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FINANCIAL LITERACY, FINANCIAL SELF EFFICACY AND FINANCIAL WELL BEING: THE MODERATING ROLE OF PROCRASTINATION

Abstract:

Financial well-being is the satisfaction an individual experiences with their financial position. This study investigated the effect of financial literacy and procrastination on financial well-being and the moderating role of Financial self-efficacy. Financial well-being was measured through the Consumer Financial Protection Bureau's measure of financial well-being. Data for the study was collected from 300 individuals using an online questionnaire. Structural Equation Model analysis was done using SmartPLS 4. The results showed that Financial self-efficacy [F.E.] is moderating the inverse relation of Procrastination [PROC] on Financial Wellbeing [F.W.] into a direct relation, but the effect of Financial Literacy [FL] is getting affected due to the moderation of FSE; it can be interpreted that the study sample contains the investors who are having behavioural biases which lead the F.W. to get reduced with the moderation of FSW on FL. This study provides insights for financial practitioners, educators, and policymakers and can help households improve their financial well-being.

Keywords:

Financial Literacy; financial well-being; Financial Self-Efficacy; Procrastination

JEL Classification: D03, G00

Introduction

A wide variety of financial products in the financial system makes financial decision-making a challenging task. Thus it is becoming challenging to manage one's personal finance to achieve financial well-being. To improve financial well-being, strategies to increase financial literacy were initiated by governments in many countries. Although it is well established that financial literacy involves provides knowledge and cognitive skills to an individual, which helps to understand the intricacies of the financial sector, enabling them to control their financial matters. Still, additional issues also play an imperative role (OECD, 2013c). The ability to manage personal finances also requires psychological and attitudinal traits. These could be the motivation to seek financial information, control one's emotions and, assurance in their capabilities. Apart from FL, this study tries to analyze the contribution of other factors such as procrastination and FSE on FWB.

This paper is organized as follows: The second section consists of the review of the previous studies related to financial literacy, procrastination, financial self-efficacy, and financial well-being. The third section of the paper discusses the research methods used to collect data and analyze the data. In the fourth section, we discuss the patterns of relationships among the research variables. The final section deals with the implications for designing and targeting financial education efforts.

Literature Review

Procrastination

Procrastination is "to voluntarily delay an intended course of action despite expecting to be worse off for the delay" (Steel, 2007). Procrastination differs from laziness. A lazy person does not undertake a given action because no ambitions are connected to the action.
Numerous societal problems are due to procrastination, and researchers have shown that procrastination is so pervasive that at the least 80% of Americans have delayed their retirement savings (Ainslie, 2005; Byrne, Blake, Cairns, & Dowd, 2006; Critchfield & Kollins, 2001; Venti, 2006). The delay in addressing problems further compounds them (Gallagher, 2008; Sirois, 2007). Procrastination in retirement savings can lead to severe financial concerns (Dunleavy, 2006; Pear, 2009). This paper uses the Five Procrastination items scale of Svartdal et al. (2016) to measure procrastination. Refer to table 1;

Financial literacy

Financial literacy refers to "financial knowledge, which includes an individual's understanding of basic financial management strategies and economic principles" (Lusardi & Mitchell, 2014). FL has a direct and significant influence on responsible financial behavior when contrasted to other constructs such as self-confidence and a supportive environment (Clark et al., 2017). Persons with higher FL are more likely to show better financial management behavior..Financial literacy is measured using the four questions shown in the table below suggested by Lusardi and van Oudheusden, 2015. A person with a score of 3 and is considered financially literate.

Financial Self-Efficacy (FSE)

"Self-efficacy is the belief people have about their capabilities to produce levels of performance" (Bandura, 1994). FSE is, "a man's perceived ability to control his/her own finances" (Postmus, 2011).Financial Self-Efficacy was measured using FSE Scale developed by Lown (2011). Refer to table 1.

Financial well being

FWB is defined as "the state wherein an individual has a sense of control over day-to-day and month-to-month finances; Capacity to absorb a financial shock; Being on track to meet financial goals and the ability to make financial choices to enjoy life" (CFPB). This study examined the relationship between Procrastination, FL, and FWB and included the moderating role of FSE.

Table no.1 Scales used in the study

Scale	Items	Responses	Developer
Procrastination	1. In preparation for some deadlines, I often waste time by doing other things. 2. Even jobs that require little else except sitting down and doing them, I find that they seldom get done for days. 3.I often find myself performing tasks that I had intended to do days before 4. I am continually saying "I'll do it tomorrow." 5. I generally delay before starting on work I have to do.	1=Always 2=Often 3=Sometimes 4=Rarely 5=Never	Svartdal and Steel, 2017 Higher scores indicates more procrastination
FL	Q1.Suppose you have some money. Is it safer to put your money into one business or investment, or to put your money into multiple businesses or investments? Q2. Suppose over the next 10 years the prices of the things you buy double. If your income also doubles, will you be able to buy less than you can buy today, the same as you can buy today, or more than you can buy today? Q3.Suppose you need to borrow OMR100. Which is the lower amount to pay back: OMR105 or OMR100 plus three percent? Q4. Suppose you put money in the bank for two years and the bank agrees to add 15 percent per year to your account. Will the bank add more money to your account the second year than it did the first year, or will it add the same amount of money both years? Q5. Suppose you had 100 OMR in a savings account and the bank adds 10 percent per year to the account. How much money would you have in the account after five years if you did not remove any money from the account?	A1.Multiple A2.Same A3.OMR 100 Plus three percent A4.More in second year A5.OMR 150	Klapper, Lusardi, and van Oudheusden (2015). Higher scores indicate more Financial Literacy. A person is defined as financially literate when he or she correctly answers at least three out of the four financial concepts described above.
FSES	1. It is hard to stick to my spending plan when unexpected expenses arise. 2. It is challenging to make progress toward my financial goals. 3. When unexpected expenses occur I usually have to use credit. 4. When faced with a financial challenge, I have a hard time figuring out a solution. 5. I lack confidence in my ability to manage my finances. 6. I worry about running out of money in retirement.	1=Exactly true. 2=Moderately true. 3=Hardly true. 4=Not at all true	The Financial Self-Efficacy Scale (FSES), (Lown, 2011)

FWB	**Part 1: How well does this statement describe you or your situation?** 1.Because of my money situation, I feel like I will never have the things I want in life 2.I am just getting by financially 3. I am concerned that the money I have or will save won't last. **Part 2:This statement applies to me** 1.I have money left over at the end of the month 2.My finances control my life **Part 3: Tell us about yourself.** 1. How old are you? a)18-61 or b)62+ 2. How did you take the questionnaire? (a=I read the questions, b= someone read the questions to me)	1=completely, 2= Very well, 3=somewhat, 4= Very little, 5= Not at all 1=Always 2=Often 3=Sometimes 4= Rarely 5=Never	Higher scores indicates more Financial Well-being

Hypotheses development

Financial literacy and financial well being

Hogarth (2006) and Shim et al. (2009) showed that FL and financial behavior affects the FWB of a person. As per Joo and Grable (2004), FL affects financial satisfaction, which ultimately increases FWB.

Hypothesis 1: Financial literacy will affect financial well-being.

Hypothesis 2: Financial Self-efficacy will mediate the relationship between financial literacy and financial well-being.

Financial decisions are usually complex and are influenced by basic skills and self-assessment of skills (Lusardi and Mitchell, 2014). Numerous researchers have found a relationship between FSE and financial behavior. If procrastinators exhibit less financial self-efficacy, this might elucidate why procrastinators often have financially undesirable outcomes. Therefore we propose

Hypothesis 3: procrastination will affect financial well-being.

Hypothesis 4: Financial Self-efficacy will mediate the relationship between procrastination and financial well-being.

Research Methodology

Standardized questionnaires have been used to assess the key study variables. While measuring using the scales, a score of 1 to 5 is used, where a higher grade represents a higher perception or experience of the construct. Data was collected using a convenient, purposively sampling technique. The survey included questions about demographics, (i.e., gender, age, income, and education), FL, FSE, F.B. procrastination and FWB. A total of 300 participants filled the questionnaire (n=300). Data was analysed using SmartPLS 4.

Data Analysis and Results

In the present study the data was analyzed using Structural Equation Modelling (SEM) technique using SmartPLS.

Measurement Model Assessment

The first step in SEM is the assessment of measurement model to evaluate the quality criteria that includes the examination of factor loadings, construct reliability, and construct validity. Measurement model assessment starts with the examination of factor loadings for items in the latent variables. Initially, measurement model analysis results revealed factor loadings less than the recommended threshold of 0.70. According to Hair et al (2014), items with low loadings (0.40 to 0.70) shall only be removed from further analysis, if the removal can improve the reliability and validity of the construct over the recommended threshold. In the present study, items with low loadings were removed one at a time and reliability and validity was reevaluated. Two items from Financial Self Efficacy (FSE2 and FSE3) and 1 item from Procrastination (PROC5) were removed. After the removal of the items, except for 2 items (FSE5: 0.571 and PROC1: 0.683), the model showed factor loadings over 0.70 for all the other items (Table 1). The 2 items were not removed as the results showed acceptable construct reliability and validity (discussed later in this section). Figure 1 presents the loadings for each of the constructs.

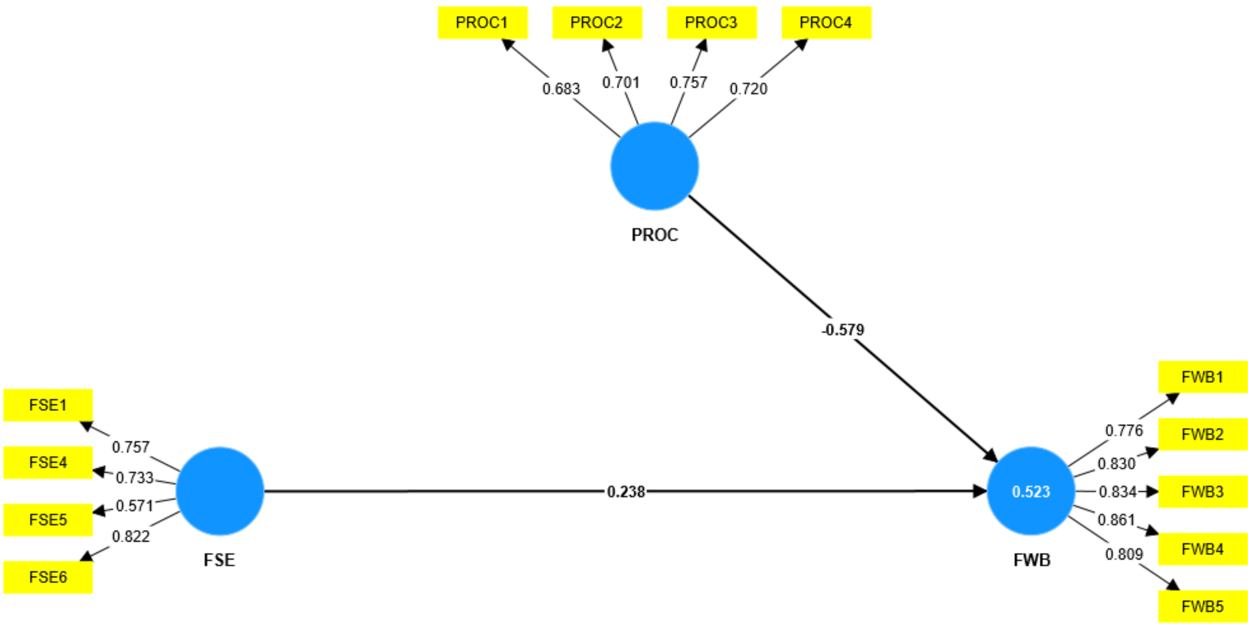

Figure 1. Measurement Model

Structural Model Evaluation

Next, after establishing the quality criteria, structural model is evaluated to test the proposed hypotheses. Bootstrapping procedure with 10000 bootstrap samples was used to assess the proposed relationships.

H1 evaluates whether financial literacy has a significant impact on financial wellbeing. The results revealed that financial literacy has a significant and positive impact on the financial wellbeing ($\beta = 0.681$, $t = 13.579$, $p < .001$). Hence, H1 was supported.

H2 evaluates whether financial self-efficacy has a significant impact on financial wellbeing. The results revealed that financial self-efficacy has a significant and positive impact on the financial wellbeing ($\beta = 0.094$, $t = 2.111$, $p = .017$). Hence, H2 was supported.

Moderation Analysis

The study assessed the moderating role of procrastination on the relationship between financial literacy, financial self-efficacy and financial wellbeing. The present study proposes that higher Degree of procrastination will weaken the relationship between the predictors (financial literacy and financial self-efficacy) and the outcome (financial wellbeing). Further, the results revealed a negative and significant moderating impact of procrastination on the relationship between financial literacy and financial wellbeing (b= -0.095, t = 2.566, p < .005), supporting H3. This shows that with increase in the procrastination the relationship between financial literacy and financial wellbeing is weakened.

Contrary to the proposed hypotheses, moderation analyses results revealed a significant but positive moderating impact of procrastination on the relationship between financial self-efficacy and financial wellbeing (b= 0.118, t = 3.097, p = .001). Hence, H4 was not supported. Moderation analysis summary is presented in Table 4.

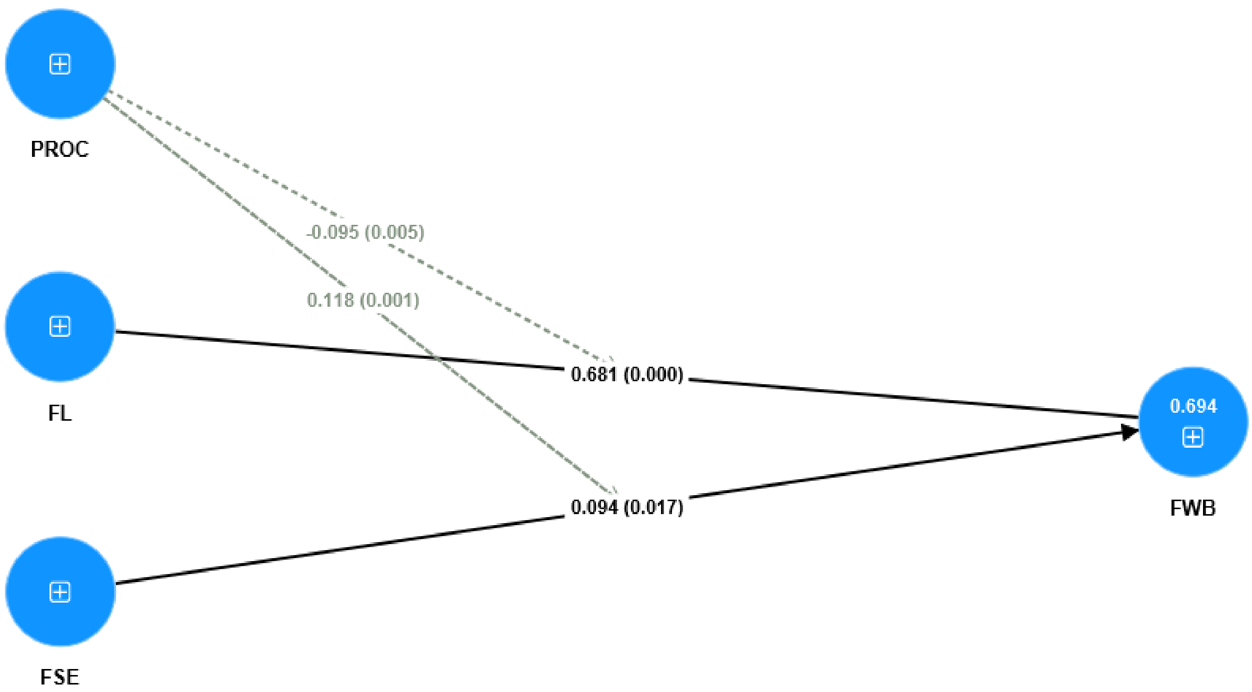

Figure 2. Structural Model

Table 4. Hypotheses Results

	Path Coefficient	Standard deviation	T statistics	P values
H1: FL -> FWB	0.681	0.050	13.579	0.000
H2: FSE -> FWB	0.094	0.044	2.111	0.017
H3: PROC x FL -> FWB	-0.095	0.037	2.566	0.005
H4: PROC x FSE -> FWB	0.118	0.038	3.097	0.001

Conclusion and Reccomendation

Results from this study provide insights to financial practitioners, educators, and policymakers who will help households improve their financial well-being. The past decade has seen governments in many countries establish national financial literacy strategies in an attempt to improve the financial well-being of their citizens. Chiefly, these strategies have sought to improve financial literacy through financial education programs (Asian Development Bank, 2013, Australian Securities and Investment Commission, 2013, Financial Literacy and Education Commission, 2011, Financial Services Authority, 2006, Hira, 2010, OECD, 2012, OECD, 2013b).

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