

# Critical Examination of Project Success Definition and Factors for Project Success Criteria

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## Abstract

*Project success is understood as the process of measuring the success determinants such as resource management, needful level of funds, application of suitable leadership styles, as well as meeting the defined goals of a project. The success of a project is also determined by the commercial benefits obtained from a defined project. In this research paper, the definition of project success and relevant criteria for project success management are critically examined. The research employed a secondary method for collecting data and thematic analysis for data-evaluation purposes. Time, budget, uncertainty management, project team coordination, mutual trust and collaboration, personnel skills, project knowledge, as well as project monitoring are identified as the valuable criteria for project success management. The paper initiates future research in the direction of applying an agile approach which might be helpful for managing flexibility in allocating resources within a defined project. The agile approach also helps in handling complexities by coordinating and communicating with the stakeholders regarding the project in a rigorous manner to ensure the project's success.*

**Keywords:** Project success, project management, agile approach, resource allocation, stakeholder communication

## INTRODUCTION

Project success is determined by measuring the fulfilment of the key factors namely clarity of goals, effective resource management, provision of the required amount of funds, appropriateness of the leadership style practiced as well as optimal change management. However, the criteria that determine a project's success are the quality, user satisfaction, cost, time, and commercial performance of the executed project [1–11]. Apart from the above, it is also identified that the estimation of the project's success is a complicated task as the success of a definite project seems to be intangible. Failure of projects can be avoided by assuring the success of project management criteria such as project delivery and fulfilment of project objectives [8]. In this context, this study critically examines the definition of project success along with the factors that are responsible for determining the criteria for project success.

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Received Date: March 20, 2024  
Accepted Date: April 11, 2024  
Published Date: April 12, 2024

**Citation:** Tareg Botouli, Mahmoud Abdurraheem. Critical Examination of Project Success Definition and Factors for Project Success Criteria. Journal of Construction Engineering, Technology & Management. 2024; 14(1): 41–48p.

Project success has been regarded as a critical issue which was subjected to debate among eminent scholars. In this relation, a study by Lamprou and Vagiona [12] denoted that project success tends to be determined by taking into account some basic criteria. For example, budget (cost), time (schedule), performance quality, risk management, communication and satisfaction of consumers have been illustrated as some critical criteria for project success in this study. Another study by Hughes et al. [10] revealed that project success tends to get

influenced by adequate and consistent communication with stakeholders during the entire lifecycle of the project to ensure successful deliverables.

However, other studies by Van Tam et al. [13], Studer et al. [14], and Iriarte and Bayona [11] also emphasized that team skills, technology utilization, resource management, pertinent leadership and constant monitoring of project phases are also essential criteria to handle the projects successfully. For example, the UK-based major project of "Tidal Lagoon – Swansea Bay" has been successfully managed because of a proper investment of £ 1 billion, the use of embedded and digital technologies, ensuring the use of effective skills of project management and involvement of all stakeholders for meeting the expectations [12, 15, 16]. However, still, there seems to be an information gap regarding the critical examination of the project definition as well as the criteria for project success with detailed reasoning and illustrations in the present time of technological advancement and competitive business environment. Therefore, contemporary research is organized to clearly define and critically examine project success–related definitions and associated factors to confirm project success.

### **Aim and Objectives**

The aim associated with this research is to critically examine the definition of project success as well as the factors concerned with the criteria of project success. In this essence, the below objectives are designed for the project:

- To define and analyze the concept of project success in the business environment.
- To determine and examine the factors linked to the criteria of project success within the business context.
- To evaluate the risks associated with project management causing the barrier to the project's success.
- To propose relevant measures for the project's successful accomplishment within the business setting.

### **Research Questions**

The core question of this study is stated below:

- *Research Question:* How the project success can be defined along with the different factors for determining the project success criteria?

Subordinate questions are also made as stated below:

1. What are the criteria for determining the success of a project?
2. What risks degrade the success levels of a project?

### **Rationale**

The rationale for planning the research in the direction of project success and related project success criteria is that this subject area has ample scope for investigation as project success is considered a broad and intangible concept which can vary in diversified situations of project management. Furthermore, this research can also be significant for project management experts in terms of providing them with effective knowledge and information regarding the success criteria which need to be met to assure the successful completion of a project. In addition to the above, this research can also be helpful for the managers and project heads that are working in project-based work companies in terms of increasing their awareness levels towards the incorporation of correct leadership and management attributes along with offering them appropriate details regarding the optimized time, costing as well as the quality of the projects which can help in completion of a project in a successful manner.

### **Research Structure**

- *Introduction:* This phase covers introductory aspects and background knowledge of the subject area about project success definition and criteria. It also integrates the development of the aim, research question and objective.

- *Literature Review*: This phase captures the scholarly debates around defining the project's success and related factors or criteria contributing towards the success.
- *Methodology*: This phase underpins philosophy, design, the technique for data collection and strategy for data analysis along with ethical underpinnings.
- *Results and Discussion*: This section includes an analysis of accumulated research data and a discussion of major findings to aid the objectives concerned with the research.
- *Conclusion and Recommendations*: Finally, the conclusions, along with the recommendations for improvement, are given in this phase. Future study is also mentioned under this phase.

## LITERATURE REVIEW

The perceptions of Seyed and Mehrdad [17], which incorporated the questionnaire method have helped in understanding that project success can be defined in relation to the three main determinants which are time, quality as well as cost-related to the project. With the support of the stakeholder theory, which focuses on considering the interests of stakeholders, the project success is also defined with respect to the organizational objectives, perceived customer benefits and satisfaction of the stakeholders [18]. On the other hand, Badewi and Shehab [4] also utilized the questionnaire method and argued that the success levels of a project can be determined by the overall success rate of the organizational processes, products as well as organizational success levels. Based on cybernetic control theory, which considers investment in enterprise resource planning shortly named as ERP as a success indicator for organizations, it is asserted that in specific relation to ERP-based projects, success can be determined against the budget as well as time invested in achieving the required objectives and functionality in a project [4].

In contrast to the above, Adinyira et al.[2] also incorporated the questionnaire method and reviewed that the project success is identified as an illusionary construct, which can be determined by the overall client satisfaction rate, net duration of the project, risk containment procedures applied as well as the usage of localized resources. On the other hand, Müller and Jugdev [19] utilized the secondary review method and asserted that the definition of project success can be provided by the help of evaluating the fulfilment of the project criteria such as the meeting of the user needs, fulfilment of the project goals, as well as satisfaction levels of the associated stakeholders and suppliers. On the other side, Silva et al. [20] conducted a secondary research and explained that project success is determined by the competency levels of the project management teams. It is also reviewed that the criteria for the project success also involve estimation of the impact generated on the customer, direct organizational success, project-oriented effectiveness as well as profitability generated.

Moreover, one of the studies by Westerveld [21] used qualitative scholarly articles review based on which it has been revealed that there are multifaceted criteria of project success with reference to the project-excellence model. These criteria include a clear determination of cost, schedule, and scope for the project, management of quality throughout the project phases and appreciation received from project personnel, contracting partners, clients and all the project stakeholders [11, 22]. For example, Tesco Plc's project of Single-Process-Design has become successful because of adequate investment, reduction of cost and risk, managing project-personnel effectively through a strong partnership with the company "Software AG" and meeting stakeholders' needs related to end-to-end process visibility and transparency for the business management [20].

Another research by Montenegro et al. [23] utilized a survey with 110 project managers and identified that project-success criteria typically involve a clear declaration of project mission, support from top management, proper project planning, skilled personnel in the team, availability of advanced technology, acceptance from the client, constant feedbacks and monitoring of project progress, undisrupted communication and rigorous troubleshooting. Emotional intelligence has also been integral project-success criterion as it supports team members to maintain their own feelings and others' emotions to constantly trigger effective support provision to team members for fostering inter-personal relations and coordination in the project work [23].

In contrast, the study by Wu et al. [24] utilized a survey questionnaire with 468 professionals and found that project success majorly relies upon clear design specifications, commitment encouragement, trust development, flexibility management in project contracts, coordination of project procedures, long-run cooperation with stakeholders, mutual dispute management, prediction of uncertainties in an accurate way, performance guarantees, security, efficient resource-allocation and stakeholder satisfaction-management. However, the study by Wei et al. [22] with support of literature, data denoted that project risks oriented to quality, cost-variability, schedule, flexibility, suppliers' capability, complexities and uncertainties are required to be managed efficiently to ensure the success of the project.

## **METHODOLOGY**

### **Research Philosophy and Design**

This study explores the definition of project success and needs to examine the factors for the determination of the success rate of a project. In order to achieve this research aim, there is a need for exploring theories and conceptual details surrounding the chosen subject area. In this context, the interpretive philosophical model is suitable to be used for the present study as it assists in the flexible exploration of the data facts from mutually shared sources of information [18]. Furthermore, interpret philosophy seems to be useful for extracting the prevalent theoretical concepts about the project success factors and related definitions as it helps to examine the research phenomena as per subjective perspectives through interpreting qualitative data [6]. In support of the interpretive philosophy, the use of exploratory design is chosen for the current study because this design promotes flexible and free exploration of the research subject and helps in grounding the new theoretical concept that is not revealed by former theorists and researchers. Exploratory design helps in revealing the undisclosed aspects surrounding the project success criteria and its associated factors [15, 14, 26].

### **Data Collection Method**

This study uses the secondary review method because it promotes the collection of detailed theoretical underpinning and evidence about the project's success and related criteria or factors which assure its success. Accredited journal articles, websites as well as academic sources are selected as per the defined search strategy to establish an information base related to the theories of project success, the definition of project success and the related factors of project success [1]. However, the primary methods are discarded as they raise the possibility of invalid, repeated, and biased data findings with respect to the chosen subject of research [3].

### **Search Strategy**

The search strategy shown in Table 1 has been applied to search appropriate literature for secondary data collection.

### **Data Analysis**

The data analysis approach that is applied to the study has been thematic analysis. The rationale has been that it contributed towards composing relevant, logical and systematic themes across the research objectives and undertook a critical analysis of secondary findings to derive appropriate project management definitions and dynamic factors or criteria oriented to project success. Thematic analysis has a valuable contribution towards providing flexible interpretations and synthesis of the information to integrate comprehensive findings for generating strong and broad results on project success criteria.

### **Ethics**

For handling ethical issues, the research work has been carried out with peer-reviewed, authentic, and scholarly credible secondary sources. Proper citations are offered in the text to ensure credit provision to the scholars. No activity of data copy-pasting has been undertaken to confirm research originality.

## **RESULTS AND DISCUSSION**

### **Theme 1: Defining the Project Success**

The reviewed secondary sources help in analyzing that project success can be defined as the way of measuring the attainment of project objectives within stipulated, time, resources, and expenses as well as the applied leadership style of the management team. However, another source determined that the project success definition is described in accordance with the subjective success factors such as the customer satisfaction attained by the project as well as the environmental impact generated through the implementation of the project. Moreover, it is determined that the success of a project can also be defined by the help of appreciation received by the end users as well as the satisfaction of the stakeholders and associated business partners [27]. In comparison with the above, it is also discussed by the real example of Amazon that the definition of project success can be understood by means of the commitment levels shown towards customer satisfaction and measuring the effectiveness of business relationships. Amazon has followed a customer-centric business approach where the focus is put on increasing customer satisfaction through the deployment of customer support channels which offer 24/7 assistance to customer-generated queries [28].

### **Theme 2: Project Success Criteria or Factors**

With reference to literature-derived findings, it is analyzed that for successful project management, the criteria incorporate proper planning of project cost, time or schedule, project scope, quality measures and accountability towards the interests and concerns of project stakeholders [9, 12, 29]. In this support, another literature asserted the importance of stakeholder theory that also stresses the management of stakeholders' interests, such as the interests of consumers, clients and investors and their values while managing business projects [16]. While considering the example of UK-based construction projects, it is evaluated that the project-success criteria for these projects include the proper flow of information among stakeholders, proper monitoring of the project, reporting of information around the project, elimination of project-related ambiguities, project teams, avoiding wastage of time, clarification of client's vision and management of flexibility to manage project-related uncertainties [27]. Therefore, a significant criterion contributing towards project success has been discussed with the above-analyzed data findings.

However, in the time of technological advancement, it is also evaluated that the project team requires having proper knowledge of advanced technology for the project's successful accomplishment. In this relation, a supportive article by Butler [8] also indicated that the Bella Italia restaurant chain in the United Kingdom has effectively managed a robotics-based restaurant service project through the project team having effective knowledge of automation and robotics technologies to meet the market competition. Along with this, the secondary data also discussed that adequate coordination, cooperation, emotional intelligence of understanding each other's thoughts and feelings, uncertainty predictions, timely risk analysis and management, complexity management and quality assurance are some valuable criteria for projects' successful management within the contemporary business environment [28, 22, 21, 24].

### **Theme 3: Risks Oriented to Project Success Management**

The secondary data also analyzed that risks oriented to inadequate investment and schedule mismanagement might hamper the successful delivery of the project in a timely manner [9, 11]. For example, the Crossrail project within the United Kingdom has got delayed because of uncertainties and failure to predict risks, because of which the cost invested in the project also got exceeded [30]. Thus, it is discussed that risk management is considered a necessary criterion for project-success achievement.

In comparison to the explored literature findings, it is also discussed by another secondary source of Befrouei and Taghipour [5] that the tight schedule of a project tends to be the most intense form of risk, which may degrade the success levels of the project. It is analyzed that a high degree of variations occurring in the project design process, excessive project approval stages along-with unreliable construction project planning tend to be the critical risk-generating areas that hamper the success of the project (Figure 1 and Table 1) [5].

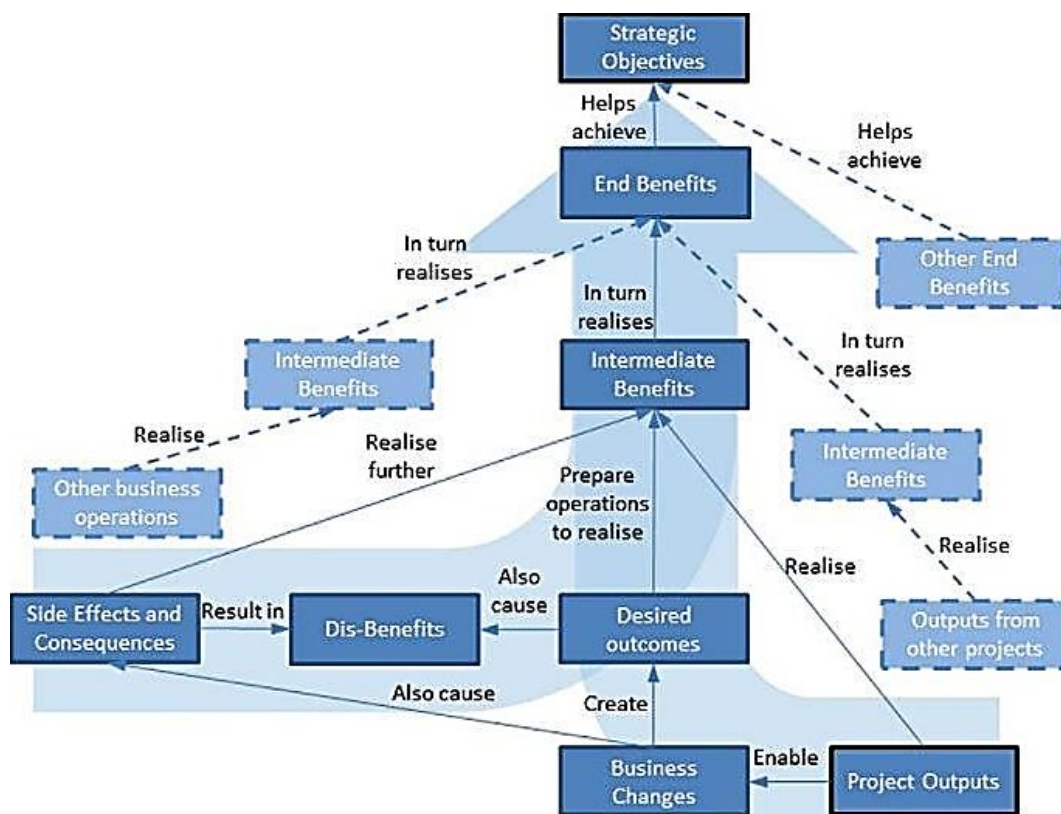


Figure 1. Benefits realization management model [31].

Table 1. Search strategy.

| Boolean Strategy  | Keywords and Phrases  |
|---|---|
| Project Success AND Project Accomplishment                      | Project success, successful project delivery, project management success, successful project handling                 |
| Project Cost Management OR Project Budget Management            | Cost allocation, budget planning, project price, project investments  |
| Project Schedule Management OR Project Time Management          | Project timely management, schedule maintenance, time-based project deliveries, deadline management, delay management |
| Project Risk Management OR Project Challenges Management        | Project risk analysis, risk factors, challenges of project, barriers  |
| Project Scope Management AND Project Mission Management         | Defining project scope, clarity of scope, project mission definition, project aim and objectives                      |
| Project Personnel Management OR Project Team Management         | Team collaboration, conflict management, coordination, team-skill management and knowledge management                 |
| Project Technology Management OR Technical Resources in Project | Advanced and appropriate technology usage and technology proficiency  |

## CONCLUSIONS

### Conclusion

In association with the first objective, it is summarized that project success can be defined as the measurement of the extent up to which the projected objectives can be achieved in the definite duration of time, resources as well as cost expenditure. However, due to the wide scope of the project's success, it is analyzed that the modern criteria for determining the success of the project revolve around the satisfaction of customers, stakeholders, and the effective deployment of the organizational resources. Furthermore, the project's success is also defined with respect to the criteria such as the environmental impact imposed by the project as well as the incorporated measures for risk containment.

It is also concluded for assisting the second objective that project success criteria are majorly linked with cost, schedule planning, quality, stakeholders' interest consideration, technology-oriented knowledge, flexibility, communication management, risk management, team coordination and collaboration, as well as ambiguity and uncertainty management. Risk factors, in line with the third objective, are also derived, such as budget overruling, schedule mismanagement, failure in predicting uncertainties and inflexibility to manage scope changes. For the eradication of such risks, the following recommendations are presented.

### **Recommendations**

The agile method of project management is to be deployed for extensive communication, coordination regarding project phases, risk and complexity management, flexible approach management and timely updates regarding scope issues for successful project delivery [5].

In order to resolve the risks related to unreliable project planning and project designing, it is suggested to the project management teams incorporate the Benefits Realization Management tool for mitigating the gaps between the project strategy planning and final execution by means of introducing strategic governance and clearly outlining the expected project outcomes. Benefits Realization Management further helps to minimize the project failure possibilities by enhancing the awareness levels of involved stakeholders [18].

### **Future Work**

As this research is solely reliant on secondary research articles for examining the definition of the project success as well as the related factors that determine the project success-related criteria, the majority of the findings highlighted in this research are of the subjective form. Hence, in future research works to incorporate factual evidence such as numerical statistics and personal opinions of the project managers, the use of the survey method can be performed. The survey can be organized by a sample of 50 project management heads and project professionals.

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