |
| | | | | | | + | | | * |
| Age$^2$ | | -0.003 | -0.02 | | -0.69 | -0.81 | | -1.08 | -1.27 |
| | | (0.01) | (0.09) | | (1.91) | (2.29) | | (2.24) | (2.71) |
| | | | | | + | * | | * | ** |
| Schooling (0/1) | | 641.60 | 147.86 | | 558.88 | 7.57 | | 5.82 | -435.44 |
| | | (4.59) | (1.15) | | (2.92) | (0.41) | | (0.02) | (1.79) |
| | | | | | | | | | + |
| Self-reported wealth | | 73.60 | 180.71 | | 149.68 | 182.81 | | 215.70 | 40.10 |
| | | (1.47) | (3.62) | | (2.12) | (2.48) | | (2.34) | (0.42) |
| | | | ** | | * | * | | * | |
| Village-level fixed effects | | | Yes | | | Yes | | | Yes |
| Number observations | 1192 | 1192 | 1191 | 1192 | 1192 | 1191 | 1192 | 1192 | 1191 |
| Censored obs | 228 | 228 | 228 | 311 | 311 | 311 | 443 | 443 | 443 |
| (at credit demand = 0) | | | | | | | | | |

(a) Reported are marginal effects at mean of independent variable
(b) t statistics in parenthesis, ** = significant at 1% level, * = significant at 5% level, + = significant at 10% level
(c) Dependent variables: 1-year loan : mean = 2048, standard deviation = 2183
5-year loan : mean = 3041, standard deviation = 2792
10-year loan : mean = 3549, standard deviation = 3492

The control variables are important, in order to allow us to rule out some other potential sources of explanation which may be correlated with locus of control. Indeed, several factors may compete in explaining one's investment behaviour including the lack of complementary assets, the exposure to income shocks, lack of information, identity traits, missing markets and limited local investment opportunities. Within our data, we cannot control for all possible explanations, but we can control for correlates of these factors, such as wealth, schooling, gender, age as well local opportunities or norms, by using village-level fixed effects. For each dependent variable, the regression without controls, with household level controls and finally with also village-level fixed effects are shown.

First looking at the controls, we find some clear gender effects (reducing credit demand), some age effects (for larger sums, possibly suggesting life cycle effects) and a positive correlation for wealth, significant in some of the specifications. Wealth effects may signify less concern of indebtedness or greater access to complementary assets. Strikingly, we do find a positive link between internal locus of control ('no fatalism') and credit demand, especially for smaller and larger loans. Adding more controls lowers the role of fatalism, as more variables correlated with fatalism, such as perceived wealth, are entered. The effect is significant at 5 percent for the case of a one year and a ten year loan, even when village-level dummies are included. The size is relevant: an internal locus of control increases credit demand by 10 percent of the standard deviation in one year loan demand, and 13% of a standard deviation in ten year loan demand. In sum, an internal locus of control, implying

no fatalism, appears to be linked to future-oriented actions, at least on the basis of the apparent demand for credit.

This section has provided preliminary, although robust empirical evidence that demonstrated the relevance of the "aspiration framework" to the analysis of poverty dynamics. In particular, the results suggest that external locus of control characterise a large proportion of the surveyed population and may significantly influence their future-oriented behaviour.

## VI. CONCLUSIONS

This paper has applied the "aspirations failure" framework as used in recent theoretical work in economics, as well as drawn inspiration from social cognitive theory to study the role of fatalism on economic behaviour. Specifically, we find that concepts such as external locus of control, low self-efficacy and a small aspirations gap help to understand ideas of fatalism and its implications for future oriented activities, such as borrowing. The evidence suggests that, understood in this sense, fatalism lowers the demand for long-term loans and for loans for productive purposes.

Of course, the final set of tests in the paper can hardly establish a causal link between fatalism and actual behaviour, in part because they are based on hypothetical scenarios. Furthermore, causality would always be difficult to establish as all the concepts, including fatalism and locus of control, self-efficacy, aspirations gaps and failure are all likely to interact with economic variables in a highly endogenous way. Exploring these links, preferably in an experimental setting, is the next stage of this research agenda. Such work is important, as it may shed light on the potential to raise self-efficacy and/or widen aspirations gaps in ways that allow poor populations to take more advantage of opportunities as well as create new ones. By so doing it can contribute towards breaking any vicious circles stemming from aspirations failure. Work of this nature, in the form of a field experiment, is now taking place in Ethiopia.

## REFERENCES


Akerlof, George and Rachel Kranton. (2000). "Economics and Identity," *The Quarterly Journal of Economics*, 115 (3), 715-753.

Akerlof, George and Rachel Kranton. (2002). "Identity and Schooling: Some Lessons for the Economics of Education," *Journal of Economic Literature*, 40 (4), 1167-1201.

Akerlof, George. 1997. "Social Distance and Social Decisions," *Econometrica*, 65 (5), 1005-1027.

Appadurai, Arjun (2001). "The Capacity to Aspire: Culture and the Terms of Recognition," *Draft.*

Ashraf, Nava, Dean Karlan, and Wesley Yin (2006). "Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines," *Quarterly Journal of Economics*, forthcoming.

Bandura, Albert (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health.* San Diego: Academic Press, 1998).

Bandura, Albert (1993). "Perceived Self-Efficacy in Cognitive Development and Functioning", Educational Psychologist, 28 (2), 117-148

Bandura, A. (1977). Social Learning Theory. New York: General Learning Press.

Banerjee, Abhijit Vinayak, Roland Bénabou, and Dilip Mookherjee (eds.) (2006). *Understanding Poverty*, Oxford University Press, New York.

Bendor, J., D. Mookherjee, D. and D. Ray (2001). "Aspiration-Based Reinforcement Learning in Repeated Games: An Overview," *International Game Theory Review*, Nos. 2 & 3, 159–174.

Bertrand, Marianne, and Sendhil Mullainathan (2001) "Do People Mean What They Say? Implications for Subjective Survey Data" *American Economic Review*, 91, 2: 67-72

Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir (2004). "A Behavioural Economics View of Poverty," *American Economic Review*, 94, 2: 419-423.

Blume, Lawrence E., Steven N. Durlauf (2005). "Identifying Social Interactions: A Review," *mimeo.*

Bowles, S. (2005). "Institutional Poverty Traps." In S. Bowles, S. Durlauf, and K. Hoff, eds. (2005), *Poverty Traps.* Princeton University Press.

Cohen-Cole, Ethan, and Giulio Zanella (2007). "Unpacking Social Interactions," *Working Paper*, No. QAU07-4, the Quantitative Analysis Unit, Federal Reserve Bank of Boston.

CSA (2007). "Household Income, Consumption and Expenditure (HICE) Survey 2004/05 – Volume I Analytical Report," *Statistical Bulletin* 394, Central Statistical Agency (CSA), Federal Democratic Republic of Ethiopia.

Di Tella, Rafael, Robert J. MacCulloch, and Andrew J. Oswald (2002). "The Macroeconomics of Happiness," *mimeo.*

Duflo, Esther and Abhijit Banerjee (2007). "The Economic Lives of the Poor"*Journal of Economic Perspectives*, Vol 21, No. 1, pp 141-167.

Duflo, Esther and Abhijit Banerjee (2005) "Growth Theory Through the Lens of Development Economics", in *Handbook of Economic Growth*, Vol. 1, Part A, pp. 473-552.

Duflo, Esther, Michael Kremer, and James Robinson (2003) 'Understanding technology adoption: Fertilizer in Western Kenya, preliminary results from field experiments.' *Mimeo*, MIT

Fang, Hanming, Glenn C. Loury (2005). "Toward an Economic Theory of Dysfunctional Identity," Chapter 2 in Chisropher B. Barrett (2005). *The Social Economics of Poverty: On Identities, Communities, Groups, and Networks*, Routledge, London.

Girma, Sourafel, and Abbi Kedir (2005). "Heterogeneity in returns to schooling: Econometric evidence from Ethiopia," *Journal of Development Studies*, 41:8, 1405–1416.

Goldstein, Markus, and Christopher Udry (1999) "Agricultural innovation and resource management in Ghana." *Mimeo*, Yale University; Final Report to IFPRI under MP17

Graham, Bryan S., and Jinyong Hahn (2005). "Identification and estimation of the linear-in-means model of social interactions," *Economics Letters*, 88, 1–6.

Graham, Carol, Andrew Eggers, and Sandip Sukhtankar (2004). "Does happiness pay? An exploration based on panel data from Russia," *Journal of Economic Behavior & Organization*, Vol. 55, 319–342.

Harriss, John, (January 8, 2005). "How and Why Does Culture Matter?" a book review of Rao, Vijayendra, and Michael Walton (editors) (2004). *Culture and Public Action*, Stanford University Press, *Economic and Political Weekly.*

Hausmann, Ricardo, and Dani Rodrik (2003). "Economic Development as Self-discovery," *mimeo.*

Hausmann, Ricardo, Dani Rodrik, and Andrés Velascoy (March 2005)). 'Growth Diagnostics,' *mimeo.*

Heckman, James J., Jora Stixrud, and Sergio Urzua. 2006. "The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behaviour." *The Journal of Labor Economics*, 24(3): 411-482.

Hoff, Karla, and Priyanka Pandey (2004). "Belief Systems and Durable Inequalities - An Experimental Investigation of Indian Caste," *World Bank Policy Research Working Paper*, No. 3351.

Hoff, Karla, Avishay Braverman, and Joseph E. Stiglitz (1993). *The Economics of Rural Organization: Theory, Practice, and Policy*, the World Bank, Oxford University Press, New York.

Judge, Timothy A. and Joyce E. Bono. 2001. "Relationship of Core Self-Evaluations Traits - Self-Esteem, Generalized Self-Efficacy, Locus of Control, and Emotional Stability - with Job Satisfaction and Job Performance: A Meta-Analysis." *Journal of Applied Psychology*, 86(1): 80–92.

Judge, Timothy A. and Charlice Hurst. 2007. "Capitalizing on one's advantages: Role of core self-evaluations." *Journal of Applied Psychology*, 92(5):1212–27.

Karlan, Dean, and Jonathan Zinman (2005). "Elasticities of Demand for Consumer Credit," *Center Discussion Paper* No. 926, Economic Growth Center, Yale University (http://www.econ.yale.edu/~egcenter/).

Krishnan, P., and S. Krutikova 2010. "Skill Formation in Bombay's Slums," Cambridge Working Papers in Economics 1010, Faculty of Economics, University of Cambridge.

Kuran, T. (1988). "The Tenacious Past: Theories of Personal and Collective Conservatism." *Journal of Economic Behavior and Organization* 10(2): 143-171.

Levenson, H. (1981). Differentiating among internality, powerful others, and chance. In H.M. Lefcourt (Ed.), Research with the locus of control construct, Vol. 1. New York: Academic Press.

Locke, Edwin and Gary Latham, 2002. "Building a Practically Useful Theory of Goal Setting and Task Motivation. A 35-Year Odyssey", *American Psychologist*, 57(9): 705-717.

Lord, R.G. and P.J. Hanges. (1987) "A control systems model of organizational motivation: Theoretical development and applied implications". *Behavioral Science* 32: 161-178.

Manski, Charles F. (2004). "Measuring Expectations," *Econometrica*, **Vol. 72, No. 5**, 1329–1376.

Manski, Charles F. (2000). "Economic Analysis of Social Interactions," *The Journal of Economic Perspectives*, Vol. 14, No. 3, pp. 115-136.

Miguel, Edward and Michael Kremer (2003) "Networks, Social Learning, and Technology Adoption: The Case of Deworming Drugs in Kenya." *Mimeo.* Harvard University.

Mookherjee, Dilip, and Debraj Ray (eds.)(2001). *Readings in the Theory of Economic Development*, Blackwell Publishers, Oxford.

Macours, Karen, Renos Vakis (2009). "Changing Households' Investments and Aspirations through Social Interactions: Evidence from a Randomized Transfer Program in a Low-Income Country," *mimeo.*

Miller, N. E., & Dollard, J. (1941). Social Learning and Imitation. New Haven: Yale University Press.

Munshi, Kaivan, and Mark Rosenzweig (2005). "Traditional Institutions Meet the Modern World: Caste, Gender and Schooling Choice in a Globalizing Economy," *mimeo.*

Peterson, Christopher. 2003. Personal Control and Well-Being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The Foundations of Hedonic Psychology* (pp. 288–301). New York: Russell Sage Foundation.

Platteau, Jean-Philippe (2000). *Institutions, Social Norms, and Economic Development*, Overseas Publishers Association, Amsterdam.

Rahmato, Dessalegn, Aklilu Kidanu (*1999).* Consultations with The Poor - A Study to Inform the World Development Report 2000/01 on Poverty and Development (National Report, Ethiopia), Addis Ababa, *mimeo.*

Rao, Vijayendra, and Michael Walton (editors) (2004). *Culture and Public Action*, Stanford University Press.

Rao, Vijayendra, and Michael Walton (2002). "Culture, Inequality and Accumulation in a Globalizing World" Paper presented at 5th Annual Conference of the Centre for the Study of Globalisation and Regionalisation on *Globalisation, Growth and (In)Equality*, , held at Scarman House, University of Warwick, 15-17 March 2002**.**

Ray, Debraj (1998). *Development Economics*, Princeton University Press, Princeton, N.J.

Ray, Debraj (2002). "Aspirations, Poverty and Economic Change," *very preliminary draft.*

Ray, Debraj (2006). "Aspirations, Poverty and Economic Change," in Banerjee, A., R. Bénabou and D. Mookherjee (eds) (2006). *What Have We Learnt About Poverty*, Oxford University Press.

Rotter, J.B. (1966). "Generalized expectancies for internal and external locus of reinforcement". *Psychological Monographs*. 80(1, Whole no. 609).

Rubinstein, Ariel (1998). *Modelling Bounded Rationality*, the MIT Press, Cambridge, Massachusetts.

Sadoulet, Elisabeth, and Alain de Janvry (1995). *Quantitative Development Policy Analysis*, the Johns Hopkins University Press, Baltimore.

Scheinkman, Jose A. (2004?). "Social Interactions," *mimeo*.

Selten, Reinhard (1999). "What is Bounded Rationality?", *SFB Discussion Paper* B-454, Paper prepared for the Dahlem Conference, May, 1999.

Simon, Herbert A. (1977). "Rational Decision-Making in Business Organizations," Nobel Memorial Lecture, 8 December, 1977. (Later published in 1979 as *American Economic Review*, 69, 493-513).

Skinner, E.A., M.J. Zimmer-Bembeck and J.P. Connell (1998). "Individual differences and the development of perceived control" *Monographs of the Society for Research in Child Development*. No 254 (vol 63(2-3).

Solomon, Robert C. (2003). "On Fate and Fatalism" *Philosophy East and West*, Vol. 53, No. 4, pp. 435-454.

Stutzer, Alois (2002). "The Role of Income Aspirations in Individual Happiness," *Working Paper Series*, Working Paper No. 124, Institute for Empirical Research in Economics, University of Zurich.

Udry, Christopher, and Santosh Anagol (2006). "The Return to Capital in Ghana," *Center Discussion Paper* No. 932, Yale Economic Growth Center, Yale University (http://www.econ.yale.edu/~egcenter/).

Whelan, Christopher T. (1996). "Marginalization, Deprivation, and Fatalism in the Republic of Ireland: Class and Underclass Perspectives," *European Sociological Review*, Vol. 12, No. 1, pp. 33-51.

Yamauchi, Futoshi (2007) "Social learning, neighborhood effects, and investment in human capital: Evidence from Green-Revolution India", *Journal of Development Economics*, 83 (1): pp 37-62.

**Appendix: Logit estimates for Figures 2, 3 and 4**

| | Locus of Control | Happiness | Communicates outside district |
|---|---|---|---|
| Age | 0.076 | 0.030 | -0.031 |
| | (0.028)** | (0.032) | (0.041) |
| $Age^2$ | -0.001 | -0.000 | 0.000 |
| | (0.000)** | (0.000) | (0.000) |
| Gender (1=woman) | 0.178 | -0.482 | -0.153 |
| | (0.199) | (0.223)* | (0.280) |
| schooling | 0.287 | -0.025 | -0.437 |
| | (0.172) | (0.199) | (0.229) |
| Self reported wealth | 0.219 | 0.841 | 0.566 |
| | (0.064)** | (0.084)** | (0.094)** |
| Village fixed effects | Yes | Yes | Yes |
| *N* | 1,148 | 1,127 | 764 |