Control thyself: Self-control failure and household wealth

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ABSTRACT

We examine the relationship between self-control and household wealth. Building on literature in psychology, we take a more comprehensive approach to the concept of self-control and posit that it consists of three ingredients: planning, monitoring, and commitment to pre-set goals. We build a measure which combines those three components and can be computed using a standard representative survey. We find that self-control failure is strongly associated with different household net wealth measures and with self-assessed financial distress.

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1. Introduction

How does self-control relate to households' financial behavior? In this paper we revisit the concept of self-control as a force behind economic decision making. Our departing point is its current definition as the ability to "resist temptation" and therefore avoid conspicuous consumption (Gul and Pesendorfer, 2001, 2004). This approach, together with the related one of treating households as a dual agent that consists of a long-horizon planner and a short-horizon doer (Thaler and Sherfin, 1981; Bertaut et al., 2009) have provided the basis for explanations of inconsistent usage of credit cards in the US. Further empirical work that employs the same definitions finds a negative relationship between self-control and households over-inedness (Gathergood, 2012) and a positive relationship with wealth (Ameriks et al., 2003, 2007).

This paper introduces a definition of self-control which is grounded in psychology theory, first introduced by Baumeister and Heatherton (1996) and then applied to consumer behavior in Baumeister (2002). The authors propose that the strength of self-control depends crucially on three, more primitive, behavioral characteristics, referred to as self-control ingredients: the ability for goal-setting, monitoring, and commitment to earlier set goals. This theory suggests that people who exhibit strong self-control set long-term goals (e.g., lose 10 kg of body weight), keep track of the relevant behavior (e.g., regularly measure their weight or calorie intake), and have the ability to commit to earlier set goals (e.g., resist a more delicious meal that would jeopardize the effort). Therefore, self-control is the ability to set goals, monitor the behavior that is relevant for achieving them and commit to them when a temptation arises.

Measuring self-control in this way, we empirically examine how it relates to various measures of households' wealth, as well as to the probability of households facing financially distressful situations. Further, we shed light on the extent to which each individual ingredient contributes quantitatively to the results. The analysis is conducted using the publicly available Health and Retirement Study (HRS), which surveys US households and has the distinct advantage of a fully-fledged psycho-social questionnaire that provides us with the necessary variables to compile our self-control measure. The survey further includes detailed information on household socio-economic status and demographics, which serve as valuable controls.

The key contributions of the paper are twofold. First, this approach to self-control, which includes the standard "resistance to temptation" view as its third ingredient, can give more flexibility to financial initiatives that help households avoid the adverse outcomes of self-control failure. It provides such initiatives with a measure of self-control failure that maps the new definition and presents results on the relationship of this measure to household wealth measures and measures of financial distress. Second, the self-control measure introduced does not rely on arbitrary proxies such as individuals' smoking or drinking behavior (see for e.g.,

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Bertaut et al., 2009). Measures of this kind can indeed be highly correlated to consumption-related self-control, but they still introduce measurement error, making the symptom (smoking/drinking) a noisy proxy. Moreover, they measure behavior that is not related to financial decision making such that even if it were to be influenced (e.g., by helping people to give up smoking), this would not have an effect on households' wealth.

We find that our self-control failure measure is related negatively to various wealth measures and positively to self-assessed financial distress. The results are statistically and economically significant across many alternative specifications. Furthermore, our measure produces much stronger results than a generic measure of impulsiveness that is constructed from the same psycho-social questionnaire. Also, from a conceptual perspective, our measure produces a distinct effect from individual's smoking habits, often used as a proxy for self-control.

A paper closely related to ours is Gathergood (2012), who studies UK-based households and finds that impulsive spenders are more likely to fall behind in consumer loan repayments, as well as to self-report over-indebtedness. Also, McCarthy (2011) reports that impulsive behavior has a positive relationship to a number of financial distress indicators, whereas planning has a relation of the opposite sign. The difference between these papers and ours, apart from the somewhat different focus, is that they measure self-control merely as impulsive behavior and/or inability to make plans ahead. The definition we employ is more comprehensive, including theirs as some of its ingredients. Furthermore, we aggregate those ingredients to a single measure in a non-linear way that is consistent with psychology theory.

Another strand of the literature, related to our work, measures the effects of self-control for various life outcomes in the laboratory. Probably the most famous experiment measuring self-control in this kind of setup is the one of Mischel et al. (1972).[1] Other cases where economists have designed field and lab experiments to measure self-control include DellaVigna and Malmendier (2006); Houser et al. (2008), and Burger et al. (2009). Compared to existing studies employing experimental data, we focus on population-wide data, of which the advantage is that they allow controlling for a large set of demographic, financial and behavioral characteristics of households and estimating the relationship that exists between self-control failure and households' wealth accumulation over and above standard wealth determinants. Ameriks et al. (2007) measure self-control in a quasi-experimental setting and find that self-control correlates positively with household wealth measures. A key difference between their work and ours is that they develop a survey instrument to measure self-control problems (based on hypothetical choice scenario) and apply it to a sample of highly educated individuals. To our knowledge, our study is the first one to apply this definition of self-control to the economics literature, using a population-wide representative survey to conduct empirical analysis.

2. Self-control failure

Baumeister et al. (1994) and Baumeister (2002) suggest that self-control essentially depends on three main behavioral characteristics, i.e., *ingredients of self-control*, including: ability for *goal-setting*, ability for *monitoring*, and ability for *commitment to pre-set goals*. In what follows we provide a brief explanation of each of these ingredients and an example of households' financial behavior that corresponds to the ingredient in question.

Goal-setting. The goal-setting ability refers to peoples' ability to plan the future ahead. In this respect people can exhibit either farsighted or myopic behavior. An example of household's goal-setting behavior may be the objective of buying a house and thus saving for a down-payment. As Baumeister (2002) argues, individuals who know exactly what they want to achieve, i.e., who have an established goal/plan in mind, would be less likely to indulge in impulsive buying or overspending. Thus these people have the ability to better manage their wealth, are more likely to save, have higher net wealth positions, and are therefore also less likely to find themselves in a financially distressful situation.

Monitoring. Monitoring refers to the ability to keep track of the relevant behavior. In terms of financial behavior and decision making, monitoring would imply systematically following how the household's financial resources are allocated. If people do not pay attention to "where their money goes," they would be more likely to spend on unnecessary purchases (even though their budget is tight) and thus they would be less likely to save. This would hinder the achievement of their pre-set goal (e.g., buying the house/saving for the down-payment).

Commitment to pre-set goals. This ingredient of self-control refers to one's ability to maintain attention and focus on pre-set goals in face of temptation. Considering our previous example of a person who has embarked on buying a house (set a goal) and has also monitored her spending behavior, the crucial question is whether she would be capable of resisting whatever unnecessary purchasing temptations might arise (stick to the pre-set goal) until she has saved enough for the down-payment.

Importantly, as Baumeister and co-authors argue, all three ingredients of self-control have to be enforced at the same time such that self-control is preserved. Namely, if either one of the three components fails, the others are not valuable without it.[2]

3. Measuring self-control failure

3.1. The data

Personality traits are commonly measured with questionnaires and self-reported assessments.[3] In a similar fashion, household wealth and demographics are studied extensively with survey data (e.g., see Guiso et al., 2002). However, publicly available surveys that cover both psychological traits and household financial information are relatively rare. One exception is the Health and Retirement Survey (HRS), a publicly available dataset that covers US households. Its core questionnaire provides valuable information on a wide range of socioeconomic variables, including household composition, income, real and financial wealth, education, occupational status, health and cognition measures. Moreover, it includes a "Lifestyle Questionnaire," which records respondents' self-reported satisfaction with their life and relationships, as well as their assessment of their inherent personality traits and behavior along a number of dimensions.[4] HRS is by construction a representative sample of US households who have at least one member aged above 50. This mature part of the population controls a large fraction of the overall household wealth of the US economy, which

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[1] Walter Mischel designed the famous "Stanford marshmallow experiment," in which children were offered a choice between one small reward vs. two small rewards if they were able to delay gratification. In follow up studies, researchers have found that those children who were more patient had better life-outcomes, such as higher SAT-scores, better educational attainment, etc.

[2] In a sense, the theory put forward by Baumeister and co-authors is reminiscent of the "O-ring" theory in development economics, originally proposed by Kremer (1993), suggesting that production tasks must be completed proficiently together in order any one of them to be of high value.

[3] See Robins et al. (2007) on the prominence of these measures among personality psychologists.

[4] Another survey that covers both psychological and financial information is the Dutch National Bank Household Survey.