

A Proposal of Use of System Dynamics as a Tool to Infer Managerial Decision Making

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ABSTRACT

Measurement of decision making in managerial behavior is a topic discussed in the field of Management but researchers can't easily access the managerial decision since it is the most important decision of the companies and usually it is strictly secret. However, if we could develop a model by using outcomes and observe the difference between actual and simulation results, we can infer the change of the company's managerial decision. Thus, we propose use of System Dynamics as a tool to infer managerial decision making. In this paper, we modeled the Japanese banking industry to observe the tendency of managerial behavior and we focus on the decision making on fund management since it is the most important decision in this industry. Harrison (2007) argued even though Modeling is artificial and it can't explain each matter, we can observe the entire mechanism and tendencies. Regarding the managerial behavior, we use

Prospect theory that is proposed by Kahneman and Tversky (1979). They renewed the empirical study of economic behavior with less emphasis on rationality presuppositions. They also found three regularities – in, actual human decision-making, "losses loom larger than gains"; persons focus more on changes in their utility-states than they focus on absolute utilities, and the estimation of subjective probabilities is severely biased by anchoring.

In aligning with Prospect theory, our study shows that the tendency of management decisions in Japanese banks is relatively risk avoidance than growth-oriented management when they faced uncertainty and experience of huge loss when they encountered the economy collapses. The observation period measures for 20 years from 1997 to 2017 and we will show the 20 years trend of decision making using a model created by using System Dynamics.