

Metrics, People and Preconcept Forecasting

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Abstract

Despite simplifying assumptions to the contrary, most project managers understand that people are both important and different. Sometimes, at the nascence of the project (i.e., before the final concept or pre-concept) the people can be more important than the project aspects because the right people might change the entire direction of a project and vastly improve project outcomes. Moreover, people are different – they can possess different skills, different experiences, different levels of creativity and different analytical abilities.

Our objective is to consider the impact of the people that implement a project on future project outcomes. To be specific, we seek to determine which people-metrics (if any) based on past performance will be better at forecasting future project outcomes and under what conditions. Our findings could be potentially applicable to many decisions involving people and summarizing their past performance. In particular, our findings could improve early or pre-concept forecasting when the people on the project might be the most important determinants of the project's future outcome. For example, when finding a new cure for a disease or inventing a new distribution channel, the creativity and insights of the people might be far more important than the initial product concept.

We study (both theoretically and empirically) six people-metrics based on past performance - the mean of the past project outcomes for a person, the number of past project outcomes, the maximum past project outcome, the minimum past project outcome, the range (i.e., maximum minus minimum) of the past project outcomes and the last observed past project outcome.

We find, for example, that when people with a higher number of past project outcomes have a higher potential (i.e., the probability of more favorable outcomes), the maximum-metric is always more highly correlated with future project outcomes (i.e., forecasts better) than the mean-metric. The minimum-metric is always better than the mean-metric when people with a higher number of past project outcomes have lower potentials. The range-metric and number-metric both are better than the mean-metric when people of different potentials are sufficiently heterogeneous in terms of the number of past project outcomes. Finally, the mean-metric is always more correlated with future project outcomes than the last-metric is.

Apart from pre-concept forecasting, this analysis should be valuable for many activities including providing information for decisions related to selecting people for specific projects and demonstrating that individual people do matter.