

WHY INFORMATION TECHNOLOGY PROJECTS FAIL IN PAKISTAN?

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ABSTRACT

The Industry of Information Technology has grown many folds in Pakistan in last few years. With the expansion of IT industry, there are many IT projects that fail and this failure brings huge amount of loss to the organization. Keeping in mind this failure of projects, the researcher wanted to find out the main reasons of these failure. According to the brochure published by Ministry of Science and Information Technology (2016), the Ministry claimed that 4 out of 10 projects fail and it brought huge loss with it. The researcher wanted to find out the reasons of these failure, so he studied the existing literature that describes the reasons of the failure of IT projects. After going through the literature, the researcher listed 21 reasons of the failure of IT projects in Pakistan. Questionnaire was developed and the researcher asked the respondents to rank and score these reasons. Criticality score and criticality index were used to rank the reasons of the failure. After analysis, top 5 reasons of Information Technology projects failures were identified. These reasons are listed in descending order i.e (i) lack of use of right technology (ii) lack of requirements gathering (iii) inability of Project Manager (iv) little testing (v) poor stakeholders handling. This research is only about the identification of reasons of IT projects failure and the researcher did not measure the project failure.

Keywords: *Information Technology, Failure, Reasons, Questionnaire, Criticality Score, Criticality Index.*

1. INTRODUCTION

The industry of Information Technology has grown rapidly in Pakistan in last two decades. According to the Ministry of Science and Technology brochure (2005), IT experts rose about 50% and amounted a total of 48.5 million USD. According to the Global Information Technology report (2014) by the World Economic Forum, Pakistan was ranked 111th among 144 countries. According to article published in Express Tribune (Nov., 2016) Pakistan has over 30 million internet users. The advancement of Pakistan in Information Technology shows that Pakistan has potential to increase its growth in Information Technology sector. According to Tech Juice (30 Dec., 2016), Pakistan has the 4th largest base of freelance Information Technology Professionals and has more than 2000 software houses. Pakistan Software Expert Board (PSEB) under IT and Telecommunication Ministry s,listed the leading IT exporting companies in Pakistan as;

- Netsol Technologies Inc.
- System Limited
- S and P Global Pakistan
- Teradata
- TRG Pakistan
- Medical Transcription Billing Co.
- Ovex Technologies
- I2C Pakistan
- LMKR
- Mentor Graphics

If we look at the report issued by the Ministry of Science and Technology in 2016 about the failure of IT projects in Pakistan, we will realize that these failures are bringing loss to the economy and if these failures are prevented, the IT industry will boom more and the economy of Pakistan will improve manifold.

2. LITERATURE REVIEW

According to [1]; twenty five percent (25%) of IT projects fail at the start and the projects that do not provide ROI are twenty to twenty five percent (20-25%) and the projects that require rework are 50%. According to [2]; "Seven Reasons IT Projects Fail" the reason of IT projects failure are (i) poor project planning and direction (ii) insufficient Communication (iii) ineffective management (iv) poor stakeholders handling (v) unsupportive executive management (vi) inability to adapt and (vii) poor methodology. According to [3]; from network computing.com, IT projects fail when organizations put technology before business need and when these organizations start on the project before fully comprehending the scope of the project. H lays emphasis on requirement gathering and he is against scope creep and gold-plating. According to him, the IT project managers must stop the project when the project goes bad. Faulty calculation of ROI's is one of the biggest reasons of IT projects failures. According to [4]; in his article "Top 10 reasons why systems project fail", IT projects fail mainly because of ten reasons. These reasons are (i) not use of specific methodology (ii) development of the project plan by working backwards from a drop-dead system complete date (iii) careless behavior towards data model (iv) hiring of technical lead who has not done the desired kind of a project before (v) hiring of more people than what is desired and not bothering about testing phase because the project is behind schedule and buying commercial off the shelf package and customize it. According to [5]; in bad leadership, inexperience project managers, culture or ethical misalignment disregarding project warning signs are some of the main causes of IT project failures. According to [6]; consider coordination and strong monitoring of the project makes a project success, if there is no coordination among the team members and if the project manager is unable to monitor the projects, the project is bound to fail. According to [7]; the IT project will fail if the project team fails to schedule and budget the project. PMBOK is a practitioner's guide. It is a field neutral guide and it deals with all kinds of projects. According to PMBOK (Vol. 5) the project of any kind must be carried out according to certain standard PMBOK claims, the project will be a success if certain steps are followed. PMBOK is divided into 10 knowledge areas, 5 process groups, and 47 processes. According to [10]; says that PMBOK is the best practice guide. PMBOK emphasized on developing business case and charter. After developing charter, the project manager must develop a project management plan which should contain all the other plans e.g. scope, schedule, cost stakeholders, quality, procurement, management plans. According to PMBOK (Vol. 5), the project must be initiated, planned, executed, monitored and controlled and closed according to certain standard. Rita Mulcahy (2013) elaborate well on the point of view of PMBOK (Vol. 5). The researcher has given importance to the PMBOK view in listing the reasons of the project failure because it is the best practitioner's guide.

3. WHY THE RESEARCHER IS CARRYING OUT THE RESEARCH

There are many IT projects that fail and millions of rupees are lost in Pakistan. The researcher wanted to find out the reasons of the failure of the projects. The aim of this research is to find out the reasons that cause failure and if these reasons are handled well, IT project can be a success.

4. INFORMATION TECHNOLOGY PROJECT SUCCESS AND FAILURE CRITERIA

The researcher adopted the project success and failure criteria from PMBOK vol. 5. PMBOK volume 5 is a practitioner's guide and it deals with all kinds of projects. According to PMBOK vol. 5, if the project is within scope schedule, cost and if the customers is satisfied with the quality of the product, the project is a success and if the project is not within scope, schedule, cost and if desired quality is not provided the project is a failure.

5. RESEARCH WORK

For this research, some tasks were carried out - these tasks are listed below;

- Success definition by the researcher.
- The researcher penned down the failure reasons of Information Technology projects.
- Development of the questionnaire.
- Collection and analysis of data.

6. METHODOLOGY OF RESEARCH

- Questionnaire was developed by the researcher to find out the reasons of the failure of IT projects in Pakistan.

- The researchers interviewed some desired people personally and send questionnaire to the other desired personnel.
- Assessment of the feedback from the questionnaire was done by the researcher. The researcher developed a questionnaire. The questions were listed under two parts. Part A and B. Part A consisted of (i) work experience (ii) individuals designation and Part B consisted the reasons that were found out by the literature review. 100 people were contacted and given the questionnaire in big cities of Pakistan i.e. Karachi, Lahore, Islamabad and Peshawar. Multi-staged sampling was done for this purpose.
- All of the contacted people were senior executives of their organizations and have been working for more than 15 years. 80 people responded to the questionnaire. The researcher will base his analysis on the response of these 80 senior executives.

7. ANALYSIS

The analysis of the response was done by the researchers. Criticality index for each reason is calculated and criteria assessment table is adopted from the research done by Muhammad Saqib, Rizwan U. Farooqi and Sarosh H. Lodhi.

Table-1: Criticality Assessment Criteria

Mean Factor Score Range	Critically Index	Critically Level
1.0 – 2.5	1	Least significant towards project success
> 2.5 – 5.0	2	Mildly significant towards project success
> 5.0 – 7.5	3	Moderately significant towards project success
> 7.5 – 10.0	4	Most significant towards project success

“The above mentioned criteria was developed by Muhammad Saqib, Rizwan U. Farooqi, Sarosh H. Lodhi.”

Table-2: Reasons of failure of Information Technology projects are listed below that were identified through the rigorous literature review

Reason	Mean	Mode	Criticality Index
Inability of Project Manger	8.625	10	4
Objectives that are not clear	6.625	8	3
Lack of importance to project charter	7.625	9	3
Lack of requirements gathering	8.625	10	4
Project management plan was not developed	6.375	40	3
Activities of the project were not identified	5.625	7	3
Wrong estimation of time and cost	7.625	9	4
Lack of importance to monitoring and controlling	4.625	6	2
Inability to make decision	3.625	5	2
Poor communication	7.625	9	4
Lack of use of right technology	8.875	10	4
Little testing	8.375	9	4
Ineffective management	6.875	8	3
Poor stakeholders handling	8.125	9	4
Non supportive management	7.375	10	3
Inability to adopt	3.625	5	2
Poor methodology	7.375	9	3
Faulty calculation of ROI's	5.875	7	3
Careless attitude towards data model	4.25	5	2
Culture or ethical misalignment	5.125	6	3
Disregard towards project warning signs	2.375	3	1

Table -3: Reasons of Failure of Information Technology Project with Criticality Index 4

Reasons	Criticality Index
Inability of Project Manager	4
Lack of importance to project charter	4
Lack of requirements gathering	4
Wrong estimation of time and cost	4
Poor communication	4
Lack of use of right technology	4
Little testing	4

8. CONCLUSION

Table-4: Top 5 reasons of Information Technology failure in terms of Mean and Criticality Index

Reason	Mean	Criticality Index
Lack of use of right technology	8.875	4
Lack of requirements gathering	8.625	4
Inability of Project Manager	8.625	4
Little testing	8.375	4
Poor Stakeholder handling	8.125	4

9. NOTE

This research is about the Information Technology projects failure reasons identification and not about the measure of the failure of the project. Keeping this in mind, further study should be done to find out the measure of failure.

10. LIMITATION OF THE RESEARCH

This research is about the identification of the reasons of failures of Information Technology projects in Pakistan, so the reasons and criticality index is not applied to information technology projects of other countries. Further, result could have been different, if the reasons identified through literature review are different.

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