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Factors Affecting Success of IT Projects in Northern Cyprus

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Abstract
This research would try to give an overview of the IT projects in Northern Cyprus. The study covers IT project management aspect based on a survey from main cities in Northern Cyprus. In addition to the survey, authors managed an IT project during the research period to add self-experiences to this research. As discussion, this paper combines understanding of the relevant theory and literature review of IT project management with the results of the survey. This research aims to investigate IT difficulties in Northern Cyprus and share these issues with recommendations with investors, IT project managers, students and government. It can decline failure of IT projects by bolding important implications and historical data of previous projects, not only in Northern Cyprus but worldwide.

Keywords: Information Technology (IT), North Cyprus, IT project, IT project management;

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1. Introduction

Northern Cyprus is facing international issues since 1983, thus, it remained untouched by international investors. Total area of Northern Cyprus is about 3,355 square kilometres and has a population of approximately 300,000 people (Cansel, 2006). A small island, with current international and political circumstances, cannot be expected to have plenty of defined or finished IT projects. Investigating IT projects that have been managed and implemented in recent years is necessary to increase quantity and quality of IT projects. Combination of managerial observations and result of survey can provide a clear statistical overview of IT projects in Northern Cyprus. Analysis of statistics would clarify failure factors, and list main success factors. This information and results can be uploaded to web as an online application which is available for IT students, IT project managers and stockholders as guidance. Results of this study could also be benchmarked for similar countries.

2. Statistics and Observations

In this research two tools were used for data collection: interview and questioner forms. Author also managed an IT project to document real observation and combine them with collected data. This part delivers general statistics of IT projects in Northern Cyprus.

2.1. Survey

A few number of IT projects were addressed even in main cities, so running a survey was difficult. Questioner forms had been prepared and distributed in 3 major cities, including Nicosia, Kyrenia and Famagusta. 78 questioners had been filled by 28 IT project managers, 15 IT project owners, 16 IT project staff and 19 students. Result of this survey unexpectedly showed that 50% of studied IT projects had been finished successfully within last 10 years. More than 66% of projects were belonged to private companies and only 7 project owned by government could be surveyed. Figure 1 shows studied projects separated by category.

2.1.1. Failed projects

None of the failed projects had a budget more than 100,000 $ where defined budget for more than 63% of failed project were less than 1000$ (2 projects had classified budget). In addition to budget, number of staff in each project proves that most of studied failed projects are not large scale and costly projects. More than half of these projects didn't have an IT project manager and even those with IT project manager were facing lack of IT project management experience.

2.1.2. Successful projects

Results show that only 2 successful projects had a budget more than 100,000$ while more than half of these projects cost less than 10,000$ (2 projects had classified budget). Only 5 Projects had more than 20 staff and 77% of successful projects had been managed by an IT project manager. It is interesting that 7 projects could finish successfully without an IT manager.

2.1.3. Unfinished projects

Unfinished projects also mostly would cost less than 1000$ but good news is that almost all of them (will) have an IT project manager. Most of these projects are in operation stage and 2 projects had been delayed due to financial issues. Statistic shows that pending projects pay more attention to training and have clearly defined objectives.

2.2. Interviews

10 IT project manager had been interviewed for qualitative aspect of this research. Interviews were focused on managerial aspect of IT projects clarifying common issues and factors that should be considered. Almost every IT project manager complained about availability of two resources in IT field: Human resources and technical resources. General result and achievements of interviews had been used to analysis quantitative result of research and generate a complete report of threats and opportunities of IT projects in Northern Cyprus. Table 1 shows top 4 threats and opportunities reported by interviewee.

Table 1. Threats and opportunities reported by interviewee

	Threats	Opportunities
1	Lack of IT staff skills and knowledge	Weak IT services need to improve
2	Cultural Differences	Large Number of Undefined IT Projects
3	International Boundaries	High Salary of IT Specialist
4	Large Number of International Competitors	Few Number of Domestic Competitors

2.3. Observations

As mentioned in section 2, this research includes observations of a true experienced IT project by author. All the processes and steps in this project had been documented and all the unusual observations are described in Table 2.

Table 2. Documented observations in IT Project Management with XP Model

Stage	Positive Observations	Negative Observations
Initiate	1. Ease of communication 2. Employer defined objective clearly 3. Employer accept to pay a deposit	1. Employer refused to sign a contract 2. Lack of employer knowledge about desired technology
Plan	1. Availability of information	1. Objectives and requirements changes 2. Unavailability of qualified staff
Execute	1. Good documentation 2. User involvement in processes	1. Requirement changes continued 2. Unavailability of resources 3. Lack of technical knowledge
Close	1. High user satisfaction 2. Project finished as planned	1. Payment was less than agreed amount due there was no official contract

3. Main Failure Reasons

Considering this research, common failure factors reported in Northern Cyprus are shown in Table 3. All the factors are graded with from both qualitative and quantitative aspects from 0 to 10. Qualitative grade shows importance (10 for the most important) and quantitative grade is about frequency (10 for the most frequent).

Studying each factor separately can generate useful “list of don’t” that should be considered when dealing with IT projects in this country. This study examines 5 most common failure causes.

Table 3. Ranking of common failure factors

	Factor	Qualitative Grade	Quantitative Grade	Total Grade
1	Poor Planning	9	9	18
2	Lack of Project Management Experience	8	9	17
3	No idea about Staff Technical Skills	8	9	17
4	No Risk Management	8	9	17
5	Role and Responsibility Confusion	7	9	16
6	Lack of Top Management Support	6	8	14
7	Requirements Change	9	5	14
8	Unavailability of Project Resources	5	8	13
9	Financial Issues	8	5	13
10	Undefined Project Success Criteria	2	10	12

3.1. Poor planning

Almost all of the failed projects in the study had planning issues. Statistic shows that most of the participants in the survey claimed that project had not been planned appropriately. On the other hand, interviewees named planning the most complex stage of project management in Northern Cyprus.

Hasting in development or trying to make top managers joyful, project managers shorten the planning process (Nelson, 2007). All of the studied projects with planning issues didn't finish on schedule and within defined budget. Nannette P. Napier mentioned in her research (2009) that "The planning and control skill category involves planning, monitoring and controlling project tasks to ensure that the project is completed on time and within the budget".

3.2. Lack of project management experience

40% of studied failed projects had IT project manager and only 1 project had a project manager with more than 2 years' experience. Additionally, interviews show that IT projects in Northern Cyprus don't pay attention to IT project management as much as they do to financial circumstances of the project. Some of the top managers claimed that there is no experienced IT manager in this country, but this research rejects this theory. This excuse could decrease the project's budget but statistic shows that an IT project without experience IT project manager is more likely to fail.

3.3. No idea about staff technical skills

Most of the top managers and IT project managers complained about lack of technical human resources in Northern Cyprus. Interesting result of the survey shows that more than half of failed projects didn't have any idea about technical skills of the staff and the other half didn't have qualified staff. An important weakness of IT projects in this study is low consideration of trainings. If some skills are required starting a project, thus project manager needs to make sure that staffs acquire these skills before kick-off (Kappelman, 2006).

3.4. Role and responsibility confusion

Observations show that most of the staff members of failed projects didn't have specified duties and responsibility. A web developer claimed that, he spent his time mostly for data entry which doesn't need any technical skills. Some other developers had no idea about their job description.

Nelson (2007) said that insufficient planning would cause role and responsibility confusion. Thus, paying more attention to planning would avoid these kinds of difficulties and consequences.

3.5. No risk management

Almost all of the failed projects didn't have any kind of risk management. Only 3 companies claimed that they consider risk management but observation proves that none of the projects in Northern Cyprus (even successful project) have a systematic or serious risk management.

4. Main Success Factors

After analyzing failure factors, there is also a "list of Dos" that should be generated and considered in order to have a successful project. Identifying and eliminating failure factors can be a success factor itself. However, many other success factors had been claimed in survey and interviews. A sorted list of reported success factors can be seen in Table 4.1.

In small scale IT projects, consideration or ignorance of even one success factor can lead the project to success or failure. Here is investigation of top 5 success factors.

Table 4 Ranking of common success factors

	Factor	Qualitative Grade	Quantitative Grade	Total Grade
1	IT PM with More Than 2 Years of Experience	10	10	20
2	Clearly Defined Objectives	10	9	19
3	Good Planning	10	9	19
4	Financial Support	9	9	18
5	Defined Roles and Responsibilities	8	9	17
6	Project Manager's skill and knowledge	7	9	16
7	Risk Management	10	5	15
8	Top Management support	6	9	15
9	Experienced Team Members	8	7	15
10	User Cooperation	8	4	12

4.1. Experience IT project manager

Considering successful projects, statistic shows that most of the IT project managers had more than 2 years of experience.

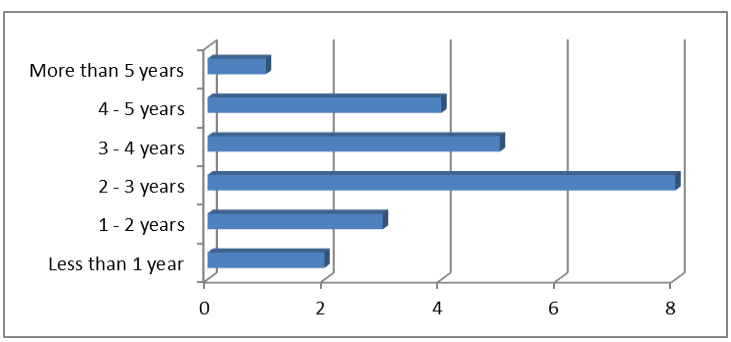

Fig 2. IT project management experience (successful projects)

4.2. Clearly defined objectives

Research shows that as unclear objectives can be a failure reason, clear objectives is a success factor of most of the projects. Statistic shows that only one successful project is reported without clearly defined objective.

Those successful projects with clear objectives had been operated with minimum change in the defined objectives, which is totally different for failed projects statically.

4.3. Good planning

Overall view of successful projects demonstrates that these projects were well planned. Kappelman (2006) connects planning with project manager experience and skills in his research. Project should be estimated completely by defining all the steps and priorities following by then estimation of required time for these steps.

4.4. Financial support

Financial support and in other word top management support is essential for a project in order to finish successfully. Most of the studied projects that had been finished successfully had been supported financially in every stage, and those project managers that had experienced failure before, mentioned this support as a success factor.

4.5. Defined roles and responsibilities

Despite of failed projects, in successful projects roles and responsibility were clearly defined. Project staff in successful projects reported this factor as main factor of project success.

5. Discussion and Conclusion

As a conclusion, this study prove that Northern Cyprus is facing lack of IT skills and experience, thus there are a few finished and managed IT projects by domestic managers. This study shows that success factors and failure factors of IT projects are exactly reverse; therefore by considering these factors, probability of failure can be decreased to minimum value. Surely, this consideration would not be enough while there are several other factors affecting success of an IT project but it can be the best practice to have a successful IT projects in Northern Cyprus.

6. Future Studies

As a continuous study, investigation of each failure or success factor individually could help elimination of failure factors and strengthen success factors of IT project in Northern Cyprus. On the other hand true experiments or simulations of IT projects considering this research can add more values and results to this study.

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