

Identification of Risk Factors in Implementation of IT Projects in Pakistan

Hussain Ali and Imran Naseem

Comsats Institute of Information Technology Abbottabad

The objective of this paper is to identify factors such as planning, change in specification, miscommunication, stakeholder, top management, conflicts, project team, complexity of project, culture and leadership that disturb the effectiveness of the IT project implementation Pakistan. The article presents the individual factor's negative impact on the successful completion and implementation of the project. A survey has been conducted to check the reliability of variables percentage and frequency distribution for that purpose regression analysis, correlation and Durbin Watson test which check the long run relation and association among variables. The findings reveal overall positive and significant relationship and impact of these factors for effective software development and other IT project. The study provides new insights into the IT projects, as very limited research has been conducted in Pakistan with respect to identification of factors that significantly influence IT industry.

Key Words: miscommunication, project complexity, conflicts, project implementation

Introduction

This study based on information technology projects implementation in Pakistan; it will describe these factors that could affect negatively IT projects implementation, quantitative analysis of ranking the factors. It is studied that risk management is the integral part of project management; the more unpredictable the project nature the more riskily, most companies put their full resources to reduce risk in projects especially during the implementation (Elkington & Smallman, 2000).

Chaos reported that Standish group discovered that 37% IT projects delivered the proposed benefits while the remaining projects didn't success in managing of time, schedule, budget and user problems. Information technology projects may be software development or installation of hardware outdoor (Aloini, Dulmin, & Mininno, 2012). IT projects are related to telecommunication industry, security industry power industries and other industries where IT projects need to be successfully deployed. Sufficient work done of risk management in IT projects in last three decades. After the bubble burst the prospective of IT filed has changed. The study is useful for IT project managers who are facing the risk factor in IT projects.

Objective

The main objective of this study is to analyze and identify different factor that may affect the IT projects during the implementation and rank these factors on the

bases of a qualitative analysis which will be conducted from IT projects associate people?

Literature Review

Risk can be define is the occurrence of loss or gain, the uncertainty can be measure from the probability of occurrence (Jaafari, 2001).

According to the researcher Project risk management is the process to develop strategy to the project that identify the potential threat to deliverable, source of threat and take effective decisions to make the project successful (Kemerer & Sosa, 1991). Project risk management process to take such step to reduce the risk and assured of self-correctness. The risk management provides choice what the risk management team needs to included and what to be excluded (Kutsch & M Hal, 2008). Effective risk management is evolutionary process consists of risk identification, risk assessment, risk response and risk monitoring & reviewing (Nieto-Morote & Ruz-Vila, 2011). Information technology project implementation is increasingly use for strategic reasons to increase productivity, effectiveness and control in organization.

 This article is distributed under the terms of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use and redistribution provided that the original author and source are credited.

The failure ratio of IT projects is greater as compare to other field projects (Stewart, 2008). It has studied that risk occurs when organization searching for opportunities in the face of uncertainty in the limitation of capability of organization. The difficult task is to find a point for risk where dimensions are set; in combine representation of risk profile that is acceptable for both internal and external stakeholders (Bannerman, 2008). It stated the dimension of risk; it is difficult to understand the software project risk, the risks are interdependent on one another factors, it is not appropriate approach to measure on one dimension of risk but it can be measure through different prospective like theoretical; the impact of risk on project and practical angle. The study supports that software project risks consist of interrelated dimensions and their measurement should not be done with the use of a one-dimensional scale, but, on the contrary, every dimension must be separately, theoretically and practically defined (Barki, Rivard, & Talbot, 1993). Bahrami introduced the effective use of Failure Modes and Effects Analysis (FMEA) for the deployment of projects. During the project implementation IT have a significant role. The tool FMEA is used for the team work to detect the potential uncertainty of the project, prevent the risk and control over these factors (Bahrami, Bazzaz, & Sajjadi, 2012). Most project managers and software developers consider that the risk management is the extra work and expense (Kwak & Stoddard, 2004).

Planning

Most IT project fails due to the common understanding and the relationship between traditional project and IT project (Irani & PED, 2002). A study suggested that project planning is the major factor of risk; if the implementation of project didn't plan properly the success chances will be low the study base on the 180 IT projects managers (Zwikael, Pathak, Singh, & Ahmed, 2014). The professional bodies of knowledge assure that planning is the essential part of every project. (Lipovetsky, Tishler, Dvir, & Shenhar, 1997).

Feng Fan suggests Bayesian belief networks (BBNs) model, the model consist three points; the risk management process should be in iteration form the problem automatically identified and adjust according to the situation, the model is visually so it's easy to detect the root cause of risk and the last point is, model provides estimation of risk & adjust the changes in project (Fan & Yu, 2004). All risk factors identify and their effects quantify, determine probability and harshness search for the alternatives and generate the cost implication for reducing the risk (Dey, 2001). There are tools for project risk management process to encounter the risk factors. The adoption of analysis,

planning, control, or management tools involves a certain investment, which in certain case could be quite significant (Raz & Michael, 1999).

Change in Specification

Boehm identified 10 risk causes for the software project development; personnel shortfalls, unrealistic schedules and resources, creating the wrong functions and characteristics, creating the difficult user interface, adding unnecessary features to software, changing of requirements, shortage in externally equipped components, lack of externally tasks, real time presentation failure, damaging computer science heuristics (Boehm, 1991).

Miscommunication

Huang describe 10 risk causes in information technology projects; the low interest of top management , miscommunication or poor planning of communication with stakeholder, lack of training of users/stakeholders, interest of users, the absence of skills in management staff, lack in the creation channel of product manufacturing, the mismanagement of conflicts among the stakeholders and contradiction, the building of project team, in case of failure, changing or reestablishment of new strategy of business and misperception of user requirements change (MHuang, Chag, HanLi, & Lin, 2004). A study identified three criteria of factors that could affect the software development projects during the implementation; risk related to estimating the time and resources, risk related to project reporting, risk related to external pressure (Jones, 1998).

Stakeholder

It has studied that any risk management approach begins with an initial stage of risk identification purposes to detect and classify potential risk factors. There are many tools and techniques can be used to communication identify to project stakeholder. These tools may be risk list, risk matrix, risk map and RBS (Risk breakdown Structure) (Holzmann & Spiegler, 2011). Ramos conducted a study in Brazilian IT industry, the researcher provides some major factors of IT projects failure; miscommunication among the project stakeholder, misperception of end-user, mismanagement of conflicts and lack of decision making (Ramos & Mota, 2014).

Top Management

C.H Law encounters the internal project risk factor to make the project success as; the supports of top man-

agement, strategic intent and the performance of information technology in an organization. The author closely relates the project success to the enterprise resources planning (ERP) and Business process improvement (BPI). The author provides a research model for the adoption of ERP model in organization which consist on; organizational performance, ERP success, the extent of business process improvement, the interaction between BPI and ERP success and organizational factors (Law & Ngai, 2007).

Conflicts

It has described factors of software development projects that user/stakeholder risk shows the lack of interest during the project implementation and he/she does not want to cooperate to others and not interested in changes, the lack of sincerity to the project, mismanagement of conflict of users/stakeholders and project management team's negative attitude towards project deployment (Hung, Hsu, Su, & Huang, 2014).

Project Team

It has studied that both organizational risk factors and technical risk factors highly influenced the project outcomes. (Bakker, Boonstra, & Wortmann, 2010). Team risk management is a process that associated with more than one entity (Higuera, Gluch, Dorofe, Murphy, & Walker, 1994).

It has been discovered nine categories of risk factor vs quality of product; user risks, requirements risks, complexity risks, planning & control risks, team risks, organizational environment risks, management quality, staff quality, process quality and staff quality (Sarigiannidis & Chatzoglou, 2014). The cost shows the level of effort; the effort level base on individual and organizational. The risk management can learn in discussion in team member, cooperate to each other and report to concern authority on time (Akgün, Lynn, Keskin, & Dogan, 2014).

Complexity of Project

A study revealed that most IT projects fail due to its complexity and categorize the reasons of failure; Simple/Rational System Approaches to Complex Systems, Actors in the Complex System Environment, Non-linear Behavior within a System, Non-ergodicity within a System and Emergence within a System (Whitney & MEM, 2013)

Ward categorized the factors that affect the project as; define the project, focus the project risk analysis management (PRAM) effort, identify the risk, esti-

mate the uncertainty and response, plan the consequences if risk occur and manage response plan and control (Ward, 1999).

Culture

The organizational culture is inside the organization; how the organization play role to mitigate risk. External culture factor can affect the project from outside the organization. The uncertainty factors may be internal or external politics (Lopez & Salmeron, 2014). Liu (2014) categorize the IT project risk factors as; social subsystem risk, organizational environment risk, user risk, team risk, requirement risk, project management risk, planning and control risk and strategic importance (Liu & Wang, 2014).

Leadership

A study suggested ten categories of risk factors that affect IT projects; Project governance, project setup partner engagement, business proprietorship, project management, change management, recognition of red flags, management of risk, benefits of realization (Bannerman, 2008). Risk management is administrative strategy that how much they compromise on such issue. The Enterprise Risk Management (ERM) is use to manage the potential uncertainties that effect the organization outputs/outcomes. The outcomes may be resources and processes of an organization during the project execution.

Response Planning

According to Kwak (2000), risk identification varies from project to project. The adoption and implementation risk management tools & techniques and principle are used in defense departments (Baškarada). Failure mode and effects analysis (FMEA) is a very effective tool to detect the embedded uncertainty of the project/system. It is also used for the examination of risk (Xiao, Huang, Li, He, & Jin, 2011). Kumar provides the list of different issue during the adoption of enterprise risk processes (ERP) in project; project reasons, associated risk, and ERP process. Keshalaf and Hashim introduced model as a tool for the software projects risk management, the model has eight steps; identification, estimate, document, assess, prioritize, monitor, control and statistics (AKeshlaf & Hashim, 2000). Oh, Suh, Hong, & Hwang, (2009) provides a new model for the telecommunication industry in Korea that how a new company adjusts himself in competitive market while the new service will be successful or not. He introduced new model that a telecommunication company visit the market before launching the product. The suggested model consists of three

phases; BSC process, ANP process, decision making for a new service. The lack of ERP experience the Iranian companies have a major factors to toward the projects failure. Lack of experience in risk management, greater the chance of project failure (Hakim & Hakim, 2010).

Hypothesis

H1: Social environment has a negative impact on project implementation.

H2: Project management risk has a negative impact on project implementation.

Methodology

This study is use for the exploratory approach to understand the complexity of different factors of risk. The survey base on different IT companies of Pakistan, to make quantitative analysis questionnaire and interview is use for survey as a tool. The research only be conducted from IT associate people; this simple better knows the circumstances of the project during the project implementation.

The research has two phases 1) interviews from certain IT persons and 2) fill questionnaire. The purpose for the interviews is to give open questions to identify the risk factors that could disturbs the implementation of IT projects, through this tool to refine the factors list of risk, in this way we able to make more valuable questionnaire, the questionnaire is useful to analysis from quantitative point of view and easy to draw conclusion. The questionnaire consist scale on every question as a) Strongly Agree, b) Slightly Agree, c) Neither Agree Nor Disagree d) Slightly Disagree and e) Strongly Disagree.

There are more than 500 large and small IT companies are operational in Pakistan. The target population is IT project team members, includes 30 companies of Abbottabad. Approximately not less than 4 IT persons working in target companies of selected areas of Pakistan. According to MACORR Research Solution the sampling size is 108 for the targeting population.

Sample is selected on the basis of convenience sampling for selecting areas and simple random sampling for selecting IT project managers.

The final/examination data is collect through close-ended questions that are adopted by Ramos and Mota in "Perceptions of success and failure factors in information technology projects: a study from Brazilian companies "as considered base paper. After the collection of information though the questionnaire than it will be analysis by statistical test, the paper aim to identify the risk factors during the implementation

of project and rank these factors and find the impacted factor.

Data Analysis

During the research and observation it is cleared that there are different factors that affect the IT project during the implementation of IT projects in Pakistan. The study identified eleven key factors that can affect the projects. Those factors are including: planning, change in specification, miscommunication, stakeholder , top management, conflicts, project team, complexity of project, culture, and leadership

The figure 1 shows the comparative analysis and different opinions of mentioned factors that affect the project during the implementation phase.

In figure 1, 81.82% of the audience strongly agrees that planning is important for the project. While the planning is consist overall project plan, implementation of the project plan or execution plan of the project and a proper identification of risk and contingency or quick response plan. While in figure 2, 5.45 % respondents are not considered that the lack of planning is a risk for the project. It can be place on 2nd position in the list of risk factors. Change in Specification; when scope of the project continuously changing, it affect the design of the project and the cost of project. 76 % audience strongly agreed that change in requirement of software development and other IT projects has negative impact on project. It is 3rd most effective risk factor in project and the other hand 7.27% IT personnel doesn't consider the requirement changing in running project is a major threat for the IT projects as show in figure 2. Miscommunication; almost 70 % respondent suggested that miscommunication with user(s), among the team member, top management and other stakeholder is compulsory for the successfully completion of the project. In figure 2, the 8 % respondent disagreed that lack in communication among the customer/stakeholder cannot affect the project execution phase. Stakeholder and Top Management; the involvement of stakeholder and interest of top management is 49% and 63 % important respectively according to the respondent. While 8% and 10 % respectively, IT associated people doesn't consider it risk for the project. Conflicts is the most negatively affected factor for IT projects. 90 % audience strongly agreed that inside the project conflict among the team member, top management and other stakeholder is dangerous for the project. In figure 2, 1% audience doesn't consider it risk. The conflict factor in IT project is major problem and threat for the implementation of the project. Project Team and Complexity of Project; The respondent strongly agreed 70% and 51 % for the project team and complexity of the project respectively. Culture is consider a risk factor, the respondent 76%

strongly agreed that culture negatively affect the project during the execution phase; it involves organizational culture how the organization execute the project. The culture may be outside of the organization or environmental obstacle can affect the project negatively. In figure 2, 7% people think that culture can't affect the project negatively. In projects, leadership have important role to lead the project team. The audience 81 % agreed that lack of leadership is a threat for

the project. The leader is to lead the whole project on frontline. All other factors are dependent on risk management. The main purpose to identify and manage these factors is to successfully estimate and draw contingency and mitigation plan for the risk. The figure 1 shows conflict factor have huge impact on the project. The change in requirement and culture during the implementation of project are secondly more important for the risk manager to reduce the risk.

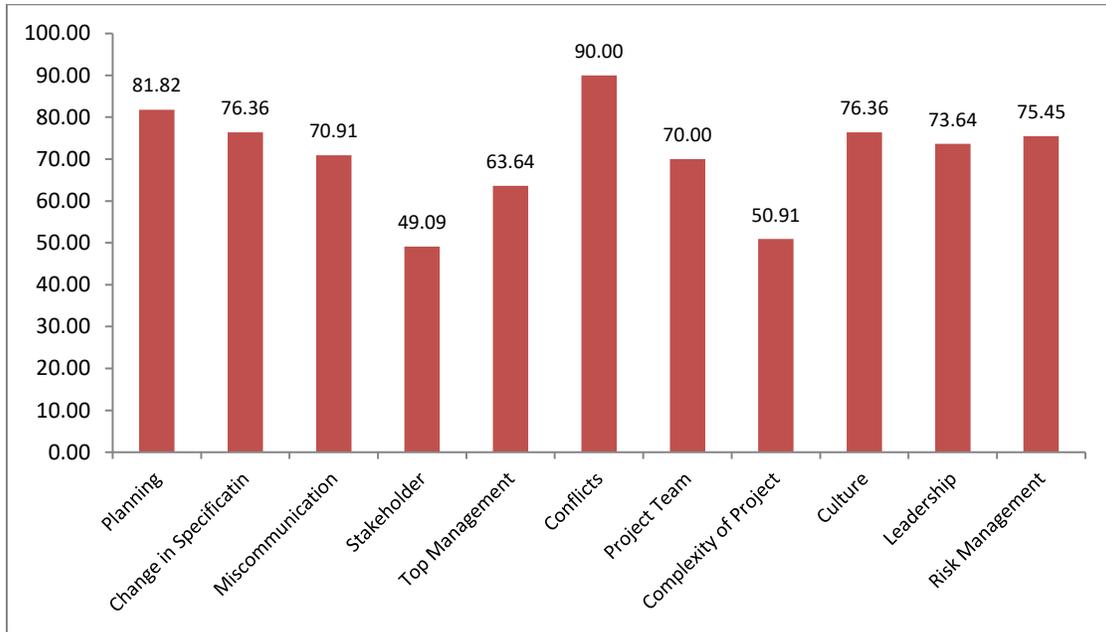


Figure 1: Risk factors of IT projects during the implementation of the project (percentage view).

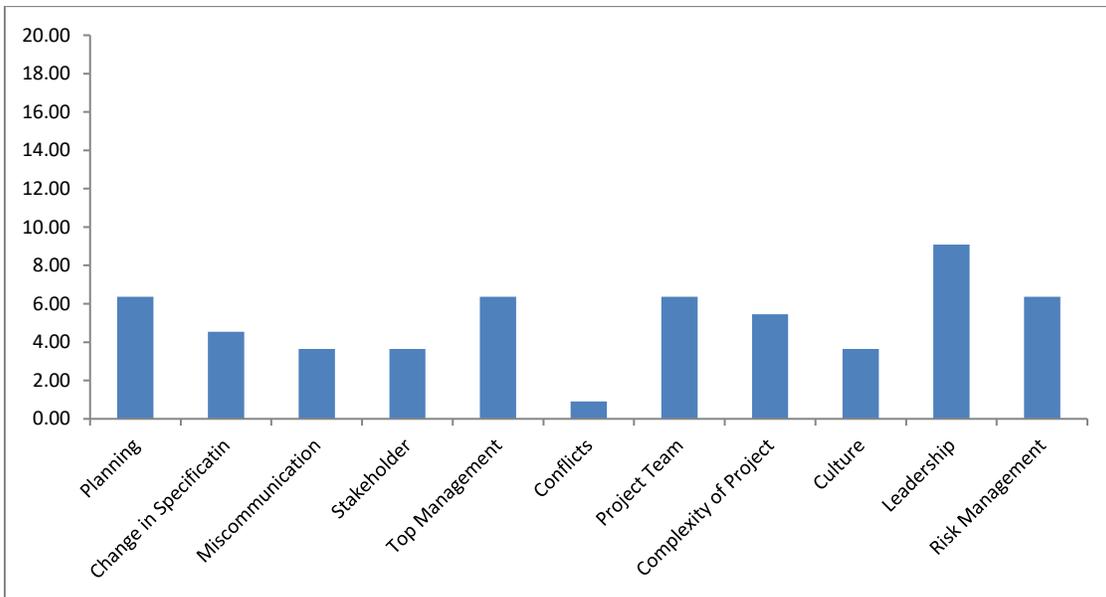


Figure 2: Percentage ratio of risk factor that are not considered threat for project (percentage view).

Table 1. The factors.

	Average Number of 5s	% Frequency of Mention
X1 Planning	90	81.82
X2 Change in Specification	84	76.36
X3 Miscommunication	78	70.91
X4 Stakeholder	54	49.09
X5 Top Management	70	63.64
X6 Conflicts	99	90.00
X7 Project Team	77	70.00
X8 Complexity of Project	56	50.91
X9 Culture	84	76.36
X10 Leadership	81	73.64
Y Risk Management	83	75.45

In Table 2, descriptive statistics to analyze the pattern and distribution of data, in which minimum, maximum, mean and std. deviation is included. While in table 3 here is the analysis for first independent variable (X1) which is planning. R which is coefficient of correlation, shows 100% relationship, means that there is 100% association between independent and dependent variable, planning and risk management. So if

planning is not according to the IT project implementation, there may chance of failure in success of that project implementation. R square is the coefficient of determination, which means that the change in dependent variable is caused by independent variable. Here 100% change is shown caused by planning in risk management. Significance level is 5%.

Table 2. Descriptive statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Y	2	75.45	83.00	79.2250	5.33866
X1	2	81.82	90.00	85.9100	5.78413
X2	2	76.36	84.00	80.1800	5.40230
X3	2	70.91	78.00	74.4550	5.01339
X4	2	49.09	54.00	51.5450	3.47189
X5	2	63.64	70.00	66.8200	4.49720
X6	2	90.00	99.00	94.5000	6.36396
X7	2	70.00	77.00	73.5000	4.94975
X8	2	50.91	56.00	53.4550	3.59917
X9	2	76.36	84.00	80.1800	5.40230
X10	1	81.00	81.00	81.0000	.
Valid N (listwise)	1				

Table 3 Planning (X1)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 ^a	1.000	.	.	.023

a. Predictors: (Constant), X1

b. Dependent Variable: Y

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.068	.000		.	.	-.068	-.068
	X1	.923	.000	1.000	.	.	.923	.923

a. Dependent Variable: Y

The table 4 shows here is the analysis for first independent variable (X2) which is change in specification. R which is coefficient of correlation, shows 100% relationship, means that there is 100% association between independent and dependent variable, change in specification and risk management. So if change in specification would be in such a manner that

is not according to the IT project implementation, there may chance of failure in success of that project implementation. R square is the coefficient of determination, which means that the change in dependent variable is caused by independent variable. Here 100% change is shown caused by change in specification in risk management. Significance level is 5%.

Table 4 Change in Specification X2

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.010	.000		.	.	-.010	-.010
	X2	.988	.000	1.000	.	.	.988	.988

a. Dependent Variable: Y

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 ^a	1.000	.	.	.000

a. Predictors: (Constant), X2

b. Dependent Variable: Y

Table 5 describes the analysis for first independent variable (X3) which is Miscommunication. R which is coefficient of correlation, shows 100% relationship, means that there is 100% association between independent and dependent variable, Miscommunication and risk management. So if Miscommunication occurs

which should be not suitable for the IT project implementation, there may chance of failure in success of that project implementation. R square is the coefficient of determination, which means that the change in dependent variable is caused by independent variable. Here 100% change is shown caused by miscommunication in risk management. Significance level is 5%.

Table 5 Miscommunication X3

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 ^a	1.000	.	.	2.000

a. Predictors: (Constant), X3

b. Dependent Variable: Y

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.061	.000		.	.	-.061	-.061
	X3	1.065	.000	1.000	.	.	1.065	1.065

a. Dependent Variable: Y

Table 6 here is the analysis for first independent variable (X4) which is stakeholder. R which is coefficient of correlation, shows 100% relationship, means that there is 100% association between independent and dependent variable, stakeholder and risk management. so if stakeholders are cooperative and making strategies according to the IT project implementation, there

may chance of success of that project implementation. R square is the coefficient of determination, which means that the change in dependent variable is caused by independent variable. Here 100% change is shown caused by stakeholders in risk management. Significance level is 5%.

Table 6. Stakeholder X4

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 ^a	1.000	.	.	.002

a. Predictors: (Constant), X4

b. Dependent Variable: Y

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.035	.000	.	.	.	-.035	-.035
	X4	1.538	.000	1.000	.	.	1.538	1.538

a. Dependent Variable: Y

Table 7 describes analysis for first independent variable (X5) which is top management. R which is coefficient of correlation, shows 100% relationship, means that there is 100% association between independent and dependent variable, top management and risk management. top management is responsible for IT project implementation for its success and failure, so

top management should take interest in controlling the planning and backups. R square is the coefficient of determination, which means that the change in dependent variable is caused by independent variable. Here 100% change is shown caused by top management in risk management. Significance level is 5%.

Table 7. Top Management X5

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 ^a	1.000	.	.	.017

a. Predictors: (Constant), X5

b. Dependent Variable: Y

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.097	.000	.	.	.	-.097	-.097
	X5	1.187	.000	1.000	.	.	1.187	1.187

a. Dependent Variable: Y

As table 9 gives the analysis for first independent variable (X7) which is project team. R which is coefficient of correlation, shows 100% relationship, means that there is 100% association between independent and dependent variable, project team and risk management. project team is responsible for IT project implementation for its success and failure, so top management should make a best composition of employees in

project team which are potential in achieving the targeted results. R square is the coefficient of determination, which means that the change in dependent variable is caused by independent variable. Here 100% change is shown caused by project team in risk management. Significance level is 5%.

Table 8. Project Team X7

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	1.000 ^a	1.000	.	.			

a. Predictors: (Constant), X7

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.050	.000		.	.	-.050	-.050
	X7	1.079	.000	1.000	.	.	1.079	1.079

a. Dependent Variable: Y

Table 10 shows the analysis for first independent variable (X8) which is complexity of project. R which is coefficient of correlation, shows 100% relationship, means that there is 100% association between independent and dependent variable, complexity of project and risk management so project should be simple

enough to understand. R square is the coefficient of determination, which means that the change in dependent variable is caused by independent variable. Here 100% change is shown caused by complexity of project in risk management. Significance level is 5%.

Table 9 Complexity of the Project X8

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	1.000 ^a	1.000	.	.			

a. Predictors: (Constant), X8

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.065	.000		.	.	-.065	-.065
	X8	1.483	.000	1.000	.	.	1.483	1.483

a. Dependent Variable: Y

Table 11 provides the analysis for first independent variable (X9) which is culture. R which is coefficient of correlation, shows 100% relationship, means that there is 100% association between independent and dependent variable, culture and risk management. Culture may affect the project, because one's culture is different from another one, so it may cause conflicts. R

square is the coefficient of determination, which means that the change in dependent variable is caused by independent variable. Here 100% change is shown caused by conflicts in risk management. Significance level is 5%.

Table 10 Culture X9

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000 ^a	1.000	.	.

a. Predictors: (Constant), X9

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.010	.000	.	.		-.010	-.010
	X9	.988	.000	1.000	.	.	.988	.988

a. Dependent Variable: Y

Table 12 shows the analysis for first independent variable (X10) which is leadership. R which is coefficient of correlation, shows 100% relationship, means that there is 100% association between independent and dependent variable, leadership and risk management. Leadership is responsible for IT project implementation for its success and failure, so leader must have

qualities to lead its team towards common goal. . R square is the coefficient of determination leads his team, which means that the change in dependent variable is caused by independent variable. Here 100% change is shown caused by leadership in risk management. Significance level is 5%.

Table 11 Leadership X10

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000 ^a	1.000	.	.

a. Predictors: (Constant), X10

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.091	.000	.	.		-.091	-.091
	X10	1.026	.000	1.000	.	.	1.026	1.026

a. Dependent Variable: Y

Conclusion

The article presented these factors which can affect the implementation of the IT project and lead it to failure. These factors are; Planning, Change in Specification, Miscommunication, Stakeholder, Top Management, Conflicts, Project Team, Complexity of Project, Culture and Leadership. The most affected factor is conflicts among the all stakeholder. The article also presented the individual factor impact on the successful completion of the project. Efficiently managing the risk increase the successfully completion of the project; within budget, within time and according to the customer specification. Every project organization should have a proper risk management department.

Recommendation

The research has shown some major findings. On the basis of those findings followings are some key recommendations that are given below.

- IT projects organization should bring new and improved mechanisms to minimize the negative impact and minimize the positive impact of these factors.
- The organizations should bring strong communication channels that can enhance knowledge sharing among the employees.
- There must be ethical counseling training in organization to mitigate rise of contradictions among the stakeholders.
- The organizations should have an efficient and effective work plan for the Accomplishments of goals and objectives
- In this field there are also unseen or potential risk factors for that further research required.

References

- AKeshlaf, A., & Hashim, K. (2000). A model and prototype tool to manage software risks. In:., pp. 297–305. Proceedings of First Asia Pacific Conference on Quality Software, (pp. 297-305).
- Akgün, A. E., Lynn, G. S., Keskin, H., & Dogan, D. (2014). Team learning in IT implementation projects: Antecedents and consequences. *International Journal of Information Management*, 37–47.
- Aloini, D., Dulmin, R., & Mininno, V. (2012). Modeling and assessing ERP project risks: a Petri Net approach. *European Journal of Operational Research*, 484-495.
- Bahrami, M., Bazzaz, D. H., & Sajjadi, S. M. (2012). Innovation and Improvements In Project Implementation and . *Procedia - Social and Behavioral Sciences*, 418 – 425 .
- Bakker, K. d., Boonstra, A., & Wortmann, H. (2010). Does risk management contribute to IT project success? A meta-analysis of empirical evidence. *International Journal of Project Management*, 493–503.
- Bannerman, P. L. (2008). Risk and risk management in software projects: A reassessment. *The Journal of Systems and Software*, 2118-2133.
- Bannerman, P. L. (2008). Risk and risk management in software projects: A reassessment. *The Journal of Systems and Software*, 2118–2133.
- Barki, H., Rivard, S., & Talbot, J. (1993). Toward an assessment of software development risk. *Journal of Management Information Systems*, 203-225.
- Başkarada, S., y, T. m., & na, T. m. (n.d.). Technology deployment process model.
- Boehm, & B, W. (1991). Software risk management principles and practices. *IEEE Software*, 32-41.
- Dey, P. K. (2001). Decision support system for risk management: a case study. *Management Decision*, 634-649.
- Elkington, P., & Smallman, C. (2000). Managing project risks: a case study from the utilities sector. *International Journal of Project Management*, 49-57.
- Fan, C.-F., & Yu, Y.-C. (2004). BBN-based software project risk management. *The Journal of Systems and Software*, 193–203.
- Hakim, A., & Hakim, H. (2010). A practical model on controlling the ERP implementation risks. *Information Systems*, 204–214.
- Higuera, R. P., Gluch, D. P., Dorofe, A. J., Murphy, R. L., & Walker, J. A. (1994). An introduction to team risk management. *Software Engineering Institute*.
- Holzmann, V., & Spiegler, I. (2011). Developing risk breakdown structure for information technology. *International Journal of Project Management*, 537–546.
- Hung, Y. W., Hsu, S.-C., Su, Z.-Y., & Huang, H.-H. (2014). Countering user risk in information system development projects. *International Journal of Information Management*, 533–545.
- Irani, Z., & PED, L. (2002). Developing a frame of reference for ex ante IT/IS investment evaluation. *European Journal of Information Systems*, 74–82.
- Jaafari, A. (2001). Management of risks, uncertainties and opportunities on projects: time for a fundamental shift. *International Journal of Project Management*, 89±101.
- Jones, C. (1998). Minimizing the risks of software development. *Cutter IT journal*, 13-21.
- Kemerer, C. F., & Sosa, G. L. (1991). Systems development risks in strategic information systems. *Information and Software Technology*, 212–223.
- Kutsch, E., & M Hal, . (2008). Deliberate ignorance in project risk management. *International Journal of Project Management*, 245–255.
- Kwak, Y. H., & W, I. C. (2000). Calculating project management's return on investment. *Project Management Journal*, 38–47.
- Kwak, Y., & Stoddard, J. (2004). Project risk management: lessons learned from software: lessons learned from software. *Technovation*, 915–920.
- Law, C. C., & Ngai, E. W. (2007). ERP systems adoption: An exploratory study of the. *Information & Management*, 418–432.
- Lipovetsky, S., Tishler, A., Dvir, D., & Shenhar, A. (1997). The relative importance of project success dimensions. *R&D Management*, 97–106.
- Liu, S., & Wang, L. (2014). Understanding the impact of risks on performance in internal and outsourced information technology projects: The role of strategic importance. *International Journal of Project Management*.
- Lopez, C., & Salmeron, J. L. (2014). Dynamic risks modeling in ERP maintenance projects with FCM. *Information Sciences*, 25–45.
- MHuang, S., Chag, I. C., HanLi, S., & Lin, M. T. (2004). Assessing risk in ERP projects: identify and prioritize the factors. *Industrial Management & Data Systems Volume*, 681–88.
- Nieto-Morote, A., & Ruz-Vila, F. (2011). A fuzzy approach to construction project risk assessment. *International journal project management*, 220-231.
- Oh, Y., Suh, E.-h., Hong, J., & Hwang, H. (2009). A feasibility test model for new telecom service development using MCDM method: A case study of video telephone service in Korea. *Expert Systems with Applications*, 6375–6388.
- Ramos, P., & Mota, C. (2014). Perceptions of success and failure factors in information technology projects: a study from Brazilian companies. *Procedia - Social and Behavioral Sciences*, 349 – 357.
- Raz, T., & Michael, E. (1999). Use and benefits of tools for project risk management. *International Journal of Project Management*, 9-17.
- Sarigiannidis, L., & Chatzoglou, D. P. (2014). Quality vs risk: An investigation of their relationship in software development projects. *International Journal of Project Management*, 1073-1082.
- Stewart, R. A. (2008). A framework for the life cycle management of information: Project IT. *International Journal of Project Management*, 203–212.
- V, K., B, M., & U, K. (2002). Enterprise resource systems adopting process: a survey of Canadian organizations. *International Journal of Production Research*, 209-523.
- Ward, S. C. (1999). Assessing and managing important. *International Journal of Project Management*, 331-336.
- Whitney, K. M., & MEM, C. B. (2013). The Root Cause of Failure in Complex IT Projects: Complexity Itself. *Procedia Computer Science*, 325 – 330 .

Xiao, N., Huang, H.-Z., Li, Y., He, L., & Jin, T. (2011). Multiple failure modes analysis and weighted risk priority numberevaluation in FMEA. *Engineering Failure Analysis* , 1162–1170.

Zwikael, O., Pathak, R. D., Singh, G., & Ahmed, S. (2014). The moderating effect of risk on the relationship. *International Journal of Project Management* , 435 – 441.