

# A Study of the Influence of Organizational Culture on Software Project Success

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**Abstract:** *Although many studies have been conducted on software project success, there is a lack of research studying the influence of organizational culture on software project success in offshore Information Technology (IT) companies. The purpose of this study is to study the relationship between software project success and organizational culture in offshore IT companies. The significance of this study lies in the fact that its results can help offshore IT companies understand the influence of organizational culture on software project success. Data were collected from a sample of IT professionals working for offshore IT Company located in India. The results indicate that there is a statistically significant relationship between software project success and organizational culture in offshore IT companies. This study seeks to contribute to the literature about the relationship between software project success and organizational culture. This study will add to the knowledge of project management, software project success, and organizational culture in offshore IT companies.*

**Keywords:** Organizational Culture, Software Project Success, IT Project Failures, Project Management, Offshore IT Companies

## 1. Introduction

This study aims at investigating the influence of organizational culture on software project success in offshore Information Technology (IT) companies. Culture may be observed by the outsider but is invisible to its members: The culture is merely assumed to be "the way things are" [1]. Organizational culture is theorized as shared beliefs and values within the organization that helps to shape the behavior patterns of employees [9]. Although there are no single theory that has been uniformly accepted, there exists a general consensus about organizational culture that it is traditionally determined and socially structured and involves beliefs, behaviors, values and morals that are associated with different levels of the organization and incorporates to all aspects of organizational life [13]. Organizational culture determines managerial processes related to decisions concerning IT [10].

Despite IT projects importance to the organizations, a large percentage of software projects failed to deliver the benefits for which they were initiated. Only 29% of IT projects were delivered on schedule, within budget, and within scope [16]. Standish Group reported that 53% of IT projects slipped schedules, budgets and delivered less functionality. The cancellation of IT projects has been very costly. The financial damage caused by failed software projects in the United States was about \$100 billion annually [12]. They discovered that the major factors affecting IT project failures were (a) the lack of senior management support, (b) shortage of required skills and means, and (c) poor project management practices.

## 2. Software Project Success

The concept of project success has been an area of interest for scholars in the field for a fairly long period of time. Since the 1970s significant research has been conducted to understand project success factors and the possible factors

that contribute to it without much consensus results. Scholars like Judgev and Shenhar suggests that project success is a multidimensional construct that comprises of both the short-term project management success efficiency and the longer-term achievement of desired results from the project—therefore, both effectiveness and impact. The definition of project success criteria has evolved from a simplistic triple constraint concept, popularly known as the iron triangle (time, scope and cost) to a more comprehensive definition which goes on to encompass many more success criteria [5].

Although recent studies focused on studying the influence of organizational culture on organizational outcomes, organizational effectiveness, and the adoption of technological innovations at the firm level, no research has focused on studying the influence of organizational culture on software project success in offshore IT companies.

The findings of this study will be useful to all IT companies across the globe, as they can use the findings of this study to understand how organizational culture impacts software project success in offshore IT companies. The concept of organizational culture originated from the field of sociology. In the context of organizations, culture is defined as the values, beliefs, and behaviors of an organization's employees [14]. McMurray studied the relationship between organizational culture and organizational climate and affirmed "organizational culture provides the context for the creation of meaning for organizational members" (p. 7).

## 3. Statement of the Problem

The problem to be examined in this study is to investigate how organizational culture affects software project success in offshore IT companies. The empirical evidence in the project success literature is unclear as to how to decide the suitable organizational culture type for software project success in organizations. Project failures and challenged projects influence performance of companies and customer satisfaction [7] [8]. For example, a project that produces

defective security software may leave organizations and its customers that use the software vulnerable and open to a computer virus or security threats. Many IT projects are not finished on time, within budget, and within scope, leading to cost overruns, schedule slippages, and missed business opportunities [16]. Academics and practitioners need more research to understand the influence of organizational culture on software project success in offshore IT companies. Some organizational culture researchers identified that cultural strength as one of the important predictor of organizational efficiency [3].

#### 4. Methodology – Quantitative Study

The nature of this quantitative study involves finding out the influence of organizational culture on software project success in offshore IT companies. Quantitative research studies are inferential, concentrated, and results oriented [2]. A quantitative approach is undertaken because the intention of this study is to explore the relationship between software project success and organizational culture in offshore IT companies.

Software Project Success Questionnaire (SPSQ), which I have developed for this study, will be used for measuring the dependent variable: software project success. The study will explore the phenomena of organizational culture and its impact on software project success in offshore IT companies by gathering perceptions of IT professionals on organizational culture and software project success experiences.

The survey will be hosted on the SurveyMonkey.com website and a link to the survey will be sent to all the respondents. Data analysis will include t tests to determine if there is a significant relationship between organizational culture and software project success in offshore IT companies. Survey participants will be selected from an offshore IT company located in India that has more than five hundred employees who offer IT consulting and services to clients across the globe and execute projects using a variety of technologies in different domains.

#### 5. Results

To determine the associated relationship, Organizational Culture-- **Mission, Involvement, Consistency, and Adaptability** (Independent variables) were determined by administering the researcher prepared survey questionnaire (Five sections including) and IT Software project success (Dependent variable) was measured by administering the Project Success portion of the Questionnaire. The quantitative research question provided the structure and focus for the research. The primary research questions that focus on studying the relationship between organizational culture and software project success in offshore IT companies will guide this study.

Below sections (Table 1 and Table 2) indicate a preview of the results obtained for this study. The results indicate that there is a statistically significant relationship between

software project success and organizational culture in offshore IT companies. Model Summary is shown in Figure 1.

#### Statistical Analysis:

**Table 1: Correlational Analysis**  
 Correlation: Mission Mean, Consistency, Involvement, Adaptability, PS Indicator

	Mission Mean Val	Consistency Mean	Involvement Mean	Adaptability Mea
Consistency Mean	0.041			
Involvement Mean	0.903	0.085		
Adaptability Mea	0.981	0.054	0.903	
PS Indicator Mea	0.985	0.064	0.940	0.965

Cell Contents: Pearson correlation

**Table 2: Regression Analysis**  
 Regression Analysis: PS Indicator versus Mission Mean, Consistency, Involvement, ...

Method						
Continuous predictor standardization						
Subtract the mean, then divide by the standard deviation						
Predictor		Mean	StDev			
Mission Mean Value		66.9803	15.6904			
Consistency Mean Value		60.5824	4.6323			
Involvement Mean Value		68.1004	5.1632			
Adaptability Mean Value		67.9525	15.5066			
Analysis of Variance						
Source	DF	Adj SS	Adj MS	F-Value	P-Value	
Regression	4	28531.2	7132.81	1842.37	0.000	
Mission Mean Value	1	795.8	795.81	205.56	0.000	
Consistency Mean Value	1	4.1	4.07	1.05	0.307	
Involvement Mean Value	1	399.0	399.01	103.06	0.000	
Adaptability Mean Value	1	21.2	21.20	5.48	0.021	

**Figure 1: Model Summary- Project Success (PS) on Organizational Culture Indicators (Mission, Involvement, Consistency, and Adaptability)**

Model Summary					
S	R-sq	R-sq(adj)	R-sq(pred)		
1.96762	98.41%	98.36%	98.27%		
Coded Coefficients					
Term	Coef	SE Coef	T-Value	P-Value	VIF
Constant	61.129	0.177	345.95	0.000	
Mission Mean Value	13.340	0.930	14.34	0.000	27.51
Consistency Mean Value	0.183	0.179	1.03	0.307	1.02
Involvement Mean Value	4.309	0.424	10.15	0.000	5.72
Adaptability Mean Value	-2.164	0.925	-2.34	0.021	27.16
Regression Equation in Uncoded Units					
PS Indicator Mean Value = -45.57 + 0.8502 Mission Mean Value + 0.0396 Consistency Mean Value + 0.8345 Involvement Mean Value - 0.1395 Adaptability Mean Value					

## 6. Conclusion and Summary

The results of this study will contribute knowledge to academic community and practitioners. This study will be beneficial to future research on organization culture, software project success, and project management in IT or offshore companies. Leaders will gain from utilizing a cultural lens such as Mission and Involvement in evaluating how to plan and implement the improvements to business policies, procedures, and practices to improve Project Success. There is minimal literature on the influence of organizational culture on software project success in offshore IT companies. This lack of gap in the literature may signify the importance of this study to the profession of project management and organizational culture factors.

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