Journal of Behavioral and Experimental Finance 4 (2014) 57–62

Contents lists available at ScienceDirect

Journal of Behavioral and Experimental Finance

journal homepage: www.elsevier.com/locate/jbef

Full length article

Finance education and social preferences: Experimental evidence

Bryan C. McCannon *

Department of Finance, Saint Bonaventure University, P.O. Box 42, Saint Bonaventure, NY 14778, USA

ARTICLE INFO

Article history:
Received 20 December 2013
Received in revised form 16 October 2014
Accepted 18 October 2014
Available online 10 November 2014

JEL classification:
C9
G1
H4

Keywords:
Experiment
Finance education
Free ride
Social preference

ABSTRACT

What impact does a finance education have on the social preferences and the resulting behaviors of individuals? Experiments of a free riding game are conducted where a wealth-creating investment decision is made. The contribution benefits the group, but the incentives are such that an individual, lacking social preferences, would rather make no contribution and free ride off others. It is shown that as one's education in finance increases, less free riding occurs and more wealth is generated. Thus, education provided in finance promotes pro-social choices that generate wealth even when external incentives are absent.

1. Introduction

Financial transactions can, typically, be characterized by investments being made in the expectation of wealth creation. The returns, though, are uncertain. Oftentimes, the uncertainty of an investment is the risk associated with the behavior of the recipient. A self-interested individual may choose actions that benefit him, but are detrimental to the investor. Social preferences, where a person cares not only about individual gain, but also the well-being of others, can conceptually enhance aggregate wealth.

While there are numerous types of market failures that exhibit these general features, an example explored here is what is known as the free rider problem.[1] In it, a group of individuals or organizations are to work together to achieve a goal. All benefit when the goal is achieved, but do not necessarily have the incentive to expend their own resources to achieve it. For example, a network of investment banks may collectively finance a development project. Oversight of the project, including proper use of the funds, competitive bidding by suppliers, etc., thrives if all members of the network participate. The incentives of each individual organization, though, are to reduce expenses and free ride off of the efforts of the others. As another example, a brokerage firm may, rather than invest the time and resources to conduct independent market analysis, simply rely on non-independent sources of information without providing appropriate research and investigation. Consequently, the CFA Institute includes a diligence and reasonable basis clause in its Standards of Professional Conduct (CFA Institute, 2010). While these are just two examples of free riding in finance, in general, free riding leads to an underprovision of wealth-generating activities and, potentially, market failure. Consequently, it is worthwhile to investigate what influences the preferences of future financial professionals.

* Tel.: +1 716 375 2145.
E-mail address: bmccannon@sbu.edu.

[1] By the free riding problem I mean the general incentive problem of not contributing to a public good (non-excludable and non-rival in consumption), but rather benefit from it relying on others to use their resources to provide it. This stands in contrast to the specific practice of purchasing shares without paying for them.

http://dx.doi.org/10.1016/j.jbef.2014.10.001
2214-6350/

While pro-social preferences can improve upon the free riding problem, the question arises as to what factors lead to higher levels of these improvements? Previous research has indicated that diverse factors such as gender (Sell, 1997), culture, and even brain functioning using fMRI measurements (Krajbich et al., 2009) are associated with differences in free riding behavior. Here, I explore the hypothesis that education can affect these preferences and resulting behaviors. Specifically, I investigate whether an education in finance encourages or discourages wealth-creating investments when the financial environment does not provide adequate institutional incentives to do so.

Previous research suggests that education is important, but does not provide a clear picture of the potential effect. For example, research in economics has investigated whether an economics education distorts individual behaviors outside of the classroom. Marwell and Ames (1981) conduct experiments on the free rider game, as is investigated here, and show that economics students free ride more than others. Carter and Irons (1991) provide results of bargaining games showing that economists make lower offers. Frank et al. (1993) report experiments of the prisoner's dilemma and show that economics students cooperate less. Frank and Schulze (2000) conduct corruption experiments and illustrate that they are more likely to take corrupt bribes. Using empirical data of charitable donations at a university, Frey and Meier (2003) give evidence that economics students contribute less. Research in business education, in general, has shown that it also correlates with lower charitable donations (Meier and Frey, 2004). Taken together and given that finance and economics education share much in common, this body of research casts doubt on the potential effect of a finance education on social preferences.[2]

The dilemma of research such as this is to disentangle selection effects from learning effects. Does the education itself change behavior or are those who choose to study the field that is predisposed to act differently? Thus, to understand the impact of finance education on social preferences; one must be able to isolate the effect of learning. One attempt has been made to separate the two drivers of outcomes. McCannon and Peterson (forthcoming) explore the selection versus learning issue for a finance education, but in a different institutional environment. The environment considered is an investment game where contract enforcement does not exist. Thus, it studies investing behavior. They show that those who choose to study finance make lower investments and return less, but provide evidence suggesting that a finance education reverses these preferences. The econometric method used interacts major and age to separate selection and learning. A direct link between behavior and coursework taken is not done and, consequently, the marginal impact cannot be assessed. Also, it does not contrast personal gain from benefit to others and, therefore, does not fully explore the influence of "other-regarding" preferences. Thus, the work presented here clarifies the issue by studying a social setting where personal and other's gain is in conflict and directly investigates the marginal impact of finance course. The objective here, then, is to investigate whether enhanced coursework in finance discourages free riding, as may be suggested by the work McCannon and Peterson (forthcoming), or does it promote selfish gain at the expense of others, as shown to be the case in economics education by Marwell and Ames (1981).

Previous research in finance tends to focus on the related issue of financial literacy. For example, Wang (2009) and Sjöberg and Engelberg (2009) consider the relationship between financial literacy, education, and risk taking. Peng et al. (2007) presents survey evidence that personal investment education correlates with investment knowledge and savings behavior. Bernheim and Garrett (2003) study information on employer-based financial education and find that these programs improve savings. Likewise, Chira et al. (2012) find that educational attainment correlates with student loan choices. Hence, the work presented here contributes to the understanding of the link between financial education and outcomes.

Experimental research analyzing the free rider game has a long history. See Ledyard (1995), Zellmer (2003), and Chaudhuri (2011) for comprehensive literature reviews. In the free rider game subjects play in groups. Each has an endowment and chooses how much to invest in a common fund, keeping the residual as personal gain. Contributions to the common fund grow and are shared equally amongst the group. Growth of the fund is such that while aggregate wealth expands as more is contributed, the division is such that an individual receives back less from every dollar invested than by retaining it. Thus, a guaranteed negative return arises. Here each subject is endowed with five "experimental dollars". The common fund triples and is evenly shared amongst the four members of the group. Hence, each dollar contributed returns only seventy-five cents. Hence, absent social preferences, the incentives are such that it is optimal to make no contribution and free ride on the donations of others. Dominating the research on the free riding game is an investigation of how institutional features, such as the endowment, group size, information, or the growth rate, affect contributions. The tactic here is to use the free rider game as an instrument to assess how external factors affect preferences and, thus, behaviors.

The experimental methods are presented in Section 2. Section 3 provides the econometric results, while Section 4 concludes.

2. Experimental design

To address this question experiments were conducted with undergraduate students at a small, private university in upstate New York. Subjects were recruited from general education classes. Additionally, individuals were recruited from classes within the business school.[3] An online reservation manager was used to schedule the

[2] An exception is Yezer et al. (1996) who conduct "lost letter" experiments to measure moral behavior. Evidence suggests that students of economics are more willing to engage in such moral behaviors.

[3] Economics is within the school of business and the faculty are joined with those in finance into one department.