

FINANCIAL LITERACY: AGE AND EXPERIENCE AS THE DETERMINANTS

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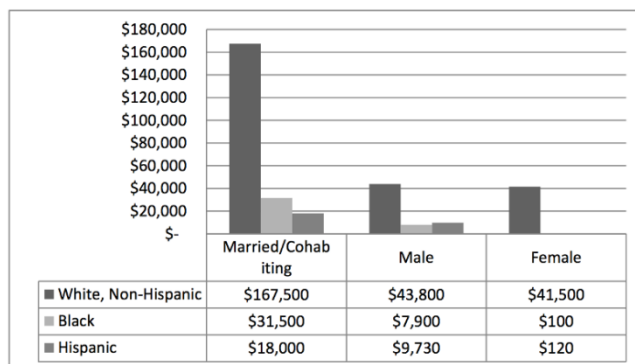
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ABSTRACT

This topic is important because of the growing disparity in wealth building. Financial illiteracy is conceptually distinct from low income, being a vulnerable minority, or lack of higher education. An aging population and shifting demographics has created a surge in government interest in financial literacy. This qualitative exploratory study was chosen due to the growing disparity in minority wealth accumulation that has expanded over the past 30 years. The minority sample consistently outperformed the national study in five of five topics. The basic assumption that the poor and uneducated is a major determinant of financial literacy or the lack of financial literacy; the assumption is challenged in this study. Financial education studies have primarily focused on high school and college students. This study focused on older adults in the workforce. The focus of this study was to compare a sample of minority respondents to the FINRA financial capabilities national study. To address the challenges of financial literacy and capability, this study proposes a number of strategies. Broader financial education programs are needed, not just programs that are focused on high school students. Additional financial capability research should address the needs of adults in the workforce.

Keywords: Financial literacy, minority wealth, financial capabilities, financial illiteracy, wealth disparity.

INTRODUCTION



This topic is important because of the growing disparity in wealth building. The disparity is most often in minority populations. Bucks, Kennickell, and Moore (2006) concluded that the disparity did not improve from 1995 to 2004. This trend continues today, especially with the crash of the housing market. It is possible that financial literacy or lack of financial literacy is the major force widening the gap in net worth. This study examines the influence of

age and education within a section of the minority population, as the poor and the uneducated are normally associated with financial illiteracy. Additionally, the study will investigate a cross-section from high school to postgraduate consumers. Shambare and Rugimbana (2012) studied college students to determine the nature and extent of financial literacy amidst educated consumers. Assumptions by the financial services community appear to assume that consumers are financially literate in their promotion of services (Shambara & Rugimbana, 2012).

Yao, Sharpe, and Gorham (2011) surmised that differences in spending patterns and debt management might contribute to wealth disparity between races. Hanna and Lindamood (2008) determined that changes in demographic and economic characteristics could not explain the drop or disparity in stock ownership or wealth. Additionally, Rowley, Lown, and Piercy (2011) noted a lack of research on how to motivate financially vulnerable Americans, particularly minorities, to take advantage of the resources available for consumers to improve his or her financial knowledge.

Financial illiteracy is conceptually distinct from low income, being vulnerable minority, or lack of higher education. Financially literate individuals may have low incomes and be classified as vulnerable minorities using other indicators; while others with high incomes who enjoy a high standard of living may be financial illiterate. Making appropriate financial decisions and understanding how to manage credit and debt are the major concerns of financial literacy (Taylor, 2010).

An aging population and shifting demographics has created a surge in government interest in financial literacy. In 2002, the Department of the Treasury established the Office of Financial Education; in 2003, the Financial Literacy and Education Commission were formed (Knoll & Houts, 2012).

THE WORKING DEFINITION OF FINANCIAL LITERACY

Houston (2010), in a review of 71 financial literacy studies, found that more than 50 of them failed to define the concept of financial literacy. In this work, Houston observed eight separate meanings for financial literacy in the 20 studies that did provide a definition. Hung, Parker, and Yoong (2009) also found a wide variety of definitions across studies. For the purpose of this study, the Program for International Student Assessment's (PISA) 2012 definition for financial literacy was adopted as quoted below.

“Financial literacy is knowledge and understanding of financial concepts and risk, and skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial wellbeing of individuals and society, and to enable participation in economic life” (PISA, 2012, p. 13).

THE IMPORTANCE OF FINANCIAL LITERACY

The Organization for Economic Cooperation and Development (OECD) (2012) found lack of financial literacy was rampant and contributed to slow economic growth in many countries, including the United States and the European Union (Shambara & Rugimbana, 2012).

In a study by Lusardi and Mitchell (2007), women in the United States and Australia appear disproportionately financial illiterate compared to men. In similar studies, women were often marginalized and excluded from economic activities (Johnson, 2004; Mayoux, 1999; Yunus, 1995, 2008).

Beverly and Chancy (2001) found that parents' lack of financial knowledge was a major factor that prevented them from providing their children with adequate financial education. Bowen (2002) concluded that the way in which young citizens learn about financial matters varies and is likely a combination of intentional and unintentional strategies by key adults in their lives. This research appears to support the need for financial education outreach that targets not only students, but also their parents. Parents' financial behaviors, financial education, and personal financial experiences are major influences on the financial literacy competency within societies globally (Chinen & Endo, 2012).

The average citizen in the past relied on the government and his or her employer for retirement security; however, today that risk has passed to the individual. Pension plans and health care benefits are reduced or in the process of being reduced across the citizenry. The individual must take on an active role in planning and maintaining his or her retirement. According to a PISA (2012) study, defined contribution plans replaced defined benefit plans, which shifted the responsibility to save for financial security after retirement to the worker. Most workers are unaware of the risks that they face; the required knowledge and skills to manage financial matters are shown by most surveys to be lacking. Americans faced the same retirement risks until the 1930s, when social reforms were enacted. For example, the risks associated with longevity, debt, financial markets, and increased costs of health care were increasing for individuals prior to social reform.

Individuals must adapt to the changing marketplace as the number and types of financial decisions are increasingly becoming more complex. Workers must ensure that their accumulated savings are sufficient to cover a long lifespan during retirement, for example. Citizens must understand the proposed offer or advice when they use the services of financial intermediaries or advisors. Additionally, improved levels of financial inclusion, developments in technology, and deregulation have increased access to financial products. Today, there is an intensifying need for financial literacy for current accounts, remittance products, revolving credit, and equity portfolios (PISA, 2012).

Financial literacy encompasses more than the reproduction of accumulated knowledge; however, measuring prior financial capabilities is important in the assessment process. Literacy is defined as an expanding set of knowledge, skills, and strategies. It is built rather than being a fixed quantity of literacy on one end and illiteracy on the other. The PISA 2012 framework study determined that financial literacy involves a mobilization of cognitive and practical skills, as well as other resources such as attitudes, motivation, and values. More specifically, financial literacy involves the knowledge, understanding, and skills to deal with financial concerns. Additionally, the framework includes non-cognitive attributes such as motivation to seek information and advice to engage in financial activities (PISA, 2012).

RESEARCH OBJECTIVES

Robb and Woodyard (2011) put forward the idea that ethnicity may explain differences in financial behavior. In an earlier study, Lyons (2004) concluded that minority college students are more likely to be at risk from lack of financial knowledge. Financial adequacy and protection against economic risk are the main factors of financial well-being, such as unemployment, bankruptcy, poverty, and retirement (Goldsmith, 2000). Financial well-being is described as a person's perception of his or her financial status, real or perceived, improving their living standards. This includes ability to meet basic needs, as well as feeling comfortable and satisfied with income and retirement (Taft, Hosein, Mehrizi, & Roshan, 2013). With financial well-being as the focus, this study examined a sample of minority respondents with respect to the Financial Industry Regulatory Authority's (FINRA) financial capabilities national sample (69% majority and 31% minority respondents). The research objective of this study was to identify the implications that education and age may have a greater influence on financial capabilities than ethnicity does.

METHODOLOGY

This qualitative exploratory study was chosen due to the growing disparity in minority wealth accumulation that has expanded over the past 30 years. A research design utilizing the survey method for data collection was employed (Calder, Philips, & Tybout, 1981). The questionnaire was created and distributed with the Qualtrics survey assessment tool. The output for this paper was generated using Qualtrics software.

SAMPLE AND SAMPLING TECHNIQUES

The financial capability survey was developed by the FINRA in consultation with the U.S. Department of Treasury and the President's Advisory Council on Financial Literacy. The survey is designed to measure the financial capabilities of American adults and to reveal detailed information about how Americans save, borrow, and plan the future financially (FINRA, 2009).

The sampling process's goal is to identify a pool of well-educated candidates with work and life experiences. Financial literacy research is currently based heavily on college and high school students. This study focused on working adults with life experience. After adjustments for non-usable data, a majority of the respondents were greater than 30 years of age (71.8%). The minority sample was largely African American (93%), with 7% accounting for the balance. The sample group was considered well educated (90.4%), with 52.2% having a postgraduate education (Appendix A illustrates the demographic profile of the 272 participants).

DATA COLLECTION INSTRUMENT

In real-time, it is difficult to explore how individuals process economic data information and make informed decisions; however, it is important to assess how financially literate individuals make choices. Before 2000, very few researchers included financial literacy in theoretical models of saving and financial decision-making, perhaps because of this difficulty. The Lusardi

and Mitchell (2004) model is used as the basis for developing the current model. The model contains four basic key principles (Lusardi & Mitchell, 2011):

- (1) Simplicity. Basic financial concepts are measured (the abc's of finance).
- (2) Relevance. Questions related to the concepts pertinent to individuals' day-to-day financial decisions are included.
- (3) Brevity. The number of questions is kept to a minimum to secure widespread adoption.
- (4) Perceptivity. The capacity to differentiate questions that can distinguish among financial knowledge levels is critical.

Lusardi & Mitchell (2011) concluded that financial literacy is very low around the world, irrespective of the level of financial market development and type of pension provision. Even among well-educated college graduates, financial literacy is not a certainty. In many current studies, it is assumed that only the poor and uneducated is financial illiterate. However, Shambare and Rugimbana (2012) determined this was not the case by utilizing a scale developed by Lusardi and Mitchell (2007) to measure financial literacy. The results of their study indicated a moderate to high level of financial illiteracy in the college students sampled.

DATA COLLECTION

The sampling pool consisted of four sections, alumni, post-graduates, students' family members older than 40 years of age, and social media. The survey link was e-mailed to 1,327 respondents, as well as posted to social media outlets for 60 days. In total, 309 responses were obtained, with 228 (17.1%) from the e-mail list and 81 from social media. The study evaluated 272 minority respondents.

DATA ANALYSIS

The questionnaire responses, 309 in total, were analyzed in SPSS v.21. In the end, 272 respondents were included in the final analysis. The data is a non-random sample; the data analysis included descriptive statistics and non-parametric tests. Therefore, the sample does not reflect the general minority sector of the population.

Financial Literacy Levels		
Categories	Literate	Illiterate
Age - Under 30	40.6%	59.4%
Age - 30 and greater	55.2%	44.8%
Some college or less	37.5%	62.5%
College grad or more	55.1%	44.9%
Total sample	51.5%	48.5%

RESULTS

The purpose of this study was to determine the disposition and extent of financial capabilities across a section of the minority population from high school to after graduation. An additive scale was developed using respondents' answers to five financial capability questions. Possible values ranged from zero to five. The financial capabilities scale was used to measure respondents' financial literacy. The respondents were considered financially literate if they answered four or five questions correctly. Those answering three or fewer questions correctly were considered financially illiterate. When respondents selected "don't know" or "prefer not to answer", the response was treated as incorrect.

The questionnaire utilized five questions from a previous study. The first three questions were developed by Lusardi and Mitchell (2004). The final two questions were added during the development of the FINRA financial capability survey (Robb & Woodyard, 2011).

- Compound Interest: "Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?"
- Inflation: "Imagine that the interest rate on your savings account was 1% per year, and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?"
- Bond Pricing: "If interest rates rise, what will typically happen to bond prices?"
- Mortgages: "A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less."
- Diversification: "Buying a single company's stock usually provides a safer return than a stock mutual fund."

Reliability analysis indicated a Cronbach's coefficient alpha of 0.654 for this measure. All items appeared to be worthy of retention. The greatest increase in alpha would come from deleting the question regarding bond pricing. However, removal of this item would increase alpha by only 0.037. All items correlated with the total scale to a good degree (lowest $r = 0.35$). An alpha greater than 0.600 is acceptable in the case of exploratory studies (Hair, Anderson, Tatham, & Black, 1998).

DISCUSSION

The level1 minority sample consistently outperformed the national study in five of five topics. However, the education level of those in the level1 sample was greater than those in the national study was. Specifically, the level1 sample contained three times as many respondents with college degrees or more when compared to the national study.

One means to compensate for the disparity was to create a weighted sub-set of the data. The weighted sample set was based on the number of respondents with some college or less. The respondents with some college or less (55 respondents) were used as the basis for creating the minority sub-set (74.7%). SPSS was then utilized to select randomly 20 respondents from the remaining college graduate or more sub-set. The weighted minority sample data outperformed

the national study in three of the five topic areas (compound interest, bond pricing, and mortgages); however, the weighted group under performed with inflation (-2.7%) and diversification (-2.7%). This information can be found in Appendix C.

The basic assumption that the poor and uneducated is a major determinant of financial literacy or the lack of financial literacy; the assumption is challenged in this study. The level2 respondents scored higher than the national survey in the areas of compound interest (+4.7%) and bond pricing (+7.2%), key areas in developing the skills to build wealth. However, the level2 respondents scored below the national study (-2.7%) in diversifying risk. Perhaps the willingness to accept risk is a key piece of the wealth-building puzzle that requires future research. For example, more than 50% of the level2 respondents did not answer the question correctly or chose not to answer.

FINANCIAL LITERACY

Financial education studies have primarily focused on high school and college students. This study focused on older adults in the workforce. The results of the minority study indicate that 51.5% of the respondents were financially literate. However, a major gap appeared among age groups and education level. A more detailed look at the literate respondents indicate that the "greater than 30 years" age group with a college degree or more outperformed the other groups by a wide margin (55% plus) compared to the next closest group. This group represents 70% of all financially literate respondents. Additionally, the respondents with a "college degree or greater" represent 85% of the "financially literate group" regardless of age. The level2 minority study indicates that 15.4% fall into the some college or less group while being greater than 30 years of age. However, this group represents 10% of the financial literate respondents (See Appendix B).

CONCLUSION

The focus of this study was to compare a sample of minority respondents to the FINRA financial capabilities national study. The minority sample consisted of 100% minority respondents; the national sample consisted of 69% majority and 31% minority respondents. The minority respondents outperformed the national sample in five of five topics. Additionally, the weighted minority sub-sample outperformed the national study in three of five topics. The study would appear to indicate that education and age is more of a determinant of financial literacy level than ethnicity.

Shifting financial well-being to the individual has created a need for new financial literacy programs. The greatest opportunity for policymakers is not just with young high school students. According to the most recent census records, 60% of the general population falls into the 30 and older age group. Future financial literacy programs directed to older adults are needed for greater coverage. To address the challenges of financial literacy and capability, this study proposes a number of strategies.

- The creation of new programs to address the needs of the adult population.
- The creation of new employer incentive-based programs.

- The creation of community-based programs

Broader financial education programs are needed, not just programs that are focused on high school students. The high school age group only represents 13.9% of Americans. Broader financial education programs need to be designed for the 73.1% of Americans over the age of 24 (U.S. Census, 2010), both highly educated and less educated. All levels of government have begun to place emphasis primarily on the financial capabilities of high school students. However, financial capability improvements require a broader approach to reach the general population.

Additional financial capability research should address the needs of adults in the workforce. The need for increased financial capabilities requires that the current workforce, as well as young adults just entering the workforce, increase. Financial literacy must become ingrained into today's society. If not, a return to the past well-being situation before the New Deal was enacted during the 1930s is inescapable.

REFERENCES

- Beverly, S., & Clancy, M. (2001). Financial education in a children and saving account policy demonstration: Issues and options. St. Louis: Center for Social Development, Washington University.
- Bowen, C. F. (2002). Financial knowledge of teens and their parents. In J. Lown (Ed), *Proceedings of the 2002 Annual Conference of the Association of Financial Counseling and Planning* (pp. 93-101). Scottsdale, AZ: Association for Financial Counseling and Planning.
- Bucks, B. K., Kennickell, A. B., & Moore, K. B. (2006). Recent changes in U.S. family finances: evidence from the 2001 and 2004 survey of consumer finances. *Federal Reserve Bulletin*, A1-A38.
- Calder, B. J., Philips, L. W., & Tybout, A. M. (1983). Beyond external validity. *Journal of Consumer Research*, 10(1), 112-124.
- Chen, H., & Volpe, R. P. (2002). Gender differences in personal financial literacy among college students. *Financial Services Review*, 11(3), 289-307.
- Chinen, K., & Endo, H. (2012). Effects of attitude and background on students' personal financial ability: A United States survey. *International Journal of Management*, 778-791.
- Finch, H. (2010). Using item response theory to understand gender differences in opinions on women in politics. *Chance*, 23(2), 19-24.
- Goldsmith, E. B. (2000). *Resource management for individual and family*. Belmont, CA: Wadsworth learning.
- Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate data analysis*. 5th edition. Upper Saddle River, NJ: Prentice-Hall.
- Hanna, S. D., & Lindamood, S. (2008). The decrease in stock ownership by minority households. *Journal of Financial Counseling and Planning*, 19(2), 46-58, 94-95.
- Hubley, A. M., & Zumbo, B. D. (2011). Validity and the consequences of test interpretation and use. *Social Indicators Research*, 103(2), 219-230.
- Hung, A., Parker, A., & Yoong, J. (2009). *Defining and Measuring Financial Literacy* (RAND Working Paper No. WR-708). Retrieved from The Pardee RAND Graduate School website: http://www.prgrs.edu/content/dam/rand/pubs/working_papers/2009/RAND_WR708.pdf.
- Huston, S. J. (2010). Measuring financial literacy. *The Journal of Consumer Affairs*, 44(2), 296-316.

Johnson, S. (2004). The impact of microfinance institutions in local financial markets: A case study from Kenya. *Journal of International Development*, 16, 501–517.

Knoll, M. A. Z., & Houts, C. R. (2012). The financial knowledge scale: An application of item response theory to the assessment of financial literacy. *The Journal of Consumer Affairs*, 46(3), 381.

Lusardi, A., & Mitchell, O. S. (2011). Financial literacy around the world: An overview. *Journal of Pension Economics & Finance*, 10(4), 497-508.

Lusardi, A., & Mitchell, O. S. (2007). Financial literacy and retirement preparedness: evidence and implications for financial education. *Business Economics*, 42(1), 35-44.

Lyons, A. C. (2004). A profile of financially at-risk college students. *The Journal of Consumer Affairs*, 38(1), 56-80.

Mayoux, L. (1999). Questioning virtuous spirals: Microfinance and women's empowerment in Africa. *Journal of International Development*, 11.

OECD (2012c), PISA 2012 financial literacy assessment framework. OECD, Paris
<http://www.pisa.oecd.Org/dataoecd/8/43/46962580.pdf>

Robb, C. A., & Woodyard, A. S. (2011). Financial knowledge and best practice behavior. *Journal of Financial Counseling and Planning*, 22(1), 60-70, 86-87.

Rowley, M. E., Lown, J. M., & Piercy, K. W. (2012). Motivating women to adopt positive financial behaviors. *Journal of Financial Counseling and Planning*, 23(1), 47-62.

Shambare, R., & Rugimbana, R. (2012). Financial literacy among the educated: An exploratory study of selected university students in South Africa. *Thunderbird International Business Review*, 54(4), 581.

Taft, M., Hosein, Z., Mehrizi, S., & Roshan, A. (2013). The relation between financial literacy, financial wellbeing and financial concerns. *International Journal of Business & Management*, 8(11), 63-75.

Taylor, M. (2011). Measuring financial capability and its determinants using survey data. *Social Indicators Research*, 102(2), 297-314.

U.S. Census Bureau. (2010). Income, Poverty and Health Insurance Coverage in the United States: 2009, Current Population Reports, P60-238, and Detailed Tables—Table HINC-01, September 2010.

Yao, R., Sharpe, D. L., & Gorham, E. E. (2011). An exploratory study of Chinese Americans' debt ownership. *Journal of Family and Economic Issues*, 32(4), 600-611.

Yunus, M. (1995). Alleviation of poverty is a matter of will: Testimony before the House [of Representatives of the United States] Committee on International Relations.

Yunus, M. (2008). A poverty free world—when? How? Romanes lecture at Oxford University. London: Oxford University.

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