Overview of Savings Theory

A. Neoclassical Economic Theory

Neoclassical economic theory assumes that individuals are rational beings who respond in predictable ways to changes in incentives. From this perspective, there are two broad determinants of individual behavior: opportunities (or constraints) and individual preferences (Pollak 1998). Preferences are generally assumed to be stable and exogenous (e.g., unaffected by opportunities and constraints). Many economic models also assume that individuals have perfect knowledge and access to perfect markets. Individual utility (i.e., happiness or satisfaction) is usually assumed to be a function of consumption, and economic models often treat savings as a residual, those resources that remain after consumption decisions are made.

The starting points for much neoclassical economic research on saving and asset accumulation have been the life cycle hypothesis (LCH) (Ando and Modigliani 1963; Modigliani and Ando 1957; Modigliani and Brumberg 1954) and the permanent income hypothesis (PIH) (Friedman 1957). Both of these theories assume that individuals and households are concerned about long-term consumption opportunities and therefore explain saving and consumption in terms of expected future income. These models assume that saving is a way to “smooth” consumption in the face of income fluctuations. Since consumption is determined by anticipated lifetime resources (rather than only current resources), saving over short periods of time (e.g., a year) is expected to reflect departures of current income from average lifetime resources. In other words, according to these theories, when current income falls below average expected lifetime income, individuals and households may borrow to finance consumption. When current income exceeds average expected lifetime resources, individuals and households save (or repay debt).

As its name suggests, the life cycle hypothesis posits that consumption and saving reflect an individual’s stage in the life cycle, which is generally proxied by age. Since retirement, for most people, is the most substantial and enduring “income fluctuation,” this model

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emphasizes saving for retirement as a primary motivation for deferred consumption. Young households are expected to have negative saving since they typically have relatively low earnings and incur debt for education, home purchase, and other expenses. In the middle period of the life cycle, saving is expected to be positive because individuals pay their debts and begin to save for retirement. Upon retirement, households are expected to dissave (i.e., spend money previously saved). Thus, differences in consumption and saving among households are believed to be partly the product of age differences, and the pattern of saving and dissaving creates an inverted U-shaped pattern across age categories and/or over time (Ando and Modigliani 1963; Modigliani and Ando 1957; Modigliani and Brumberg 1954).

In recent years, economists have extended the LCH and PIH. Some models consider the desire to leave a bequest (e.g., Hurd and Mundaca 1989; Menchik and David 1983). “Buffer-stock” models (e.g., Carroll 1997; Carroll and Samwick 1997; Deaton 1991) emphasize a precautionary motive for saving, particularly for younger households and for households facing greater income uncertainty. These households are expected to accumulate small stocks of assets (buffer stocks) to smooth consumption in the face of short-term income fluctuations and liquidity constraints. The pattern of asset accumulation predicted by buffer-stock models is very different than the inverted U-shape predicted by the LCH: Wealth is expected to remain fairly constant (assuming that households have accumulated and can maintain their optimal buffer stocks) until about age 50 when households begin saving for retirement (see Carroll and Samwick 1997, Figure 3). Other models, sometimes called “augmented” life cycle models, have attempted to incorporate the effects of income-maintenance policy on precautionary saving motives (see Hubbard, Skinner, and Zeldes 1994; 1995, discussed in more detail below in Sections III.D and IV.D, under “Incentives”).

B. Psychological and Sociological Theory

Psychological and sociological theories of saving consider additional determinants of saving and asset accumulation, including personality characteristics, motives, aspirations, expectations, and peer and family influences. Some of the propositions emphasize the effects of relatively stable personality characteristics on asset building. Other psychological and sociological propositions assume that saving-related preferences and aspirations are not fixed and in fact seek to explain how motives, aspirations, and expectations are shaped.

The propositions that emphasize relatively stable personality characteristics typically come from psychology. For example, psychologists have examined the effects of thrift, conscientiousness, emotional stability, autonomy, extraversion, agreeableness, inflexibility, and toughmindedness on saving (e.g., Nyhus and Webley 2001; Wärneryd 1996). The propositions that seek to explain how motives, aspirations, expectations, and even preferences are shaped come from both sociology and psychology. Some scholars have emphasized social norms, suggesting that the norm of “conspicuous consumption” leads people to over-spend (and thus to under-save). Some researchers consider the effects of
families and peers. For example, Stack (1974) suggests that demands from social network members for money or other material assistance can sabotage efforts to save. And, the literature on financial socialization (e.g., Chiteji and Stafford 1999; Cohen 1994) suggests that social network members can strongly influence an individual’s consumption patterns, saving-related beliefs, and aspirations and expectations for saving. For example, a child who knows that her family spends carefully and saves regularly, who overhears and perhaps participates in conversations about stock performance, and who is encouraged to have her own savings account is expected to be more financially sophisticated and more inclined to save as an adult than an individual raised in a family that does not save and does not make use of a variety of financial products.

Other researchers have emphasized the effects of individual experiences. For example, Duesenberry (1949) wrote about personal norms, suggesting that individuals may strive to maintain past consumption levels even when income falls. Economic psychologists (e.g., Furnham 1985; Katona 1975) have proposed that past savings experiences (good and bad) shape individuals’ beliefs about their abilities to save in the future.

C. Behavioral Economic Theory

The emerging behavioral theory of saving attempts to explain how people actually behave with regard to financial matters. Unlike neoclassical economic theory, these models do not assume that people are rational and all-knowing. As the title of an article by Thaler (2000) suggests, behavioral theory attempts to explain (and make assumptions that are consistent with) the behavior of Homo sapiens not Homo economicus. Behavioral theorists also assume that financial planning has significant nonfinancial costs.

Behavioral theorists have identified a number of common human characteristics that shape financial behavior, including lack of self-control (people tend to place too much weight on current consumption relative to future consumption); limited cognitive abilities (people do not always learn from their mistakes, and people tend to become overwhelmed by too many choices); inertia (people tend to continue doing what they are currently doing); the tendency to interpret default options as advice; and the tendency to use mental accounting techniques. Often, according to behavioral theory, these tendencies lead individuals to

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2 One of the earliest behavioral economists, and still one of the most active, is Richard Thaler. This summary draws heavily from his writings (e.g., Mullainathan and Thaler 2000; Thaler 1994, 1999; Thaler 2000; Thaler and Shefrin 1981). Some of the other key references on behavioral theory are Bernheim (1997); Choi, Laibson, Madrian and Metrick (2002); Choi, Laibson and Madrian (2004); Lusardi (2002); and Madrian and Shea (2000).

3 As Schreiner and Sherraden (2007) state, “financial decisions are especially difficult because they involve the future, uncertainty, and math.”

4 For example, a worker signing up for a 401(k) investment option may assume that the default option is the best choice for him; otherwise, this choice would not have been defined as the default.

5 The use of mental accounting means, in part, that people think about funds differently, depending on their source. For example, regular wage and salary income may be defined as funds for consumption, while irregular income, such as money from a temporary job or from a tax refund may be defined as savings or “treat” money.
behave in ways that are inconsistent with their own priorities or inconsistent with maximizing long-term consumption. For example, the lack of self-control often causes people to over-spend and under-save, even when they are saving for a specific, much-desired goal. Also, limited intellectual capabilities and inertia lead people to postpone making financial decisions.

If people are aware of these tendencies, they may try to compensate for them. For example, people may attempt to control their spending by imposing “precommitment constraints”, such as arranging for direct deposit to saving and investment vehicles. Even if people are naïve about their limitations, saving and investment programs may facilitate saving by deliberately attempting to compensate for these common human characteristics. In fact, behavioral theorists have begun to propose some programmatic reforms and innovations such as simplified investment options and automatic enrollment in 401(k) plans. These program reforms, as we suggest below, are institutional arrangements that will require an institutional theory for knowledge building that can inform policy and program design.

D. Strengths and Weaknesses of the Existing Theoretical Work

In their current stages of development, none of the existing theories provides a suitable explanation for saving and asset accumulation in low-income households. Neoclassical economic models tend to be specified clearly and tested rigorously, and there is an extensive body of scholarly work. But these models tend to make unrealistic assumptions, such as the assumptions that individuals have near-perfect knowledge and are forward-thinking and rational. In reality, the decisions required to optimize consumption (and other financial goals) over the life course are extraordinarily complex (Bernheim and Scholz 1993, p. 87), and empirical studies suggest that the majority of Americans lack the financial sophistication and information to make even basic economic calculations (Bernheim 1994). Since low-income individuals may also have limited financial sophistication, they may have trouble making optimal long-term decisions regarding saving and consumption. Neoclassical models also assume that saving-related preferences are fixed. The lack of discussion about origins of preferences suggests that preferences are the product of stable personality characteristics. Thus, neoclassical economic models may implicitly “blame” individuals for low rates of saving and asset accumulation, and they may offer no policy pathway for improvement.

Psychological propositions that emphasize personality characteristics also seem to blame individuals and have little to offer in the way of policy implications. Some of the propositions offered by psychologists and sociologists attend to the origins of preferences and aspirations and so are less likely to imply that individuals are solely responsible for limited asset accumulation. Relatively few of these propositions have been tested, however.

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6 Programs that enroll people automatically are sometimes called “opt-out” programs because eligible individuals are enrolled in the program unless they take the initiative to opt out.
Behavioral theory is an important advance. This theory is rooted in neoclassical economic theory and tends to have the theoretical rigor of neoclassical models, but it makes more realistic assumptions about individuals. These assumptions (which partly flow from systematic observation of individuals) might be thought of as psychological variables. Thus, behavioral theory complements and advances psychological as well as economic theories of saving.

The number of empirical studies examining behavioral propositions is growing rapidly. Although these studies largely examine the behavior of middle- and upper-income individuals who are eligible for retirement plans, most of these studies provide support for behavioral theory. We summarize and assess several of these studies below, in the section on empirical evidence. In our opinion, behavioral theory describes most individuals quite accurately. Behavioral theory has sometimes stopped there, however—with an emphasis on individual deficiencies. Theory could move beyond this focus on individuals to emphasize institutions that can encourage saving and asset accumulation by accounting for, and perhaps even taking advantage of, individual tendencies. The behavioral literature seems to be moving in this direction, and we anticipate a merging of behavioral and institutional theory in the future.