Sustainability and Personal Finance Links among College Students

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Introduction

There is a link between science and finance. Physicists have used their training in big data to impact the financial world. PhDs in Physics have made their way to the Wall Street trading floor (Bouchaud et al., 1999; James, 2001; MacKenzie, 2001; Lux, 2008). Mathematician Fischer Black, along with economist Myron Scholes, created a partial differential equation to measure risk and price derivatives in the options market (Black & Scholes, 1973; Bouchaud & Sornette, 1994). On a less complex scale, numeracy and financial literacy have shown a positive relationship (Lusardi, 2012). Sustainability has integrated into finance by using environmental science to explore topics such as corporate social responsibility, socially responsible investing, sustainable finance and sustainable banking (Fayers, 1999; Salzmann, 2013). However, this connection has not yet been made at the household level to explore financial decision-making surrounding money management, budget, saving, spending, risk tolerance, and time horizons. Neither has the link been made to mental health well-being related to stress from finances.

The sustainability mindset may be a way to improve normative financial behaviors leading to positive overall financial and mental health. Sustainability involves allocating limited resources over time to strike a balance between use today and use tomorrow. It is improving human well-being and ensuring social equity for present and future generations while safeguarding the planet's life-supporting ecosystems (Boone, n.d.). Sustainability addresses consumer issues related to responsible consumption, waste reduction, well-being, socially responsible investment and finance, equality, and sense of community. These topics are relevant for individuals and families managing limited resources, but research on sustainability has tended to overlook its connection to personal financial management. The sustainability movement is growing on campuses nationwide; therefore, examining the relationship of sustainability and personal financial management among college students is a natural place to build on this emerging literature. This knowledge is important given the challenges facing young people in the establishment and maintenance of personal financial well-being.

Research Questions

1. Do attitudes, behaviors, and habits from environmental sustainability (ecological systems, climate control, and waste reduction) show up in the personal finance attitudes, behaviors, and habits of college students?

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2. Do attitudes, behaviors, and habits from social sustainability (quality of life, purpose, community, relationships, gender equality, and reduced inequalities) show up in the personal finance attitudes, behaviors, and habits of college students?

3. Do attitudes, behaviors, and habits from economic sustainability (no poverty, no hunger, good health, quality education, good jobs, economic growth, responsible consumption and partnerships) show up in the personal finance attitudes, behaviors, and habits of college students?

4. Does a sustainability index score encompassing all three aspects of sustainability predict positive or negative personal financial attitudes, behaviors, and habits of college students?

Theoretical Background/Conceptual Framework

Sustainability is comprised of various dimensions: environmental, social, and economic. Environmental sustainability includes ecological systems, climate control, and waste reduction. The zero-waste focus of sustainability emphasizes reducing, reusing, recycling, and renewing our limited environmental resources. Social sustainability emphasizes community over self. It includes quality of life, purpose, community, relationships, gender equality, and reduced inequalities. Economic sustainability involves anti-poverty, anti-hunger, good health, quality education, good jobs, economic growth, responsible consumption and partnerships.

Personal finance connects values, beliefs, and attitudes with financial behaviors (Hira, 2016). Using this conceptual framework, we identify factors associated with student values, beliefs, attitudes and behaviors that can be used to operationalize each dimension of sustainability, and test whether their values, beliefs, attitudes and behaviors pertaining to each dimension of sustainability are significantly related to personal finance attitudes and behaviors among students (Hira, 2012).

Literature Review

Attitudes toward the environment have been linked to consumerism. DeAngelis (2004) found that materialistic values and corporate driven consumerism are having massive psychological effects on people and our planet. In economic terms, the big idea of sustainability is to use a resource without diminishing or permanently damaging, depleting, or diminishing its supply (Sherman, 2008). It includes respect for limits and has an intergenerational focus. Stafford et al. (1999) created a research model of sustainable family businesses and concluded that in the face of competing values and interests, between the family and the business, sustainability requires resource management and interpersonal communication.

Marcolin and Abraham (2006) wrote, "Because financial literacy has become increasingly important for the economic wellbeing of the nation's future [according to Australian government sources], it is important that it can be explicitly linked with financial behavior, and hence financial success and sustainability. No financial literacy study has yet achieved this.
Another area of research could then focus on the components of financial literacy and determine which are the most and least critical to financial success and sustainability" (p. 9). The gap in the literature still exists. Research has suggested there are relationships between sustainability and socially responsible consumption, corporate social responsibility and socially responsible investing, but to our knowledge, there have been no links established between the three dimensions of sustainability and personal financial behaviors, financial management and financial literacy. There may exist a link between environmental literacy and financial literacy (Hira, 2012).

Methods

Data

APLUS Waves 1-4 (panel data) collected at University of Arizona is used to explore the link between sustainability and personal finance among undergraduate students.

Model
Based on the conceptual framework and previous literature we build an index that includes all aspects (environmental, social, and economic) of sustainability. We test each aspect separately, then use the index to conduct a combined sustainability test of its impact on personal finance.

Estimation
Regression and structured equation modeling (since some variables are latent) are used to estimate the relationship between sustainability and personal finance.

Variables
Dependent variables are financial and mental health constructs from waves 3-4. The wave 3 financial outcomes include financial well-being, stress, financial confidence, financial behaviors, financial literacy, time horizons and money management styles (Hira, 2012). Wave 4 financial topics are used to test intertemporal changes in financial outcomes measured in wave 3.

Independent variables come from all four (4) waves of the data. We use all four waves of the data to create a sustainability index. The index assigns a sustainability score to each student based on their answers to the questions included in the index. The index includes environmental, social, and economic components of sustainability. The sustainability score is used to test whether increased sustainability activities and attitudes are related to personal finance decisions, attitudes and behaviors.

Expected Outcomes

Our long-term goal is to build attitudes of economic, environmental, and social sustainability into the financial planning process that benefit families and create lasting financial and mental wellness. We propose the central hypothesis that attitudes toward sustainability play a role in the personal financial attitudes and behaviors of college students, and students more involved in sustainability will incorporate the sustainability framework into their personal financial lives. Our rationale is that responsible consumption, eliminating waste, managing resources, and socially responsible investing are behaviors that also contribute to overall financial and mental wellness of consumers.

Upon conclusion, we will understand the role that the sustainability framework plays in normative personal financial behavior. This discovery will stimulate new areas of focus in the sustainability toolkit and a fresh look at how we approach financial literacy and financial planning among college students. The knowledge gained may also be applied to other cohorts (re-entering the workforce, military veterans, transition to retirement) for assessment and effectiveness. We believe K-12 school districts trying to determine the best subject in which to place financial education, universities building sustainability programs that may want to include a personal finance component, and financial services professionals trying to attract and help clients will all be interested in the results of this study.