ARTICLE IN PRESS

Economic Modelling xxx (2017) 1–10



Contents lists available at ScienceDirect

Economic Modelling



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

Locus of control and financial risk attitudes

Dusanee Kesavayuth, Kaung Myat Ko, Vasileios Zikos

Research Institute for Policy Evaluation and Design (RIPED), and School of Economics, University of the Thai Chamber of Commerce, 126/1 Vibhavadee-Rangsit Road, Dindaeng, Bangkok, 10400, Thailand

ARTICLE INFO

JEL codes: D01 D90 Keywords: Locus of control Risk attitude HILDA

ABSTRACT

An extensive literature in economics investigates the relationship between cognitive abilities and financial risk attitudes. Yet, little is known about the importance of non-cognitive skills for financial risk attitudes. In this study, we focus on one specific non-cognitive skill, namely locus of control, which represents the extent to which an individual believes that life events are outcomes of his/her own actions. Using Australian panel data, we show that locus of control is positively related to the risk attitudes of older individuals who also differ significantly from younger individuals. The observed difference in risk attitudes between the young and the old is found among females but not males. These findings provide new empirical evidence on financial risk attitudes and how they relate to three sources of individual heterogeneity: locus of control, gender, and age group.

1. Introduction

People make decisions under risk and uncertainty regarding a variety of matters in life. As their risk preferences affect the decision-making process, any systematic changes in their willingness to assume risk would be expected to have wide-ranging consequences on economic and socio-political outcomes (Dohmen et al., 2011; Becker et al., 2012; Bonsang and Dohmen, 2015).¹ There is also strong evidence that cognitive functioning relates to people's attitudes towards risk, and people with better cognitive abilities are more likely to hold stocks or opt for riskier investments (Banks, 2010; Christelis et al., 2010; Grinblatt et al., 2011). In this paper we consider another, yet relatively unexplored determinant of risk attitudes, non-cognitive abilities. Using panel data from the Household, Income and Labour Dynamics in Australia (HILDA), we examine whether and to what extent one specific non-cognitive ability, namely locus of control, relates to people's attitudes towards financial risk.

Economists and other social scientists are becoming increasingly interested in the study of people's non-cognitive characteristics. It is now well-established that psychological factors, such as the Big Five personality traits (agreeableness, conscientiousness, extraversion, neuroticism, and openness to experience), self-esteem, optimism, and trust are important predictors of economic behaviors and outcomes, including schooling, wages, productivity, portfolio delegation, and stock market development (e.g. Bowles et al., 2001; Heckman et al., 2006; Borghans et al., 2008; Wang et al., 2013; Ng et al., 2016). In this study, we focus our attention on one of the most studied psychological concepts – locus of control (Rotter, 1990).

Locus of control captures "whether or not the person perceives a causal relationship between his own behavior and the reward" (Rotter, 1966, p. 1). An individual exhibiting high (also known as internal) locus of control believes that life outcomes are the consequences of one's own efforts and behaviors. On the contrary, an individual with low (or external) locus of control believes that life outcomes are beyond one's own control but rather are the consequences of external factors, such as fate, luck, and other people (Heckman et al., 2006; Schultz and Schultz, 2017; Cobb-Clark and Tan, 2011; Cobb-Clark and Schurer, 2013).

Earlier studies have shown that locus of control can explain an individual's motivation, decisions, actions, and personal goals. More specifically, individuals who have relatively higher locus of control tend to exhibit greater initiative, motivation, and productivity, and hence tend to be generally more successful (Linz and Semykina, 2007). Given these findings, it is not surprising that locus of control has also been shown to be an important predictor of various life outcomes, including subjective health, life satisfaction, wages, employment, and educational attainment (Osborne Groves, 2005; Becker et al., 2012). Furthermore, locus of control may have important implications for the individual's likelihood of employment in occupations such as those of managers, scientists, and engineers (Cobb-Clark and Tan, 2011). It may also act as a psychological

* Corresponding author.

E-mail address: V.Zikos@riped.utcc.ac.th (V. Zikos).

¹ For example, voters who are risk averse would tend to elect governments with a more conservative orientation, while risk averse workers might prefer longer-term contracts with less variable pay schemes (Dohmen and Falk, 2011; Kam and Simas, 2012).

https://doi.org/10.1016/j.econmod.2018.01.010

Received 17 July 2017; Received in revised form 12 December 2017; Accepted 17 January 2018 Available online xxxx 0264-9993/© 2018 Elsevier B.V. All rights reserved.

ARTICLE IN PRESS

D. Kesavayuth et al.

buffer against many negative life events that people may experience (Buddelmeyer and Powdthavee, 2016).²

In addition to these benefits, there is also evidence that locus of control is related to risk behaviors. Heckman et al. (2006) find that locus of control plays an important role in explaining risky behaviors of teenagers and young adults, including daily smoking, using marijuana, participating in crime, and incarceration. Cobb-Clark et al. (2016) show that people with a higher locus of control tend to save more. On the other hand, we found only one study on locus of control and willingness to take financial risks, the topic of this paper. Salamanca et al. (2016) use data from the Dutch Central Bank Household Survey (DHS) to study how the investment decisions of household heads relate to their 'economic' locus of control.³ They show that individuals with a higher economic locus of may also maintain a higher share of risky investments than individuals with lower economic locus of control.

As there is little previous work on the importance of locus of control for financial risk attitudes, more remains to be understood about the nature of this relationship. Here, three questions suggest themselves. First, are the results found for the Dutch similar to those found elsewhere – in our case, Australia – and thus are broadly representative? Second, given that the previous analysis was based on pooled data,⁴ do similar results hold with panel data, allowing us to control for the confounding effects of unobserved person-specific characteristics? Third, in addition to heterogeneity in risk attitudes by locus-of-control type, do similar patterns hold for other sources of individual heterogeneity? The aforementioned study did not address this question. Here, we consider two sources of individual heterogeneity – gender and age group – and examine whether the relationship between locus of control and financial risk attitudes might differ across these groups within the population.

Based on the earlier findings, we hypothesize that an individual's locus of control is positively related to his/her financial risk attitude. In other words, we expect that individuals with a higher locus of control are more willing to take financial risks simply because they believe that, through their own actions, they are more in control of future outcomes compared to those with a lower locus of control. We then bring this hypothesis to the data and, using a unique nationally representative dataset from Australia, we examine systematically the longitudinal relationship between locus of control and financial risk attitudes. The analysis reveals that locus of control is positively related to the risk attitudes of older individuals who also differ significantly from younger individuals. This result further varies by gender; the observed difference between the young and the old is found among females but not males. Overall, our results provide new empirical evidence on financial risk attitudes, suggesting that at least for certain groups of individuals, locus of control may matter for a person's willingness to take risks.

The paper is organized as follows. Section 2 describes the data. Section 3 presents our empirical model and strategy. Section 4 discusses the results. Section 5 extends our analysis in various ways, and Section 6 concludes the study.

2. Data

The data used in the analysis come from waves 3, 4, and 11 of the Household, Income and Labour Dynamics in Australia (HILDA) survey.⁵

HILDA is an annual survey funded by the Australian government. Since 2001, it has collected data from a nationally representative sample of Australian households. Almost 14000 individuals from 7682 households were interviewed in wave 1 of the survey. The panel members are followed over time and each household member over the age of 15 is interviewed. Watson and Wooden (2012) provide detailed information on the HILDA survey.

2.1. The measure of financial risk attitudes

Our dependent variable originates from the Survey of Consumer Finances (SCF) risk tolerance question. The wording of the question is as follows: "Which of the following statements comes closest to describing the amount of financial risk that you are willing to take with your spare cash? That is cash used for savings and investment." The options given to the respondent are: (1) I take substantial financial risks expecting to earn substantial returns; (2) I take above average financial risks expecting to earn average returns; (4) I am not willing to take any financial risks.⁶

For ease of interpretation, we reversed the scores so that a higher value indicates greater willingness to take financing risks. It is worth noting that among the 10837 individuals included in our study, 45.96% reported unwilling to take any financial risk while 44.85% reported that they were willing to take average financial risks expecting to earn average returns. In addition, 7.43% and 1.76% of the respondents were willing to take above average and substantial financial risks, respectively.

According to Grable and Lytton (2001), this self-reported measure of financial risk attitudes has good face and construct validity and also offers a reasonable measure of reliability. As an additional check, we regressed investment in equity on financial risk attitude. The estimates reported in Table A1 show that a higher willingness to take risks is positively related to the likelihood of holding risky assets, indicating that our risk measure is a good predictor of actual risk-taking behavior in investment decisions (see e.g. Cardak and Wilkins, 2009; Black et al., 2012; Bonsang and Dohmen, 2015).

Nonetheless, there is still a possibility that financial risk attitude reflects factors other than pure risk preferences, such as a person's financial situation (Hanna and Chen, 1997; Chen and Finke, 1996). To alleviate this concern, in addition to controlling for household income, we included household wealth as an explanatory variable in the risk attitude regression equation.⁷ Importantly, we found qualitatively equivalent results with or without household wealth in the estimation.

2.2. The locus of control variable

Locus of control is derived from the responses to seven questions. The questions are: (1) I have little control over the things that happen to me; (2) There is really no way I can solve some of the problems I have; (3) There is little I can do to change many of the important things in my life; (4) I often feel helpless in dealing with the problems of life; (5) Sometimes I feel that I'm being pushed around in life; (6) What happens to me in the future mostly depends on me; and (7) I can do just about anything I really set my mind to do. Answers are reported on a 7-point scale that ranges from 1 (strongly disagree) to 7 (strongly agree).

It is worth noting that Cronbach's alpha is slightly above 0.82, indicating that the questions on locus of control imply internal consistency that is highly reliable. This enables us to calculate a single index for the locusof-control variable by reversing the scores of the responses to questions 1 through 5, and then adding the scores of all questions from 1 to 7. By using

² A rapidy-expanding literature shows that personality traits may have important effects on how a person's well-being responds to various life events, including income changes, unemployment, retirement, and illness, among others (see e.g. Boyce et al., 2010; Budria and Ferrer-i-Carbonell, 2012; Boyce and Wood, 2011; Kesavayuth et al., 2015, 2016).

³ Unlike typical locus of control, economic locus of control measures directly an individual's belief about his/her ability to control economic outcomes rather than life outcomes in general.

⁴ Salamanca et al. (2016) did not utilize the panel dimension of their dataset.

 $^{^5\,}$ Data on financial risk attitudes are collected in waves 1–4, 6, 8, 10–14, while data on locus of control are collected in four waves, 3, 4, 7 and 11.

⁶ The HILDA survey includes a fifth option, namely "I never have any spare cash". For our analysis, we follow West and Worthington (2014) and exclude any observations related to the fifth option. Its relation to financial risk attitude is questionable as "it may correspond to greater risk aversion, but it may also reflect other factors, such as low income" (Cardak and Wilkins, 2009, p. 855).

⁷ This sensitivity analysis is carried out in Section 5.

Download English Version:

https://daneshyari.com/en/article/7346898

Download Persian Version:

https://daneshyari.com/article/7346898

Daneshyari.com