Financial Literacy Profiles of American Adults

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Financial literacy is broadly used to describe a person's human capital specific to personal finance. Although the term financial literacy is used widely in the media, and increasingly so in academic research, there currently exists no standardized method for determining if a person is financially literate. The President's Advisory Council on Financial Literacy has encouraged financial educators and researchers to adopt a uniform definition that "financial literacy is the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being" (PACFL, 2009; USFLEC, 2007). Huston (2010a) views financial literacy as how well an individual can understand and use personal finance-related information, which is congruent with other existing financial literacy definitions within the literature and stems from other standardized literacy definitions (e.g., prose, document, quantitative, and health).

The literature includes a variety of content conceptualizations for financial literacy ranging from a single, specific topic—for example, investor literacy (Muller & Weber, 2008; NASD, 2003; Volpe, Kotel, & Chen, 2002) or debt literacy (Lusardi & Tufano, 2008)—to a multi-topic, more generalized approach (ANZ, 2008; FSA, 2006; Moore, 2003). Huston (2010a) suggests that financial literacy should be measured over four content areas: money basics (i.e., time value of money, purchasing power, financial statements), borrowing (using future resources in the present through the use of revolving credit and installment loans), investing (saving present resources for use in the future through saving accounts, stocks, bonds, mutual funds) and asset protection (through insurance products or other risk management activities).

Methods for assessing financial literacy range from using instruments with as few as three items (Henry, Weber, and Yarbrough 2001; Lusardi 2008a; Lusardi and Mitchell 2007a, 2007c, 2008c) to as many as 68 (Chen & Volpe, 2005; Volpe, Chen, & Lui, 2006). Huston (2010a) suggests that the number of items for a financial literacy assessment instrument should be in the range of twelve to twenty.

The purpose of this paper is to examine financial literacy profiles of American adults to evaluate the extent to which personal finance-related human capital is associated with financial behavior indicators related to asset accumulation and debt management as well as other human capital and financial indicators. This study follows the assessment guidelines proposed by Huston (2010a) and uses data from the Consumer Finance Monthly Survey (CFM) to calculate an individual's financial literacy level and to determine how the aspects of financial literacy are correlated to asset accumulation (e.g. stock ownership, retirement savings), debt management (e.g., carrying balances on credit cards, mortgage rates) in addition to other human capital and financial indicators. Analyzing the impact of financial literacy levels on financial behaviors has the potential to inform public policy aimed at improving financial literacy. The detection of discernable behavioral differences by differing financial literacy levels may provide evidence that further exploration regarding the promotion of financial literacy education is warranted. No substantial impact on behavior by financial literacy levels may suggest that a regulatory policy approach would be more appropriate.

Measuring Financial Literacy

The construct of financial literacy is comprised of two main elements (understanding and use) and four main content areas—basic personal finance concepts, along with the borrowing, building, and protection of income and assets (Huston, 2010a). The conceptual framework, assessment instrument, and scoring grid used in this study are adapted from the models presented by Huston (2010b). Figure 1 presents the two main elements—knowledge (understanding attained through education and/or experience) and application (use). Application is measured through two components—ability to objectively demonstrate appropriate use of knowledge and the confidence to use one's knowledge. The convergence of knowledge and application form a third dimension—sophistication—which is also captured in the conceptual model and subsequent assessment instrument and scoring grid.

The financial literacy assessment instrument reflects the conceptual model in that it contains 20 items covering the four content areas within the elements of knowledge and application regarding personal finance. The instrument contains two knowledge questions, two ability questions, and one confidence question for each of the four personal finance content areas. Basic personal finance concepts include elements such as time value of money, purchasing power, and personal finance accounting. Intertemporal transfers of resources include both borrowing (bringing future resources into the present for consumption through the use of revolving credit and installment

Figure 1. Conceptual Model of Financial Literacy
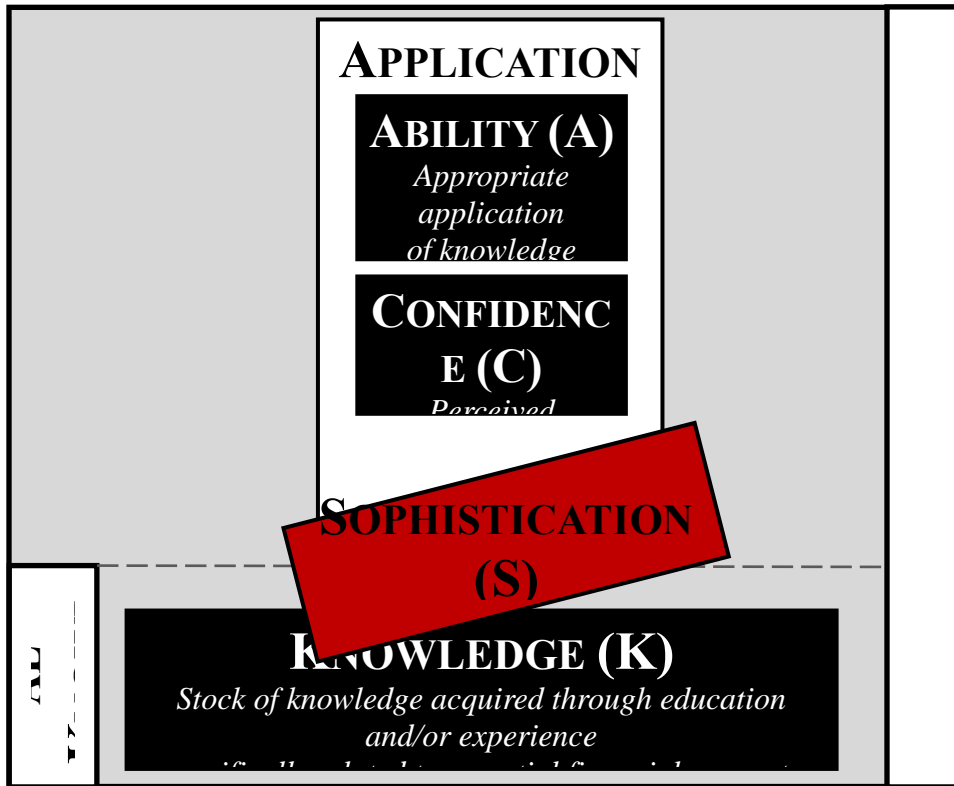
loans) and building assets (saving present resources for future consumption through the use of saving accounts and investing through stocks, bonds, or mutual funds). Protecting resources (income generation and/or assets) includes the use of insurance products, tax and estate planning, or other risk management techniques.

Financial literacy assessment items contribute to the financial literacy score as demonstrated in Figure 2. Knowledge items contribute up to 40% (8 points) and ability items contribute up to 40% of the total score with 20% (4 points) from confidence items and 20% (4 points) from application items. The remaining 20% (4 points) of the score is calculated through concordance of the eight knowledge-application pairings, representing financial sophistication.

Figure 2. Financial Literacy Assessment Instrument

Personal Finance Area	KNOWLEDGE (K)	APPLICATION		SOPHISTICATION (S)
		Ability (A)	Confidence (C)	
BASICS (BA)	BA-K1	BA-A1	BA-C1	BA-S1
	BA-K2	BA-A2		BA-S2
BORROW (BO)	BO-K3	BO-A3	BO-C2	BO-S3
	BO-K4	BO-A4		BO-S4
BUILD (BU)	BU-K5	BU-A6	BU-C3	BU-S5
	BU-K6	BU-A7		BU-S6
PROTECT (PR)	PR-K7	PR-A8	BR-C4	PR-S7
	PR-K8	PR-K8		PR-S8
FINANCIAL LITERACY SCORE	40%	40%		20%

A financial literacy scoring grid (see Figure 3) is constructed to help interpret the financial literacy score. The target zone (being financially literate) represents high scores all of the dimensions – knowledge, ability, and sophistication. The danger zone represents either low scores on all of the dimensions (financial unawareness) or low scores on at least two of the three dimensions. Financial overconfidence represents those with high ability, but low knowledge and sophistication while financial paralysis occurs when individuals have high knowledge, but low ability and sophistication. The caution zone represents a variety of scores in between the target and danger zones.

Figure 3. Financial Literacy Scoring Grid
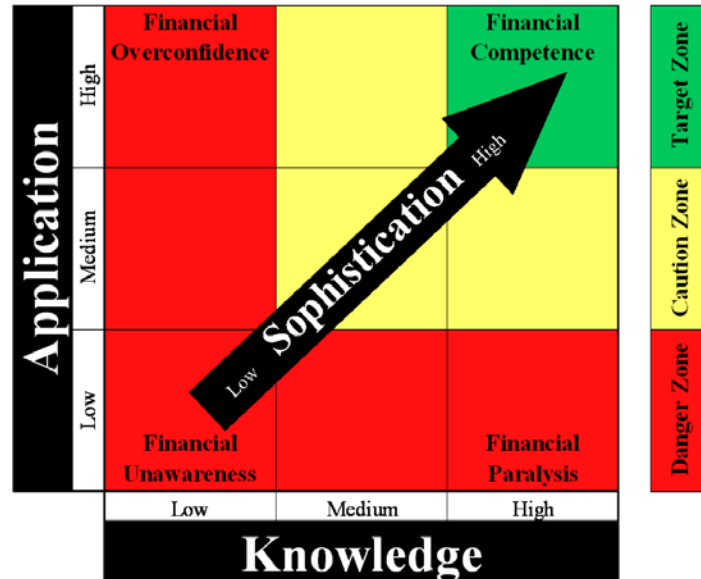
Data

Data were collected between December 2009 and February 2011 by the Center for Human Resource Research (CHRR) at the Ohio State University as part of the Consumer Finance Monthly (CFM) Survey. The CFM survey is conducted by the Consumer Finance Research Group within the CHRR and includes data on credit usage, balance sheets, incomes, along with region and other demographics of U.S. households. Data is collected via telephone interview using computer assisted telephone interview (CATI) software. The financial literacy data module contains complete information for calculating a financial literacy score for 3,275 respondents.

Results

Table 1 provides the mean scores by financial literacy dimension. On average, respondents scored correct on about 5 out of the 8 knowledge questions, but only on about half of the ability questions. In terms of knowledge-ability question pairs, respondents average about three concordant pairs out of a possible eight pairs. The overall confidence score for all four content areas is seven out of 10. The mean financial literacy score, based on all 20 items, is 58% for the sample.

Table 1.

Mean Scores by Financial Literacy Dimension					
Dimension	Questions	Raw Score	% Score	Weight	Total
Knowledge (K)	8	**5.1**	**64%**	40%	**25.6**
Application					
Ability (A)	8	**4.1**	**51%**	20%	**10.2**
Confidence (C) (Scale 0 to 10)	4	**7.0**	**70%**	20%	**14.0**
Sophistication	K-A pairs	**3.1**	**39%**	20%	**7.8**
Total number of questions = 20					
				Mean Total Score	**58%**

Table 2 shows that 14% of respondents score within the target financial literacy zone, indicating they have high (top third) scores in all dimensions of financial literacy. About a third of respondents scored within the caution financial literacy zone and the majority of respondents (54%) scored in the danger zone, indicating they scored low in at least one of the financial literacy dimensions. Of the respondents in the danger zone, half are categorized as overconfident (i.e., scoring high in confidence but low in other areas), almost 20% are categorized as financially paralyzed (i.e., scoring high in knowledge, but low in other areas), and the remaining third are categorized as financially unaware (i.e., scoring low in all dimensions of financial literacy). The mean financial literacy score for respondents in the target and caution zones is 88% and 71%, respectively. The mean score for all respondents in the danger zone is 41%. Other human capital indicators (education and age) suggest a positive correlation between education level and financial literacy, but not so clear for age. A positive relation is suggested between financial literacy and both household income and net worth. In terms of debt management behavior, respondents in the target zone appear to have lower mortgage rates and incidence of carrying credit card debt. Respondents in the financial literacy target zone have a higher frequency of owning tax advantaged retirement accounts compared to respondents in the other financial literacy zones.

Table 2. Indicators by Financial Literacy Zone

Indicator (Means)	TARGET (N=466)	CAUTION (N=1060)	DANGER (N=1749)		
			HIGH K	HIGH C	NONE
FINANCIAL LITERACY	88%	71%	62%	41%	32%
Knowledge	95	83	84	37	35
Ability	87	64	50	31	28
Confidence	8.1	7.4	5.0	8.3	4.7
Sophistication	83	53	43	15	13
EDUCATION (1-5)	4.0	3.6	3.6	3.0	2.9
AGE	55	57	54	63	58
HH INCOME (000)	102	72	64	45	33
NET WORTH (000)	1,248	898	299	408	180
MORTGAGE RATE	5.4%	5.6%	5.9%	5.7%	6.0%
CC BALANCE	19%	25%	43%	25%	26%
DEBT WORRY	1.8	2.0	2.7	1.7	2.5
OWN TAX ADV. ACCTS	46%	29%	20%	14%	9%

Discussion

Results from this study indicate that further multivariate analyses are warranted to understand the impact that personal finance-related human capital has on financial behavior and outcome. Multivariate analysis of the data will provide additional insight into predicting which financial outcomes are most influenced by human capital specific to personal finance and can inform public policy related to financial literacy education. If financial literacy does not have a substantial influence on subsequent financial behavior, then public policy regarding financial literacy may be better served by shifting the focus away from education efforts and targeting regulation of financial investment products and contracts associated with financing and acquiring consumer goods. If financial literacy results are mixed among demographic groups, perhaps a combination of policy approaches is warranted.

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Endnote

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