



Role of Variability in Project Performance: A Few Theoretic Investigations

Milind Shrikant Padalkar, Indian Institute of Management Kozhikode (IIM K)

There is sufficient empirical evidence that project performance continues to be problematic despite over six decades of research and practice attention. Theories of project management remain weak while research adheres to a dominant deterministic paradigm to search for explanations through conceptual or empirical lenses. The premise that a non-deterministic enquiry through the lens of variability would offer superior and theoretic explanations of performance motivates this study. The premise is justified through a comprehensive review of project management literature. The review uncovers trends in project management research. Analysis of non-deterministic research shows that Complexity and Uncertainty are the principal constructs of variability. Based on a thematic analysis, the study proposes a 5-dimensional framework of variability. Anchored to structural and behavioural themes on the framework, the study develops conceptual/analytical models to examine stochastic dependence in series networks paths, sub-structure topological forms of stochastic activities, effect of stochastic work rates on the interplay of procrastination and pacing behaviours, and game-theoretic structure of manager-worker interactions. The models are corroborated from field studies through a mixed quantitative and qualitative methods approach. The study makes several original contributions to project management research. It shows the diffused state of project management research, with the dominant deterministic stream showing signs of maturing, and the non-deterministic enquiry remaining emergent. The models developed in this study offer theoretic explanations into several aspects of project phenomena, and provide instructive insights into structural and behavioural antecedents of variability in projects. The study employs novel methodological approaches to developing taxonomies, assessing influence of research themes, and using statistical or game-theoretic techniques to analyze complex interactions of human behaviours, and thus contributes to the literature on research methods. It delivers useful prescriptions to practitioners, and generates several avenues of future research enquiry.