

Black & White Swans in Mega Projects: Fuzzy Logic Evaluation Approach

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Abstract

In the process of benefit management, measuring of benefits is regarded as a difficult phase. IT projects are designed to deliver technological benefits to enterprises. But only 20% of organizational projects are able to justify the investments with benefits. IT is a cross functional domain which has an extensive benefit scope for automation projects. In this context, the benefits analysis leading to monitoring becomes an acid test. In tech automation projects only multinational project teams have designated project goals at Project-Program-Portfolio (PPP) levels. The objective of the paper is to develop a benefit measurement for total evaluation. Also, the benefit realization at PPP will be measured in order to facilitate decision making by project hierarchy managers. The study analyzed 14 IT managers who gave insights for quantitative survey on a 5-point scale & is generalizable as the findings will holistically represent the socio-opinions of the managers. The data was analyzed with SPSS and fuzzy simulation. The study revealed that technology benefits have an increasing positive relationship with benefit realization. Also, the project level, program and portfolio level benefits are not the only outcomes. Study showed hybrid mix level benefits and mixed portfolio enterprise benefits with a future scope for Tech. The study founded that there are tangible unquantifiable benefits that are fuzzy which have a positive relationship with total benefit realization. In real business IT settings, managers have divergent interests such as fully, partially or never realizable benefits with significance on IT benefits like strategic architecture alignment, IT financial goals, organizational socio benefit. Future preparedness of projects are positively correlated with the innovation of the organizations. The study has modern value because tech benefits once measured and monitored can give plethora of social value to society. Non-profit value is essential for future sustainability and the realization of stakeholder benefits. The study also has outward policy effects to tech industry and government to streamline benefit analysis in Mega projects driven by technology. The non-profit short termed benefits of automation have futuristic utility value. Future studies to explore the fuzzy benefit realization with the application of socio fuzzy consensus to ascertain clarity of unquantifiable short term benefits. In the light of fuzzy, uncertain benefits there is a link between sustainability and innovation because evolving projects have an effect on society and wider stakeholders who are motivated by novelty and industrial applicability.

Keywords

Socio fuzzy, futuristic, unquantifiable benefits, non-profit, PPP