Critical failure factors affecting Projects Performance of Multinational Project Teams in Telecom industry

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Abstract: The research on the topic of Projects failures and success was conducted on a generalize approach that covers all types of Projects and factors which are normally discussed in broader-spectrum. The focus of this research study has been on the Telecom Market of Pakistan and goes on to explore the failures taking place in various executed projects. Identification of the failures will ultimately lead to the designing of a model which if adopted can minimize the chances of failures in any project. In the study the emphasis has been both on the local teams working on the project and the ones which are being managed remotely.

1. Introduction

1.1 Architectures

Over the years the development of communications has focused on the wired and wireless networking structures.

<table>
<thead>
<tr>
<th>Networks types</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Line Network</td>
<td>Includes Public Switched Digitial Network (PSTN), Central Network, TV, Digital Satellite Line (DSTV), Integrated Services Digital Network (ISDN), and finally the high speed Optical Fiber Network.</td>
</tr>
<tr>
<td>Wireless Networks</td>
<td>On the wireless side, we have Dig Radio, Mobile Communication, Spread Spectrum, Microwave and Satellite Options. In short, the waves which include the physical waves called the guided medium waves and the unguided medium waves are the ones where the propagation data/video is through the interconnection frequencies.</td>
</tr>
</tbody>
</table>

Fig 1.1 shows a picture of the Teledensity in case of various deployed services.

Table 1.1: Networks types

For the last many years, the Telecom Sector of Pakistan has shown remarkable growth, (wire line & wireless) networks/communications. Fig 1.1 gives a picture of the Teledensity in case of various deployed services.
Federal Board of Revenue (FBR) statistical data is an indication of the contribution of the sector in the overall health of the country’s economy.

Similarly the imports pertaining to the specialized equipment to be deployed in the network infrastructures has seen a sharp increase.

The penetration and the expansion of the mobile market has been phenomenal surpassing any other telecom revolution.
With the introduction of Third Generation (3G) & Fourth Generation (4G) services, the user base has further swelled.

Increasing the number of subscribers further translates into increase in the number of cell sites across the country.

**Fig 1.6**

Table 1.4 lists the number of market operators & Fig 1.7 narrates the market share of each.

Table 1.4

<table>
<thead>
<tr>
<th>Operator Wise Net Addition in Cellular Subscribers</th>
<th>Mobilelink</th>
<th>Ufone</th>
<th>Gm/Pak</th>
<th>Telenor</th>
<th>World</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-09</td>
<td>2,495,574</td>
<td>1,962,747</td>
<td>4,418,613</td>
<td>1,967,041</td>
<td>3,560,675</td>
<td>6,628,774</td>
</tr>
<tr>
<td>2009-10</td>
<td>1,065,706</td>
<td>455,667</td>
<td>1,521,717</td>
<td>2,065,092</td>
<td>655,049</td>
<td>4,877,864</td>
</tr>
<tr>
<td>2010-11</td>
<td>1,275,614</td>
<td>996,697</td>
<td>2,271,615</td>
<td>2,264,968</td>
<td>456,111</td>
<td>6,764,675</td>
</tr>
<tr>
<td>2011-12</td>
<td>2,075,272</td>
<td>3,383,474</td>
<td>5,893,200</td>
<td>2,396,644</td>
<td>887,962</td>
<td>11,256,719</td>
</tr>
<tr>
<td>2012-13</td>
<td>1,966,437</td>
<td>679,707</td>
<td>4,207,356</td>
<td>3,552,100</td>
<td>703,492</td>
<td>6,811,358</td>
</tr>
</tbody>
</table>

**Fig 1.7**

**Fig 1.8**

Fig 1.9 through Fig 1.15 illustrates further market trends relating to different other telecom infrastructures deployed in the country.

**Fig 1.9**

**Fig 1.10**
It will be imperative to also have a glance at the global ICT development trends under various categories of telecom deployments (Fig 1.16).
1.3 Drive for undertaking Research

Indicators of growth as detailed in section 1.2 make us think seriously & pragmatically that it is utmost important to focus on this sector as it involves the execution of many projects initiated by the telecom companies. Furthermore it is extremely important to have a look at the success factors, but more specifically, defining the failure factors which have resulted in the collapse of certain projects. Defining the failure factors under various organizations will lead to identifying some common failure factors which lead to understanding the causes and finally trying to avoid them in future endures. Success factors have been studied in depth however a concentration on the failure factors, especially in case of telecom companies, had been lagging. The research work aims to address this focused dimension.

2. Basis of Research

Here the six parameters are selected after narrating the research problem keeping in view the basics aims of the research work. Methodology on which the research has been based is figured out to reach towards defining a framework for analytical analysis.

2.1 Research Problem

Telecom industry has been lacking in so many ways as to come up with a research model which will address the issue of defining failures which will further lead to carrying out projects with much better success rates. Furthermore, many multinational operators and vendors are doing huge investment in telecom industry and involved in number of projects in using Local and Virtual Teams formations. But there exists uncertainty in determining whether the Projects succeed or failed. Similarly there exists no deterministic mechanism to measure the project success or failure. The project which is considered to be a success by the customer might be considered as failure by the top management

The problem at hand in case of both team formations (local and virtual team’s) is the level of influence of certain common Failure factors that lead the project to be less successful. Two scenarios were researched upon:

(a) Local projects done in Pakistan by Multinational firms
(b) International Projects done by multinational firms through Global Virtual teams.

2.2 Aims and Objectives

The main objectives of the research will be:

(i) To classify the critical failure factors which are common in both scenarios.
(ii) To calculate the influence of the identified factors on Project Teams.
(iii) To design a Model.
(iv) To recommend a solution for avoiding failures in the projects.

2.3 Research Methodology

The study will involve work on both primary and secondary data resources in which questionnaire will be distributed to the related project teams working in multinational organizations. It findings will further be strengthened by conducting few interviews
targeting audience in the field of Telecomm. Secondary data resources will include books, periodicals, published papers in journals and internet. Non-probability sampling design technique will be used in this research which will be followed by 250 samples from locals and virtual team members from Pakistani and international employees of multinational organizations. The collected data will be run through the available tool of statistical package for the social sciences (known widely as SPSS) software to evaluate the results and compare them with initial hypothesis that were built on the theatrical framework.

3. Review of Literature

Research done by various scholars in the identified area is dug into after researching various sources and reading extensively the historical works.

3.1 Background

Although there are many factors that form the basis for project delays or inefficient project execution management but the main emphasis should be on the following factors:

- **Long/Unrealistic scheduling**

Long & unrealistic scheduling is one of the factors for the delays in projects. In order to address that issue, we have a slack analysis which needs to be looked into. According to the established norms, all the activities in any project should be measured using the slack criteria. Generally the constraint in the available resources becomes one of the main reasons for long/ unrealistic scheduling. Handling project feasibility schedules is a herculean task for the people handling the projects. In a cut throat competition with resource constraints, efficient control and scheduling can only be achieved through the use of tools that make decisions based on the concepts of activity slack or the activity criticality index. For this purpose, new approach towards scheduling & parameters (control) needs to be clearly defined. This miscommunication of constrained resources plays prime role in the project’s success or its failure/delay.

- **Lack of use of Tools**

The non-engineered approach of business processes evaluation has led to a proliferation of technically analyzing problems. Absence of tools and the requisite techniques can be identified but that needs herculean effort. A more comprehensive approach of solving the problem includes Methods Tools and Techniques that help in re-engineering the project strategy, people, management, structure and technology dimensions of project management processes (William J. Kettinger, James T.C. Teng and Subashish Guha, 1997) [1]. In short, comprehensive use of tools/techniques forms the basis to improve management practices.

- **Ignoring best practices**

Poor project planning significantly results into projects failures and vice versa (Alan Murphy, Ann Ledwith, 2007) [2]. The responsibility for controlling the projects resides primarily with managers who own the projects and thus achieve quality standards. The most important projects delay/failure factor relates to having unclear
goals/objectives and non-support of the top management. In case of high tech business firms, lack of proper project management tools & techniques forms the ground for avoiding the best practices terminology. Project managers must cherish and consider their previous insights as a defining tool in introducing efficient managerial procedures & figuring out its long term future success. Lack of use of best practices should not only be concentrated within large firms but it must be practiced at each and every segment/department of the business enterprise.

- **Cultural & Ethical Misalignment**

Cultural issues mainly arise due to the underestimation in interpretation, communications, emotion and trust among the local and virtual teams or our concerned problem area. So to rectify these issues we need to use methods of participatory action, experimental research, and an analysis based on dialogue and reasoning between the teams of different cultural backgrounds (Hong Xiao, David Boyd, 2010) [3]. There is a need to apply personal construct theory by arranging cross-cultural dialogue among the team members for convenient resolution of the problem areas. Cultural differences are strongly considered/perceived by local managers with the introduction of many multinational companies coming in. Pakistani culture is dominated by a high degree of uncertainty, instability and volatility thus forming a very strong implication for foreigners to operate here. This results in the formation of virtual teams. Multicultural & ethical issues in an organization arise due to differing working habits, religious values, cultural backgrounds and performance orientation/assertiveness.

- **Trust Deficit in Virtual/Local Teams**

Trust relates to strategy formulation and provides a hierarchy model for an individual and the industry. The findings help to explain trust relations with three issues: a group perspective of value-based trust; the perception of trust by clients and contractors as in the construction industry; and the hierarchy of a trust model based on the moral, social and work dimensions of trust. Thus the value of clients and servers in any industry affects the overall project performance (Ellen Lau, Steve Rowlinson, 2010) [4]. Identification of the behavioral outcomes, areas with deficiencies and managing conflicts are some of the specific areas which need to be looked into by the researchers.

- **Lack of Motivation (Virtual & Local Teams)**

Even though there is difference between project management and traditional management, but, the same motivation theories are employed to motivate employees working on projects. Nowadays, effective use of motivation has a significant impact on the dedication and performance of employees and, the overall success of a company. There is a need to have a look at various important motivation theories and work towards their application to the management of the employees/project management teams. Important motivational theories were presented by Maslows, Herzbergs and McGregors theory X and theory Y. After applying these theories
in our organizations, managers should analyze the situation and make their decision about which motivation theory to be applied under given circumstances (FangMin Yang, 2009) [5].

- **Documentation Management**

In a project life cycle, a project manager must produce different types of documents to facilitate the planning, tracking and reporting of the project. These documents range from the feasibility studies, resource plans, financial reviews and project plans, supplier contracts, post-installation reports, inventory change request forms and project status reports (Neil Stolovitsky, 2010) [6]. It’s a fact that the manner in which project documents are managed by project leaders can either be the driving force behind a project’s success or it may place a project in despair resulting in its failure to meet its concerned time line, budgets and scope. The way in which the project documentation is managed determines a project manager’s effectiveness in responding to the unexpected situations/workflow. The project document is a self-contained record comprising of initiating, planning, executing and closing phases of a project. The format/manner of project’s documentation makes an organization more dynamic and innovative.

- **Role of Communication in Virtual Teams**

Creating and maintaining trust in a global virtual team whose members transcend time, space, and culture is a tough challenge. The main focus areas include computer based communication, organization’s trust level. A global virtual team member are separated by location and culture and are challenged by a common collaborative project, and for them the only economically and practically viable communication medium is computer-based communication. Pragmatically, the study describes communication behaviors that might facilitate trust in global virtual teams (Sirkka L. Jarvenpaa, Dorothy E. Leidner, 1999) [7].

Effective communication strategy is the best available remedy that can form the binding link between the members of local/virtual teams in a multinational environment. Global virtual team is defined as a temporary, culturally diverse, geographically dispersed and electronically communicating work group, thus the term temporary elaborates teams whose members may have never worked together before and who may not expect to work together again as a group therefore being anonymous to each other does create communication deficiency and the resulting consequences.

### 3.2 Framework in the light of Literature Review

By carrying out the study and testing of hypothesis on the variables in the above defined scenario, it will be very useful for the Project organizations where different foreign nationals work in a project either at the same physical location and in Virtual team formation, to establish certain defining factors. In this study, the following six factors will be studied and analyzed:
(a) Lack of Communication
(b) Lack of trust, motivation and rewards
(c) Long and unrealistic scheduling of the Project timelines
(d) Lack of use of tools and best practices
(e) Cultural and ethical misalignment among teams
(f) Lack of Documentation, Progress tracking and reporting

4. Analysis of collected Data

The section relates to the questionnaire development, its circulation and the interpretation of the collected data.

4.1 Developed Questionaire

Questionnaire was floated among the project management teams in the telecom sector (operators & vendors). The respondents must be involved in number of projects in using local and virtual team formations. It should involve Local projects done in Pakistan by Multinational firms & International Projects done by multinational firms through Global Virtual teams.

Questionnaire was distributed among the personnel involved in the projects (local and virtual team formations) to ascertain the effects of lack of Communication, lack of trust, motivation and rewards, long and unrealistic scheduling of the Project timelines, lack of use of tools and best practices, cultural and ethical misalignment among teams and finally the lack of documentation, progress tracking and reporting. Following were the respondent’s categories:

(1) Project Directors
(2) Project Managers
(3) Regional Project Managers
(4) Project Team Members/coordinators

Question under every relevant category will be marked from 1-5 on the likert scale.

Thirty Seven (37) questionnaires’ came under the following categories:

- Lack of Communication
- Lack of trust, motivation and rewards
- Long and unrealistic scheduling of the Project timelines
- Lack of use of tools and best practices
- Cultural and ethical misalignment among teams
- Lack of Documentation, Progress tracking and reporting
Table 4.1: Questionnaire

<table>
<thead>
<tr>
<th>Questions</th>
<th>Scale</th>
<th>Description</th>
<th>Weightage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Dissatisfied</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Dissatisfied</td>
<td>2.50</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Neither agree nor disagree (Neutral)</td>
<td>3.75</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Agree</td>
<td>4.50</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Strongly Agree</td>
<td>5.0</td>
<td></td>
</tr>
</tbody>
</table>

Following format is used:

Table 4.2: 5 Point Likert Scale

SPSS was used and accordingly reliability test was carried out. Cronbach’s α value came out to be 0.782 showing high reliability of data.

4.2 Sample Size

Total Number of Questionnaire’s = 250
Invalid = None

Following is the distribution list:

<table>
<thead>
<tr>
<th>Telecom Industry/Vendors</th>
<th>Frequency</th>
<th>Project Directors</th>
<th>Project Managers</th>
<th>Regional Project Managers</th>
<th>Project Team Members/Coordinators</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTCL</td>
<td>40</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>WorldTeck</td>
<td>30</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Telenor</td>
<td>30</td>
<td>4</td>
<td>7</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>MobiKwik</td>
<td>30</td>
<td>3</td>
<td>6</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Vendors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Huawei</td>
<td>30</td>
<td>3</td>
<td>8</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Zte</td>
<td>30</td>
<td>2</td>
<td>6</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Ericsson</td>
<td>30</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Nira</td>
<td>30</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.3: Composition of Sample

4.3 Collected Data Analysis

Analytics were carried out/applied on the collected data. The compiled outcome is detailed below in the tabular form.
Ten percent (10%) of the questionnaires were discussed in person in the form of structured interview and filled accordingly. Analysis of the following parameters was done:

(a) Lack of Communication

(b) Lack of trust, motivation and rewards

(c) Long and unrealistic scheduling of the Project timelines

(d) Lack of use of tools and best practices

(e) Cultural and ethical misalignment among teams

(f) Lack of Documentation, Progress tracking and reporting

Table 4.4: Questionnaire responses
(Note: 5 Point Likert Scale, 250 respondents)

Looking at the statistics, it is noted that 83% of the respondents agree to the fact that lack of communication plays an important part in the failure of the projects. The disagreement is nominal at 2% & 9% while 7% are not sure about its effect.

(b) Lack of trust, motivation and rewards

Here we see a slight shift with 47% and 27% people agree to the trust, motivation and the rewards factor. It should be noted that around
14% of the people seem to think that there is something bigger pertaining to trust, motivation and reward which might be loyalty.

(c) Long and unrealistic scheduling of the Project timelines

Figure 4.3

Around 73% people tend to agree with the fact that long and unrealistic scheduling of the project is a major cause of projects being not successful.

(d) Lack of use of tools and best practices

Figure 4.4

Around 30% here are not attaching too much emphasis on the lack of tools, however this is also a depiction of the mindset to adopt to new systems/tools.

(e) Cultural and ethical misalignment among teams

Figure 4.5

Here we have 37% in strong agreement, 36% in agreement with 13% falling in the list of being neutral. The remaining 8% and 7% fall under dissatisfaction levels.

(f) Lack of Documentation, Progress tracking and reporting

Figure 4.6

72% of the respondents here believe in the fact that lack of documentation and progress tracking is an important element in the failure of the projects.
It is also pertinent to have an overall response picture of the respondents by looking at the integrated repose to all the six factors. Here 74% of the respondents believe that these six identified failure factors are the main cause of project failures. 6% strong disagreement and 9% disagreement adds to around 15%, which is not that significant looking at the overall percentages context.

5. Conclusions/Recommendations & Developed Model

Conclusions are drawn, a sustainable model is developed and future recommendations are made.

5.1 Conclusion

Based on the data analysis, following are the outcomes:

- In any organization, lack of communication between different components/sections is a key to success of the company. Our results have clearly shown that in terms of failure of different projects because of lapse in the communication of vital information across the company. As a starting point there is a need to define processes and standard operating procedures thus ensuring that the penned down procedures relating to communication channels are followed. Once these guidelines are in place, the chances of failures are substantially reduced. Communication is not restricted to the deployment of electronic and computer architectures but it also relates to the human bonds and as to how the office staff interacts with each other in an effective manner and in alignment with company procedures and direction.

- Lack of trust, motivation and rewards are the crucial factors which can lead to the failure of projects. These relates to the human psychological aspects too. For any project to succeed, the employees or the people working at a particular project have to show extreme trust by following the team leader. Once this trust is established, a sense of motivation is instigated. However looking at the human nature, it should also be followed by certain rewards mechanisms. Monetary relief is not the only reward the employees are only looking for. At times an appreciation in front of the colleagues and co-workers is enough to boast the morale and motivation. Frequent non-monetary and once a year monetary rewards based on the performance appraisals is a must. The project teams which head towards disasters owe it to this lack of trust, motivation and lack of rewards mechanisms. The result of this is an obvious failure.
More often the project managers tend to give unrealistic timelines which in fact causes more stress and less productivity. By doing this some managers tend to forget the compromise on the quality. Once a job is done imperfectly, it has long term consequences as we have initiated a fault/failure which will continue forever. Managing timelines requires evaluating each and every step of execution. A breakdown approach is adopted whereas any work is further subdivided into small fragments and time line for each that segment is defined keeping in view the realistic targets. This finally gives a cushion to the overall project timelines to be met. However there has to be a balance and equilibrium so that the timelines should not stretch too much. The failure to adhere to these practices can lead to the delayed and fractured projects.

Times have changed. The technology has now provided humans with lots of easily usable tools which makes life very easy for the project managers. Think of projects where hundreds of small items are to be managed. The task becomes impossible for human mind to simply remember so many things at hand. Tools provide an easy mechanism to handle multiple tasks through multitasking. The use of tools also helps in decision making by analyzing the available data. The organizations which do not invest in sourcing appropriate/relevant tools to aid its staff simply fall out of the business. Lack of use of tools leads to service degradations and project mismanagements. This failure point needs to be addressed.

With so many people working in the setup plus the virtual teams involved in the project, the issue of cultural and ethical misalignment is obvious. Humans are not predictable machines nor are they a puzzle which can be solved by placing in order various pieces. When dealing with humans in the project human chains, there comes cultural diversity which can be positive plus also fatal. Ethical conduct during the project by all the stakeholders is a must to achieve success. Failure or ignoring the issues can lead to total disaster. The issues gets more serious when the virtual teams are also involved who are working thousands of miles away in totally different cultural, moral and ethical surroundings. A harmony among all is essential to avoid project failures.

Whatever happens in an instant becomes past the very next moment. Creating a history of events is what life is all about. The same goes for the adoption of documentation and document control procedures. The relevant documents need to be available with the staff all the time. In order to take certain decisions, it becomes important to refer to have a
look at previous decisions taken in similar circumstances. If any organization wants to excel, keeping a solid documentary record in both electronic and hardcopy form is a must. These documents should list all the processes, schedules, standard operating procedures, instructions etc. Project managers should also look into the documentation controls. Not every document needs to be floated among all the team members. Every level of document control has to be defined in order to address some security protocols. Failure of proper documents certainly is a contributing factor towards the projects health and sustainability.

5.2 Designed/Developed Model

Based on the extensive research analysis, a viable and sustainable model developed, which when deployed/used will ensure taking care of the failure aspects of the projects by minimizing their effects on the overall health of the projects.

The designed model describes the consequence of the identified six failure attributes. The five failures of “Lack of trust, motivation and rewards”, “Long and unrealistic scheduling of the Project timelines”, “Lack of use of tools and best practices”, “Cultural and ethical misalignment among teams” & “Lack of Documentation, Progress tracking and reporting” leads to the “Communication Deficiencies”. As the consequence of this Communication Deficiency breakdown, the local projects done in Pakistan by multinational firms and the international projects done by multinational firms through global virtual teams are severely affected. The resultant being obvious, the overall project failure becomes inevitable. To avoid the failures in the project, these essential factors need to be taken care of right from the start.

This research study has been restricted to the Telecomm area; however, the same approach can be used to investigate the causes of failures in any organization involved in any other area. However this model can also be used as a general model which can then be tailored to specific organizations as the failure factors identified in this research are more or less common to many organizations.

References


