

# Model for Selecting Project Members to Minimize Project Uncertainties

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## Abstract

Project risks come mainly from the future uncertainties, and new product and service development projects possess the most uncertainty and therefore the highest risk. However, if the project team has gained experiences from previous similar projects, the risk to the project drastically declines. In other words, an inverse correlation exists between member experiences and project risk. Therefore, the guiding principle would be to assign an experienced member to execute familiar work for that member. This study aims to establish a mathematical model that uses member experience to minimize project uncertainty. The nonlinear model assigns members with different experiences to the most suitable tasks to minimize project risk, and thus maximize project success rates under constraints of project costs and communication complexities. An experimental case is used to demonstrate the applicability of the proposed model, and results indicated that under cost and communication complexity constraints, project uncertainty can truly be minimized by allocating an adequate member to the suitable task.

## KEYWORDS

Keyword : Project, Project management, Experience, Uncertainty, Risk