

CHIEF INFORMATION OFFICERS’ PERCEPTIONS OF IT PROJECT SUCCESS FACTORS IN SAUDI ARABIAN PUBLIC ORGANIZATIONS: AN EXPLORATORY STUDY

Abdulaziz I. AlMajed. *School of Computing Sciences, University of East Anglia, Norwich NR4 7TJ, UK.*

Pam Mayhew. *School of Computing Sciences, University of East Anglia, Norwich NR4 7TJ, UK.*

ABSTRACT

IT project failure rates remain high despite the enormous amounts of money that have been invested in IT. Many researchers have studied this critical subject in order to identify IT project success factors, however, it is a challenge to get universal agreement on which factors are the key. This paper presents an exploratory study of the main factors that affect IT project success in Saudi Arabian public organizations from chief information officers’ (CIOs) perspective. A qualitative approach using semi-structured interview method was used to collect and analyze the data. Interviews were conducted with CIOs to gather their opinions about the IT project success factors. The findings of the study proposed seventeen factors that may have effect on IT project success. Conflict of interest, knowledge management, rewards and recognition, top management stability and project management office (PMO) have been collected from the interviewees. Top management support and commitment, strategic planning, project management, process management, project team competency, IT infrastructure, change management, risk management, communication management, training and education, supplier management, stakeholder management have been collected from the literature and confirmed by the interviewees.

KEYWORDS

IT; project; success; CIO; Public; Saudi

1. INTRODUCTION

Information technology (IT) has become a crucial part of any organization to run effectively and efficiently. In fact, IT has been considered to be the fastest growing industry in developed countries (Hartman and Ashrafi, 2002). With the expectation to make a significant contribution to the organization's efficiency, effectiveness, and competitive positioning, there are many indications that organizations are spending enormous amounts of money investing in IT. It has been estimated that large organizations are spending up to 50% of their total capital expenditure on IT (Renemka, 2000). Another vital point, the culture and structure of any organization have been impacted by the implementation of IT projects (Doherty, 2003). Therefore, the need for successful project managers is important with the growth number of IT projects (Brewer, 2005). In order to enable organizations to stay competitive, attention to the issues related to successful projects has been tracked by academics and practitioners.

However, many studies have found that IT project failures are very common, and the rates stay high in spite of the vast investments in IT. Standish chaos summary report provides a view of project statistics mainly in developed countries (US and Europe). This report found that 32% were considered successful (delivered on time, on budget, with required features and functions) and 24% were considered total failures and abandoned. The remaining 44% were considered partially fail or challenged with time and/or cost overruns and/or other problems (Standish-Group, 2009). Table 1 tracks the progress of Standish Group for project status (1994-2008).

Table 1. Project resolution results from CHAOS research for the years 1994–12008

Project Status	Year							
	1994	1996	1998	2000	2002	2004	2006	2008
Succeeded	16%	27%	26%	28%	34%	29%	35%	32%
Failed	31%	40%	28%	23%	15%	18%	19%	24%
Challenged	53%	33%	46%	49%	51%	53%	46%	44%

Unfortunately in high income developing countries such as Saudi Arabia, there are no statistics reports about the IT project success or failure rates. However, there is only one study has been done by Alfaadel et al. (2012) that showed the failure rate of IT project is approximately 52%. In reality, IT project failures financial impact is huge. About 150 billion US dollars are misused every year on IT projects failures in US and a comparable amount is stated in the European Union (Gauld, 2007). American Airlines Corporation AMR Information Services (AMRIS), and London Ambulance System, the Wessex Health Service RISP (Regional Information Systems Plan, London Stock Exchange's Transfer and Automated Registration of Uncertified Stock (TAURUS) system, FoxMeyer Drug Co., Mandata Human Resource System and the Californian State Automated Child System (SACSS) are examples of high profile IT project failures reported in the literature (Sauer, 1993; Beynon-Davies, 1995; Remenyi, 2012).

Even though there is an intensifying theoretical and empirical studies on IT project failures, most of these studies are derived from the private sector. In fact, the failure rate of IT projects is worse in the public sector reaching around 84% (Gauld, 2007). Therefore, the aim of this research is to identify the factors that may affect the success of IT project in Saudi Arabian public organizations from CIO's perspective. The paper is organized as follow: section 2 presents a literature review, and section 3 describes the research methodology. Section 4 presents data analysis and findings, and section 5 shows the research conceptual framework. The last section provides the conclusion and further research.

2. LITERATURE REVIEW

Several research studies have been done in the area of project management to identify the critical success factors (CSFs) that effect the success and/or failure of projects over the years (Pinto and Mantel Jr, 1990; Belassi and Tukel, 1996; Tukel and Rom, 2001; White and Fortune, 2002). However, these studies are not focused on IT industry projects only. In fact, IT projects are different from other types of projects because they have distinctive characteristics such as high complexity and high chances of project failure (Rodriguez-Repiso et al., 2007). It has been agreed amongst some researchers that different industry types have differences in project management (Cooke-Davies and Arzymanow, 2003; Zwikael and Globerson, 2006). Moreover, there is no project success factors would be applicable to all projects (Dvir et al., 1998).

In reality, for a specific IT project such as the Enterprise Resource Planning (ERP) and Health Information System (HIS), there is no general agreement on which set of factors are the key to success. Furthermore, set of CSFs are different even for the same project which have been identified by different studies. These studies amongst countries that have different cultures, government regulations, and economics which make the set of CSFs differ (Ngai et al., 2008). For example, Pintos (1986) identified ten CSFs such as project mission, top management support, project schedule/plan, client consultation, communication to recruitment/selection and training. Based on a review of literature and former experiences, Holland and Light (1999) developed research framework of CSF. In this framework, the CSFs were grouped into strategic and tactical factors. Both groups originally based on Slevin and Pinto's work (1987).

Most of the CSFs studies concentrate on specific IT projects such as ERP. Nah et al. (Nah et al., 2003) conducted a survey of CIOs from fortune 1000 companies on their perceptions of the CSFs in ERP implementation and found that top management support, project champion, ERP teamwork and composition, project management, and change management program and culture were the most five critical factors that identified by the CIOs. Similarly, Umble et al. (2003) identifies in their case study of a successful ERP implementation that software selection steps and implementation procedures as critical success factors. In review of different resources such as journals and conference proceedings across ten different countries, Ngai et al. (2008) identified eighteen CSFs for the successful implementation of ERP and found that "top management support" and "training and education" were the most frequently cited CSFs.

On the other hand, different researchers consider critical failure factors (CFF) to study the IT project success. For example, some IT projects fail as a result of poor knowledge management, poor project management, inadequate reuse of past experiences and lessons learned, and/or insufficient understanding of the technology and its limitation (Desouza and Evaristo, 2006; Thomas and Fernandez, 2008). Furthermore, the Royal Academy of Engineering and the British Computer Society found significant difficulties in managing IT projects such as project complication, poorly project definition and no lessons learned from the past projects (Rodriguez-Repiso et al., 2007).

Literatures available about the CSFs of IT projects in Saudi Arabian organizations are unsatisfactory. Alfaadel et al. (2012) study was the first to discuss the IT project success and failure in Saudi Arabia. They found in their study that the most important critical success factors are clear statement of requirements, top management support, and proper project

planning. However, there are few studies in the implementation of particular projects like Enterprise Resource Planning (ERP) and Health Information System (HIS).

Al-Mashari and Al-Mudimigh (2003) found in their case study of a failed ERP implementation for a major middle-eastern manufacturer (Comp Group) that the critical failure factors are: scope creep, lack of ownership and transfer of knowledge, lack of change management, lack of communications, lack of performance measurement, and propensity to isolate IT from business affairs. Alghathbar (2008) found from his experience of implementing an ERP at the largest university in Saudi Arabia (King Saud University) that hiring project manager in early stage of implementing the project, the head of the organization is the sponsor, good communications with top management and users, good project team and key users, change management, and incentives for project team would increase the success of the project. Al-Turki (2011) found in his study on the ERP implementation practices that most organizations suffer serious time and/or cost overruns. In addition to that, management commitment, the existence of a clear strategic objective, change management, and training were found to be critical for the success of the ERP implementation. Aldammas and Al-Mudimigh (2011) found in their two case studies of ERP systems at Air force and Saudi Telecom Co.(STC) that top management decisions are very important for project success. Al-Shamlan and Al-Mudimigh (Al-Shamlan and Al-Mudimigh, 2011) found in their case study of MADAR ERP system that top management commitment, communication, and training are more critical for project success.

Abouzahra (2011) found in his study of 52 HIS projects that the main factors behind healthcare IT project failure are unclear scope, failure to manage risks, failure to identify stakeholders, and miscommunications. Al-Mudimigh et al. (2011) found in their two case studies of portal implementation at Saudi Food and Drug Authority (SFDA) and Saudi Stock Exchange Market that the top five factors affecting the success are organizational which are good communication, user acceptance, top management support, clear goals and objectives, and project monitoring and controlling.

3. RESEARCH METHODOLOGY

This study empirically investigates the factors that play a significant role in the success of IT project in Saudi Arabian public organizations. In order to identify these factors, a qualitative method using semi-structured interview is used. Qualitative approach assists the researchers to reach deeper into the participants' experiences. This exploratory study carried out through interviewing a number of CIOs (10) using a list of factors which has been collected from the literature review.

The semi-structure interview process went through the following steps. First, the researchers proposed a list of factors from a thorough review of the literature on the success factors of IT projects to be examined and modified by the interviewees. For the interview to succeed and to save the CIO's valuable time, the researchers had emailed this list to them in advance in order to enable full discussion of the topics included. Only those who had at least five years' experience of IT management were chosen. The reason for that was to consult people with significant levels of practical experience.

Invitations were sent to 20 CIOs in the field, and only 10 agreed to participate in this study. The researchers conducted interviews during October 2012. Each interviewee was briefed on the information concerning the aims of the study and the purpose of the interviews. The duration of each interview was one hour, and each interview was conducted on a one-to-one basis. The interviews were conducted in English. Participating CIOs were assured of their anonymity before the beginning of each interview. The researchers conducted the interviews using the voice over IP such as Skype. None of the interviews were tape-recorded because the CIOs requested that information they provided not be recorded. Therefore, notes were taken. These interview notes were emailed to each CIO after the interview for confirmation and validation.

After the interview process with the CIOs had finished, the researchers started to analyze the interviewees' answers. The researchers transcribed the results in a separate form for each interviewee. This form consists of the following: CIO's background, organizational and IT characteristics, a list of factors from the literature to be confirmed if it is important or not, and a space for any additional factors that can be added. In the data transcribing process, the researchers marked (☒) when the CIO confirmed the importance of one of the factors that were listed in the interview results form. If, however, the interviewee suggested a new factor, the researchers added it to the proper space in that form. The researchers also wrote down the interviewees' comments about each factor. After this, the process of transcribing the interview results was finished, and the data analysis process started in order to identify the factors which have influence on IT project success.

4. DATA ANALYSIS AND FINDINGS

For each CIO (CIO#X), the following information has been considered: CIO background (Age, Education Level, and Experience), and the important factors. The factors that the CIO had confirmed or rephrased are called "Factors From Literature", and the factors that he/she had added are called "Factors Added by CIO". In order to place this information in one table, all the factors (both Literature (L) and Added (A)) have been coded in another table which called "Factors' Reference Table" (see table 2). The breakdown of the CIOs interviewed has been summarized in Table 3.

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Table 2. Factors' reference

Factors From Literature (L)	Factor Code	Factors Added by CIO (A)	Factor Code
Top Management Support and Commitment	L1	Conflict of Interest	A1
Strategic Planning	L2	Knowledge Management	A2
Project Management	L3	Rewards and Recognition	A3
Process Management	L4	Top Management Stability	A4
Project Team Competency	L5	Project Management Office	A5
IT Infrastructure	L6		
Change Management	L7		
Risk Management	L8		
Communication Management	L9		
Training and Education	L10		
Supplier Management	L11		
Stakeholder Management	L12		

Table 3. Breakdown interviewed of CIOs

CIO No.	CIO Background			Important Factors	
	Age	Educational Level	Experience	Factors From Literature (L)	Factors Added by CIO (A)
CIO#1	>40	PhD	16-20	L1,L2,L3,L4,L5,L6,L10,L11,L12	A1,A2
CIO#2	26-30	Bachelor	6-10	L1,L2,L4,L5,L6,L7,L8,L9,L11,L12	A3
CIO#3	36-40	Master	16-20	L1,L2,L3,L5,L6,L7,L8,L9,L10,L11,L12	A4
CIO#4	31-35	Master	6-10	L1,L2,L3,L4,L5,L6,L7,L8,L9,L10,L12	
CIO#5	>40	Master	16-20	L1,L2,L3,L5,L6,L7,L8,L9,L10,L11,L12	A5
CIO#6	31-35	Master	11-15	L1,L2,L3,L4,L5,L6,L9,L10,L12	
CIO#7	31-35	Master	6-10	L1,L2,L3,L5,L6,L7,L8,L10,L12	
CIO#8	>40	PhD	>20	L1,L5,L6,L7,L8,L9,L10,L11,L12	
CIO#9	26-30	Master	6-10	L1,L2,L3,L4,L5,L6,L7,L8,L9,L10,L12	
CIO#10	36-40	Bachelor	11-15	L1,L2,L3,L4,L5,L6,L7,L8,L9,L10,L11,L12	

4.1 Factors Affecting IT Project Success (Literature Review List)

The results of IT CIO's success factors of IT projects are mostly consistent with literature review. The following subsections provide a description of the research outcomes. For each factor, it starts with a brief definition and CIOs' comments for the researchers' question "To what extent factor X is important to IT project success?".

4.1.1 Top Management Support and Commitment

Top managers should dedicate time to review plans, follow up on results and facilitate management problems. 100% of CIOs agreed that this factor is critical. CIO#2 confirmed that by saying "definitely, without endorsement/sponsorship of top management, the project is likely to be hindered". CIO#4 commented "it is very critical to ensure gaining their continuance support to resolve any obstacles may face project progress". CIO#8 mentioned "it

is very important factor throughout the project lifecycle. Various types of support from the top management such as budget allocation, encourage managers to cooperate, facilitate the organization environment for IT project adoption, speed up approvals, ease cooperation and support of stakeholders, partners, and the board of directors, prepare organization for change brought by the new IT project". CIO#10 said "without the management support, the projects tend to fail. We have seen many projects that were started and the management wishes but not supporting, and it turned to fail."

4.1.2 Strategic Planning

IT Strategic planning should be aligned and integrated with the organization's strategy. 90% of CIOs agreed that this factor is critical. CIO#2 commented "strategic planning is without a doubt a considerable success factor. Even if the project is implemented fully, with the absence of vision and direction that key drivers to any project, we will be missing the main value out of it. Typical examples in our environment, I've seen live cases of IT projects where two departments have implemented the same project fully twice causing double amount of finances, efforts of man hours, and double the amount of hardware/software assets causing administration overhead". CIO#3 said "It's imperative to have a very precise and clear strategic plan to govern the mission of the organization and drive it smoothly to its objectives with well designed, implemented, and controlled strategic plan." CIO#4 mentioned "IT projects must be aligned with organization strategic planning and organization objectives." CIO#7 said "IT strategy acts as an enabler to business strategy. Projects should be planned strategically to achieve business goals".

4.1.3 Project Management

Project management is term as an application of knowledge, skills, tools and techniques to project activities to meet project requirements (PMI, 2004). 80% of CIOs agreed that this factor is critical. CIO#3 confirmed the importance of project management by saying "Projects nature are getting more complicated and intersected nowadays especially in Saudi Arabia, thus without proper project management, project managers and decisions makers want be able to properly control and prioritize them along with losing accurate and right projects status". CIO#4 said "to ensure appropriate management during project life cycle to deliver project objectives". CIO#7 commented "IT projects are usually associated with costs and resources which need to be managed. Because of these characteristics of IT projects, project management is crucial". However, CIO#2 said "I don't see personally that with the absence of project management methodology that the project would be compromised, because some project managers intuitively can manage the full details of the project and assure it can be matching the expectations based on their practical experience and knowing how to make it a success."

4.1.4 Process Management

Process management is a set of methodological and behavioral practices which are implemented to manage and improve processes that produce products and services. 60% of CIOs agreed that this factor is important. CIO#2 said "It's important to synergize and harmonize the project internal processes with the operational organization. It would impact the transition for example of the project if we don't have such process established and well defined and informed to every party".

4.1.5 Project Team Competency

Project team refers to the project manager and all the project team members, and this team should recruit the best individuals in the organization. 100% of CIOs agreed that this factor is critical. CIO#3 confirmed that by saying “the team is the arms and tools for project managers, their valuable contributions are the fuel that accelerates the project execution. Failing to select the right resources along with poor training makes project manager life harder and put the project success on the edge”. CIO#4 commented “sufficient project team size, qualifications and experiences to ensure well-organized project tasks accomplishments and delivery as planned. Existence of good project manager will motivate project team and overcome any obstacles may affect project progress”. CIO#10 said “serious and committed team members will ensure the activities are delivered on timely manner”.

4.1.6 IT Infrastructure

IT infrastructure is a comprehensive term that includes equipment, networks, and applications. 100% of CIOs agreed that this factor is critical. CIO#1 confirmed that by saying “IT infrastructure is crucial for any IT project”. CIO#3 mentioned “IT infrastructure is the backbone of any implemented information system”. CIO#5 said “I cannot imagine having a system without having a proper IT infrastructure”.

4.1.7 Change Management

Change management is the application of the set of tools, processes, skills and principles for managing the people side of change to achieve the required outcomes the project. 80% of CIOs agreed that this factor is critical. CIO#2 confirmed that by saying “There is always resistance of a change, and change management stream would be needed to ensure change can happen”. CIO#4 commented “it needs to be controlled in integrated and effective way since it has direct impact on organization”. CIO#10 said “IT projects tend to fail because of changes and managing the changes. We have seen many projects dragged for long time and time and money consumed just because of wishes and changes required”.

4.1.8 Risk Management

Risk management is the identification, analysis, assessment, control, and avoidance, minimization, or elimination of unacceptable risks in the project. 80% of CIOs agreed that this factor is critical. CIO#2 confirmed that by saying “Risk planning, register and mitigation plan are all indicators of success of the project”. CIO#3 commented “Risks are always there, having proper risk management plan tailored for every project would definitely reduce the risk factors and increase probability of having a very successful project”. CIO#4 said “Early establishment of clear risk plan and risk response mitigate projects failure”.

4.1.9 Communication Management

Communication management is the systematic planning, implementing, monitoring, and revision of all the channels of communication within all the people involved in the project. 80% of CIOs agreed that this factor is critical. CIO#2 confirmed that by saying “it is critical for all project staff and stakeholders. It's important to run communication mechanisms whether video broadcasts over local portal, communication messages, online training sessions, surveys, etc... It's a mean of bringing the value of the project in front of everyone touched by it”. CIO#3 commented “Different project members and stockholders require a very clear

communication plan to avoid any missing information and keeping the project under control. It is strongly recommended to keeping project members based on their authorities and roles up to date with project status and information via proper communication channels". CIO#10 said "Communication in Saudi Arabia is the weakest part, even we tend to like to chat and talk, when it comes to communicating all the project and project status, we found that most of projects failed to manage that part successfully".

4.1.10 Training and Education

Training and education is the acquisition of knowledge, skills, and competencies, and this facility should be available to all concerned people including project team members and end users. 90% of CIOs agreed that this factor is critical. CIO#3 confirmed that by saying "It's imperative for the success of the project during the project life cycle and last but not least during the project post implementation to ensure smooth operation". CIO#7 said "Contentious professional development for IT staff is really important to keep them aware about updates in the field. Also, training for both end-users and IT staff aids them to utilize information system efficiently. Also, it will help to eliminate their resistance and it will increase their readiness to change".

4.1.11 Supplier Management

Supplier management is a business process that allows a company to adequately select its vendors and negotiate the best prices for goods and services that it purchases. 60% of CIOs agreed that this factor is important. CIO#2 confirmed the importance of supplier management by saying "it plays a critical role in the project success. We need to be cautious about setting a clear process of supplier selection to assure that the choice is totally un-biased to a preferred vendor which may affect the project outcome".

4.1.12 Stakeholder Management

Stakeholder management is the process of managing the expectation of anyone (person or organization) that has an interest in a project or will be effected by its deliverables or outputs. 70% of CIOs agreed that this factor is important. CIO#4 confirmed that by saying "Stakeholders of a project are your key people that will drive the PMO to meet their expectations and be in close contact during the project cycle since they carry big influence on how to translate the project outcomes and capture the value added to the line of business". CIO#3 mentioned "stakeholders with their different roles, high expectation, and influences on the project which should be watched and mentor closely and sharply". CIO#9 said "An unhappy one of the stakeholders can close the project". CIO#10 commented "It's always important to bring the stakeholders in the same picture".

4.2 Factors Affecting IT Project Success (CIOs' List)

4.2.1 Conflict of Interest

A conflict of interest is a set of circumstances that creates a risk that professional judgment or actions regarding a primary interest will be unduly influenced by a secondary interest. This factor has been added by CIO#1 and his comment is: "This factor is critical because it might hinder the success of the project. Conflict of interest can be in different levels and shapes.

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There are many examples of that such as recruit unworthy personnel for the project, awarding the project to a company which is ineligible, etc.”

4.2.2 Knowledge Management

Knowledge management is the process through which organizations generate value from their experiences, intellectual and knowledge-based assets in terms of resources, documents, and people skills. This factor also has been added by CIO#1 and his comment is: “It is very important issue from two points of view: to learn from the past experience of unsuccessful projects in order to avoid the reasons behind the failure in the future and to have the knowledge transferred after the completion of success projects”.

4.2.3 Rewards and Recognition

Rewards and recognition defines the incentives, rewards, and recognition plan in its entirety, and it should be available to all employees in the organization. This factor has been added by CIO#2 and his comment is: “Although this is not fully enabled in our organization, but I see great importance of increasing people moral and spirit by standardizing a rewarding process and be always recognizing people efforts and accomplishments”.

4.2.4 Top Management Stability

Top management stability refers to the impact of the top management unpredictable change or turnover. This factor has been added by CIO#3 and his comment is: “In our organization, the general director has been changed three times in less than four years which was very critical to the strategic planning of our IT projects. Every one of them had his own vision about the critical IT projects so he made many changes which caused wasting a lot of resources and delay clients' projects”.

4.2.5 Project Management Office

A Project Management Office (PMO) is a group or department within an enterprise that defines and maintains standards for project management within the organization. This factor has been added by CIO#5 and his comment is: “It is a crucial to plan, prioritize, monitor, measure and report to the entire project stakeholder about the status of each project. It manages all the resources across many projects implementing simultaneously”.

5. CONCEPTUAL FRAMEWORK

The findings of the study proposed seventeen factors that may have impact on IT project success. After analyzing the collected data, researchers were able to construct a conceptual framework (see Figure 1) of IT project success factors that need to be considered to minimize the failure rate of IT projects using the following propositions:

- P1: Top management support and Commitment increases the level of IT project success.
- P2: Strategic planning increases the level of IT project success.
- P3: Project management office increases the level of IT project success.
- P4: Conflict of interest increases the level of IT project success.
- P5: Top management stability increases the level of IT project success.
- P6: Project management increases the level of IT project success.

- P7: Change management increases the level of IT project success.
- P8: Stakeholders management increases the level of IT project success.
- P9: Risk management increases the level of IT project success.
- P10: Supplier management increases the level of IT project success.
- P11: Business process reengineering increases the level of IT project success.
- P12: Communication management increases the level of IT project success.
- P13: Knowledge management increases the level of IT project success.
- P14: Project team competency increases the level of IT project success.
- P15: IT infrastructure increases the level of IT project success.
- P16: Training and education increases the level of IT project success.
- P17: Reward and recognition increases the level of IT project success.

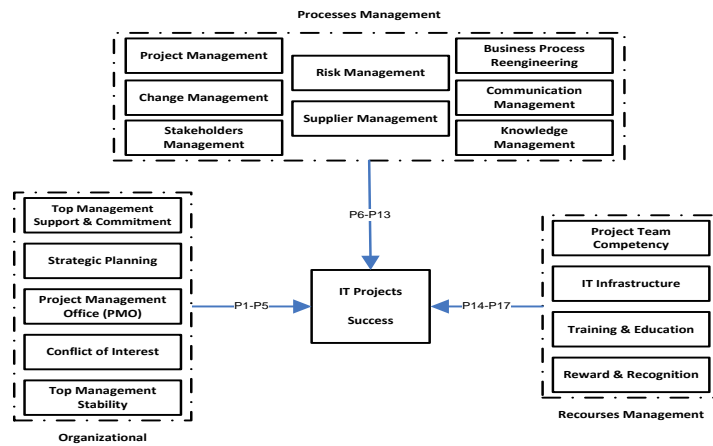


Figure 1. Conceptual Framework

Those factors are grouped into three categories which are: organizational, processes management and resources management. Organizational factors are top management support and commitment, strategic planning, project management office (PMO), conflict of Interest and top management Stability. Process management factors are project management, business process reengineering, change management, risk management, communication management, stakeholder management, supplier management and knowledge management. Resources management factors are project team competency, IT infrastructure, training and education, and rewards and recognition. As part of an ongoing study, further investigation has been done by Almajed and Mayhew (2013).

6. CONCLUSION AND FURTHER RESEARCH

This paper has presented an exploratory study of CIOs' perceptions of IT project success factors in Saudi Arabian public organizations. The findings of the study proposed seventeen factors that may have an impact on IT project success. These are: top management support and commitment, strategic planning, project management, process management, project team

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competency, IT infrastructure, change management, risk management, communication management, training and education, supplier management, stakeholder management, conflict of interest, knowledge management, rewards and recognition, top management stability and PMO. The last five factors have been added by the CIOs.

The anticipated contribution to the academic community includes development of an understanding of the organizational factors that affect IT project success. This study has contributed to existing knowledge in a number of ways. First, it managed to identify a number of factors which are critical to the success of IT projects in high income developing countries in general and in Saudi Arabia in particular. Second, this study succeeded in synthesizing existing literature in this area with its findings from real world experience. The success factors of IT projects found by this research are also expected to be applicable to other high income developing countries. Further effort needs to be made to investigate the relationships between the factors identified above and hence their combine impact on IT project success. Further research can be carried out in the private sector in order to facilitate a comparison between the two sectors.

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