

Chapter 8

Policy Analysis of Individual Financial Planning Affected by Personal Bias Factors in Indonesia

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ABSTRACT

Even in making individual financial decisions, humans will naturally still be affected by personal biases which leads to less than optimal, illogical, and irrational decisions. It will be an important issue due to individual financial decisions which accumulate as a whole country's economic performance. This research introduces the idea to combine personal biases stated in behavioral economic theory with individual financial decision models using a system dynamics approach. The research uses vignette a fractional factorial studies method to calculate the score of personal bias factors. The main findings of the research show that there is a positive feedback loop on individual financial planning which is influenced by personal biases. The research concludes that personal bias factors such as the hedonic editing effect, future spending, category budgeting, endowment effect, and house-money effects are important factors in individual financial planning. Thus, paying attention to these personal biases then may help policy maker to control saving, spending, and investment rates in Indonesia.

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INTRODUCTION

According to Randi Anto, Commercial Director of Bank BRI, Indonesia has now shown a change in behavior related to how individuals plan their finances. These changes are evident from the economic conditions of the last decade that Indonesian people prefer to keep their money in savings rather than to develop businesses, as Tardi, Director of Retail Bank Mandiri puts it (Sari, 2017). This condition is also considered by Prof. Ari Kuncoro, Dean and Professor of the Faculty of Economics and Business University of Indonesia, as an anomaly influenced by the self-esteem of middle-class economic society in Indonesia who prefer to reduce some components of retail spending to maintain consumer spending needs (Jefriando, 2017). Therefore, there are some behavior factors influencing individual financial planning decisions.

This individual financial decision-making may affect economic condition of whole country. Sterman (1989) had shown in the study of system dynamics simulation called “Beer Game” about how experimental method could be paired with simulation in constructing parts which can move decisions on individual actor level into system’s behavior, and finally giving theory that can be tested to explain rises on macro behavior which was built from micro human system structure. This also prove life-cycle saving theory by Modigliani (1988) which offered a coherent microeconomic theory of individual saving that is capable of delivering important macroeconomic conclusions through a process of explicit aggregation over households (Deaton, 1997). This concludes the importance of understanding relationship between personal biases factors which affecting individual financial planning.

From the background problem, the research tries to build better understanding of the connection between personal biases and individual financial planning. Finding the best model to build better understanding of those connections will help policy maker to find main determinant factors to control saving, spending, and investment rate. There are many models that can be used, and it is divided to three types of model such as qualitative, quantitative, and system dynamics.

In financial planning research field, there are 45 research journals summarized by Steuer dan Na (2003). Many of them are using Goal Programming (GP) model and financial simulation model. This is consistent with those research findings by Zopounidis and Doumpos (2002) that most mathematical models used for financial planning are multi-objectives/GP programming approaches. There are some researches calculating personal bias effect of behavior economy to financial planning, specifically investment aspect using a mathematical model. The mathematical model used such as multi-agent Grossman and Stiglitz (1980) with objective, agent selection, different bias, and different asset value (Dieupart-Ruel et al., 2013). Zhou (2010) also combining personal bias with investment planning using some mathematical model such as expected utility theory (von Neumann & Morgenstern, 1944), dual theory of choice (Yaari, 1987), and cumulative prospect theory (Kahneman & Tversky, 1979).

On the other hand, financial planning related with investment has more research journal using qualitative model approach than saving and spending. For example, in journals related with multi-criteria decision analysis (MCDA), qualitative model that could be used for investment planning calculations depends on the type of information received (Larichev, 2002) such as analytical hierarchy process (AHP) and verbal decision analysis (VBA) (Ustinovichius et al., 2007). Other than qualitative model mentioned previously, there are qualitative model which then could be counted quantitatively to give better understanding of individual financial planning affected by personal bias factors. Those models are using simulation game theory approach, for example ultimatum bargaining game (Camerer, 2003), dictator game (Engel, 2011), and trust game (Berg et al., 1995).

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