Budget Sufficiency, Profile Diversity, and Managerial Flexibility for Improving IT Portfolio

Yu-Ju (Tony) Tu
College of Commerce, National Chengchi University, Taipei, Taiwan (R.O.C.), tuyuju@nccu.edu.tw

Michael J. Shaw
College of Business, University of Illinois at Urbana-Champaign, IL, USA, mjshaw@illinois.edu

Ramanath Subramanyam
College of Business, University of Illinois at Urbana-Champaign, IL, USA, rsubrama@illinois.edu

Abstract

The specific mechanisms for improving IT investment performance remain open research issues, and the governance of IT investment, which is integral to corporate governance, has long been of concern to senior managers (e.g., CIOs and CFOs), particularly in the current decade during which global economic volatility has intensified. In the recent literature, an emerging realization has been that portfolio-level research might be very appropriate for addressing these concerns.

The main objective of this study is thus to investigate the manageable factors in composing a superior IT portfolio, which in turn, leads to better governance of IT investment in tandem with performance improvement. The concept of portfolio superiority is rooted in modern portfolio theory (MPT), which succinctly refers to superior return-risk efficiency and balance. Because IT investment governance challenges result from constantly managing the contextual factors involved in decision making, this study begins by identifying budget sufficiency as the constraint in limiting the return-risk efficiency of IT portfolio alternatives based on a firm’s risk appetite. Next, this study identifies profile diversity and managerial flexibility as factors that relax the limit of budget insufficiency. Diversity refers to how the attributes’ values can differ, and flexibility refers to the investment decision units of candidate IT assets. Their rationales are mainly grounded in the redundancy and density of the decision space composing the IT portfolio. In this study, the results are based on 80,000 portfolio alternatives, as well as certain analytical evidence. The targeted assets are IT project investments. To account for a majority of IT investment across firms, the data used to generate portfolio alternatives includes the simulated data and real-world data from a US Fortune 100 company.

The main findings indicate that budget sufficiency, managerial flexibility, and profile diversity are all positively associated with the efficiency of IT portfolio alternatives across firms’ risk appetites. Further, efficiency will decrease if the budget is not sufficient for the entire set of candidate IT assets considered as portfolio alternatives. Nevertheless, this decrease in efficiency will be mitigated by either greater managerial flexibility or greater profile diversity in the set of candidate IT assets.