

Software development projects

ABSTRACT

Past research reveals that software services firms do not adequately fulfill the promises made to customers. One primary reason highlighted in the literature is that studies on software project performance have largely focused on structural factors and ignored cultural factors. This is true in spite of the fact that culture has found to be a key factor in influencing performance in different contexts and is not only a source of high reliability but also a source of competitive advantage. This study, therefore, endeavors to bridge this gap by investigating the influence of organizational culture on software project performance. This study uses competing values framework to establish relationship between organizational culture and software project performance. This study investigates the influence of culture on performance at two levels: project level performance and performance in different stages across the software development life cycle.

The proposed relationships are tested in a field setting by collecting data using a standard questionnaire from software professionals working in CMM Level 5 software services firms in India. The relationships are investigated using stepwise multiple regression analysis and structural equation modeling.

The findings of the project level model reveal that organizations need to exhibit competing cultures for delivering better software project performance. It is suggested that organizations need to have both internal orientation (clan) and external orientation (market) to improve overall software project performance. Further, organizations should



also focus on market culture to deliver better process performance and adhocracy culture to deliver better software performance.

The findings of the stage level models reveal that competing cultures are required to deliver better performance in different stages of software development process. It was found that adhocracy culture influences requirement analysis stage performance, clan culture influences design stage performance, hierarchy culture influences development stage performance and market culture influences testing stage performance. However, market culture was the most dominant culture influencing performance in all stages of software development lifecycle. It is suggested that organizations can manage the dichotomy of mechanistic and organic culture by practicing the concept of ambidextrous organization.

It is recommended that organizations should not only provide a culture focused on career growth and professional development to their employees but also ensure effective implementation of processes to ensure delivery of tasks or processes efficiently and effectively. The study concludes with a discussion of the relevance of the findings to practitioners and academicians.