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Exploring the Critical Success Factors for Project Management and Project Risk Management

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Abstract – Project Management has gained a significant importance in the recent years. Due to industrial revolution and competition, companies are undertaking projects for increasing their profitability, sustainability and product diversity. Surveys conducted at international level indicate that only 30-40 % of the total projects are successful whereas the remaining 60-70 % projects fail to complete within estimated time and cost. Risk management is one of the most important knowledge areas in the project management process. Effective implementation of risk management is of paramount importance for the project to be successful. This paper aims to explore the various critical factors for successful project management and also for effective risk management in projects through literature survey. The findings derived from evaluation of the publications led to the identification of twenty two different types of critical success factors associated with project management and fifteen different types of critical success factors associated with project risk management. This research work provides the awareness related to various critical success factors for project management as well as project risk management which can assist in developing appropriate strategies.

Keywords— Project, Project Management, Risk, Project Risk Management, Critical Success Factors

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1. INTRODUCTION

Project is defined as a series of related activities with a well-defined set of desired end results. Generally projects are classified as domestic and international projects [1].Domestic projects are the one in which the project is performed in its native country for a resident firm. International projects are those where the owner or the contractor of the project are from a different country than the one where the project is being executed [2].The surveys conducted by various international agencies show that only 30-40 % projects succeed in successful completion. It is very important to execute the project by systematic implementation of the standardized project management methodologies. To improve project performance the risks which occur across the entire project life cycle must be recognized and they must be given due consideration [3]. Critical success factors (CSF) are those few key areas of activity in which favourable results are absolutely necessary for a particular manager to reach his or her own goals [4]. Identification of CSF for project management and ranking them according to their importance enables the project manager for proper allocation of resources to complete the project successfully within the estimated time and budget at the desired quality. Identification of CSF for effective risk management enables the project team to minimize the adverse effects of project risks by systematic and effective implementation of risk management practices.

2. RESEARCH OBJECTIVES AND RESEARCH METHODOLOGY

Research Objectives

This paper aims to explore the various critical success factors for effective implementation of project management practices as well as risk management practices in a variety of projects executed in various countries.

Research Methodology

This work can be characterized as a theoretical concept, specifically for review of literature on the various types of critical success factors for effective project management and project risk management practices. The study is exploratory in nature, which

constitutes a secondary source. Extensive literature exists in the field of project management and risk management in projects.

Following criteria are used for inclusion of literature:

- Literature published on project management, risks and critical success factors;
- Literature published from 1995 to 2015;
- Journals stating project management in their editorial scope;
- Survey report published on project failure by professional agencies;
- Articles published in referred scholarly journals, working papers, and thesis;
- Articles addressing issues related to the success of projects;
- Keywords used in article:

– Primary keywords: projects, risk, project management, CSF

– Secondary key words: success, failure, timely completion etc.

The literature review was augmented by the use of online computerized search engines using keywords that are often used in the literature to describe success of projects and risk management. The references of the recent research papers were scanned for previous work done in the project risk management area. In addition to this search, articles, thesis as well as survey reports by professional agency were also included after scanning the reference sections of the initially selected papers. Feedback of industry professionals were considered for selecting the most commonly observed critical success factors amongst the various critical success factors obtained through literature survey.

2. LITERATURE REVIEW

A. Project Management

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. The project is concerned with defining and selecting a task which will be of overall benefit to the company. This benefit may be financial, marketing or technical, but will be of long term nature. On the contrary, project management deals with planning and control. It concentrates on the aspects of project like on time delivery, within budget expenditures and appropriate performance standards which will be of short term nature. Project Management is accomplished through the use of five processes which include initiating, planning, executing, monitoring & controlling and closure [5].

The various processes involved in project management are project initiating processes, project planning processes, project executing processes and project closing processes.

B. Project Risk Management

Risk is often referred to as presence of potential or actual threats or opportunities that has influence on objective of project during construction, commissioning or at the time of use [5]. Risk is the possibility of critical situation where an activity cannot deliver mandatory outcomes required for the project objectives and no other immediate alternatives are available [6].

Risk can be managed, minimized, shared, transferred or accepted but cannot be ignored [7]. Risk management is one of the key project management processes [8]. Risk management can help project managers to anticipate delays that cause projects not to be delivered on time [9].

C. Critical Success Factors (CSF)

The literature survey conducted through various research papers, theses, articles resulted in the exhaustive list of critical success factors for project management as shown in Table 1 and for project risk management as shown in Table 2.

TABLE II

CSF for Project Management

Sr. No.	Critical Success Factors (CSF)	Authors
1	Project manager commitment to the goals and his technical capability	*[10] ,[11], [12],[13],[14], [15], [16], [17], [18], [19], [20],[21],*
2	Project team motivation	*[10], [13],[14],[18]*
3	Top management support	*[11],[22],[12],[14],[15],[16] ,[23], [24], [25],*
4	Availability of resources	*[11], [26], [14],[16],[18],[24],[27],*
5	Effective project	*[22], [12],[14], [18], [28], [19],[20],[21],*

	monitoring	
6	Co-ordination and communication effectiveness	*[22],[14], [16], [18],[28],[29],[23], [25]*
7	Decision making effectiveness	*[22]*
8	Risk identification & allocation	*[22],[13],[14],[16],[28]*
9	Client's consultation, acceptance and involvement	*[12], [14], [15],[16]*
10	Effective Control Systems	*[10],[13], [16], [28],[20],*
11	Effective Project Team Formation	*[14],[15], [16], [29], [27],*
12	Clearly defined goals and objectives	*[14], [19],[23], [24],[27], [30],*
13	Clear and detailed procurement process	*[14],[18],*
14	Well defined Technical specifications	*[14]*
15	Political support	*[14]*
16	Effective quality assurance programme	*[14], [28]*
17	Effective Stakeholders Management	*[18]*
18	Training the HR in the skill demanded by project	*[28],[25]*
19	Implementing an effective safety program	*[28]*
20	Clearly defining complexity of project	*[31], [23]*
21	Absence of bureaucracy	*[27]*
22	Accurate initial cost estimates	*[27]*

TABLE 2

CSF for project risk management

Sr. No.	Critical Success Factors (CSF)	Authors
1	Commitment and support from top management	[32], [33], [34]
2	Effective communication	[32]
3	Organization Structure	[32]
4	Effective use of Information Technology (IT)	[32]
5	Training of employees	[32],[33], [34]
6	Risk-aware culture	[33]
7	Sufficient resources	[33],[34]
8	Risk identification, analysis and response	[33]
9	Leveraging risks as opportunities	[33]
10	Risk communication	[33],[34]
11	A common risk language	[33]
12	A risk management information system (RMIS)	[33]
13	Formalized key risk indicators (KRIs)	[33]
14	Monitoring, review and improvement of risk management framework	[33]
15	Integration of risk management into business processes	[33]

CONCLUSION

The paper represents an exhaustive list of critical success factors for project management as well as for project risk management. The knowledge of critical success factors helps the project manager in successful completion of project. It is observed that most of the researchers have mentioned Commitment

from top management, Capability and experience of project manager and project team, availability of adequate resources, effective communication, clearly defining project goals and effective risk management as the prominent critical success factors for project management. For project risk management; top management support, employee training, adequate resources and effective risk communication are the significant critical success factors.

LIMITATIONS AND FUTURE SCOPE

The critical success factors included in the paper are through a survey of literature published during 1995 to 2015. There may be few more critical success factors which are not reflected in the published literature. The MCDM tools like ISM, TOPSIS or DEMATEL etc. can be used for ranking these critical success factors based on their importance in the success of any project.

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