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# An Overview of Research in the Field of Project Construction and Management

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**Abstract**

The success of failure of a project depends on various organizational and non-organizational factors. Various stakeholders are often tasked with different roles to ensure the success of a given project. The success of a project is predominantly defined by the end user satisfaction while in most cases it is defined by the number of stakeholders who affirm that most of the project requirements were addressed. Other than the satisfaction of the stakeholders, managerial skills have a stake in the success of the project. A good manager ensures there is a flow of information between the project owners and the team players to ensure the success of the project. This chapter highlights some of the risks that could jeopardize the success of a project and outlines the effective measures that would ensure a project is successfully completed. A good project is one that works within the allocated time and budget since those are the crucial parameters used to evaluate the success of a project. The chapter reviews four foreign articles alongside ten Persian articles.

***Keywords:*** Project success; Project failure; Project management; Project evaluation; Project plan; Risk management and analysis; Stakeholders; Firm and Client/ project owner:

## 1. Introduction

The issue of project failure has been contentious among scholars and researchers. According to this chapter, there is no universally agreed definition for project failure. Various instances and scenarios have been identified to be project failures. Basing project failure on concepts and anecdotes is the major cause of ambiguity concerning project failure.

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According to Archer & Ghasemzadeh, 2007 and Albert and his colleagues 2017, the majority of practitioners try to regulate the instances that can lead to project failure or success to their scope of specialization and area of work rather than what is universally considered to be a success or failure of a particular task. Project failure depends on the project under discussion as well. An identifiable loss pattern has been noticed in particular projects, which was never seen in other projects. It implies that a specific scope of projects has distinct features that would define their failure. The factors for failure of certain tasks differ from what other projects require to be considered failed projects. An instance where failure could be permitted in one case and does not translate to failure in another case is when comparing construction and research projects. In construction projects, several environmental and external factors could lead to loss, which might never be detected during the research phase of a particular project.

**Figure 1:** Construction worker on site.

## 2. Description of Concepts

At various stages of project development, failure can be noticed. A project failing in the initial stages of its effect could be viewed differently from a similar project that falls at the later stages of its development. A project failing when it is nearly due for launch could be regarded as a big failure as opposed to projects that stall initially. The reason could be that, at the initial stages of project development, there is room for redesign and corrections at a reasonable cost. Projects failing when they are nearly due sometimes are considered irreparable when the cost of production is factored in. The concerned stakeholders would rather redevelop the project from scratch.

## 3. Review of Research Background

### *a) Internal Research Background*

Internal research background refers to the available articles and research conducted in the Persian territory. This

research appreciates the work of scholars in the mentioned region. They have done well on the issue of project management. Various articles have explained what it refers to as the success or failure of a particular project with no definite conclusion on the meanings of the two contentious phrases. I searched for the materials provided in the library as well as other leading search engines. Google Scholar, Scriber, and Cite Fast helped me in finding the articles used in the paper. The keywords used during the search included; project success, project failure, managerial roles in project management, duties of stakeholders in project management, and client satisfaction in project delivery. The database search provided several articles, thus leaving me with the luxury of choice, I went for the construction projects due to their relevance to my area of specialization.

According to Pinto & and Slevin (1988), factors that constitute a project failure can be classified as the implementation process, the perceived value of the project, and the satisfaction rate of a customer. The loss of a project begins right from the implementation stage, whereby the project is bound to fail when things are not done right. The value from cost to the aesthetics of a project could also define failure. When the client gets in return what they never ordered during the design of a project, the project could be described as having failed. Since the client is at the center of the project, they must be satisfied with the outcome of the project. Otherwise, it would not have achieved its intended purpose (Pinto & Slevin, 1988). The responsibility of moving with the schedule relies on the project manager, who should coordinate with every team player to ensure everything operates as needed at each point. During the implementation stage of a project, failure could be observed when the project manager fails to cohesively bring the team together to push the agenda of the project. While they might achieve the implementation of all the requirements, a fragmented team could prove costly to the project result.

The success of a project is usually achieved by team coordination and dedication to have every member on board knowing their scope of work and the delivery timeline. Baker and his colleagues 1997 highlight some critical success factors every project manager should learn and implement during any project initiated. The goals and missions of a project need to be spelled out clearly and each team member is assigned a role that should be completed within a specified period. The top management in charge of the project should liaise with all the team players and provide the needed support and materials at the right time during implementation. Delivery of materials when the allocated time has passed could prove difficult for the team players since they would struggle to work beyond the deadline. This could be a recipe for pressure and compromise the project's implementation. All should access the project schedule, and every team member should be assigned a role. When the plan is open for all, accountability for a failed aspect of the project would be easier. A manager would easily trace where implementation failed, and the responsible team member would be questioned, and necessary action taken against them. The process of recruitment, selection, and training of the personnel to undertake the project is one of the success factors. The process should be transparent, and only eligible individuals should be selected for particular duties. When incompetent people are assigned duties unknown to them, the project will fail as they will never deliver the designed and desired quality. Technical tasks should only be given to competent and able people.

Otherwise, the project would fail on technicalities. Monitoring the progress of the project during every developmental phase is key. When continuous monitoring and evaluation are done, there are chances of averting

a potential failure likely to occur during a subsequent phase of construction. Project managers who wait to evaluate the progress of a project when it is advanced most of the time end up failing since some mistakes are irreversible. When a fault is detected, the project would have consumed many resources and would need a complete face-lift. Effective communication between team members, management, and clients is a big success factor. The management, through communication, would be able to detect if the client is unsatisfied with the project and call for immediate adjustments. Waiting until the project is complete to have the client's opinion could be disastrous. Constant communication gives the team players confidence about what they are doing and assures them they are on the right track.

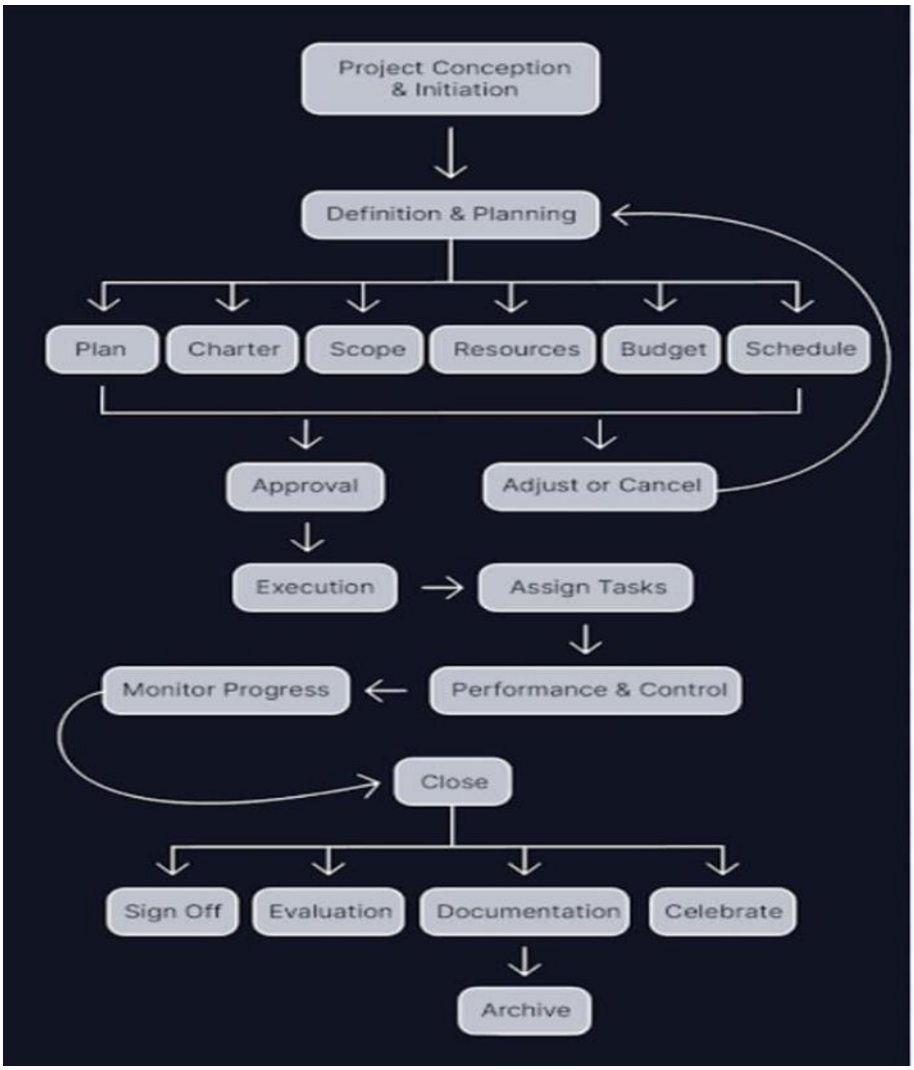


**Figure 2:** Project Management Flow Chart.

***b) External Research Background***


**Figure 3:** Project Success Factors.

External research background refers to the available articles and research conducted outside the Persian territory. Various articles have explained what it refers to as the success or failure of a particular project with no definite conclusion on the meanings of the two contentious phrases. I searched on the leading search engines. Google Scholar, Scriber, and Cite Fast helped me in finding the articles used in the paper. The keywords used during the search included project success, project failure, managerial roles in project management, duties of stakeholders in project management, and client satisfaction in project delivery. The database search provided several articles, thus leaving me with the luxury of choice. The articles chosen from the available majorly explain what project failure or success is in the construction industry.

The criteria for a project's success are still being determined. Rather, it is more of what most stakeholders agree on. The quality of how a project is handled is debatable, and there is no universally agreed quality of how a project should be done. When the major stakeholders agree that most aspects of the project details are done right, the project can be considered successful. Failure can be observed when most stakeholders fail to agree on the key aspects of the project. When a section of the people disagrees, the only conclusion is that some aspects of the project were never attended to as desired. According to Conway (2004), managers are always concerned with the success of a project since it is what will dictate if they will be able to win more projects in the time to come. Failure would lead to a trust deficit among potential clients in the future. Thus, before a project is implemented, its success must take center stage in the discussions. Scot-Young and Samson, 2004, highlight that project fails more on management than technicalities. When a firm hires an astute manager with the technical know-how and skills to handle the available staff, then they are on the path toward success. Very few projects would fail when a good manager is on site. With good team players and incompetent managers, the

chances of project failure are very high. A good manager with the right leadership skills knows how to manage their staff and keep them up to date with what the project guidelines require. A good manager can understand what their clients need and design it for them. The manager is tasked with knowing and reading the inner thoughts of the client to be able to produce their desired designs and artistry. Some projects have been considered successful by the initiators, but the client is considered to have failed (Silva and his colleagues 2021). The end user of a project determines its failure or success. Thus, before presenting a project to the client, a firm should have a manager who is sensitive to knowing if the project can appeal to the client.

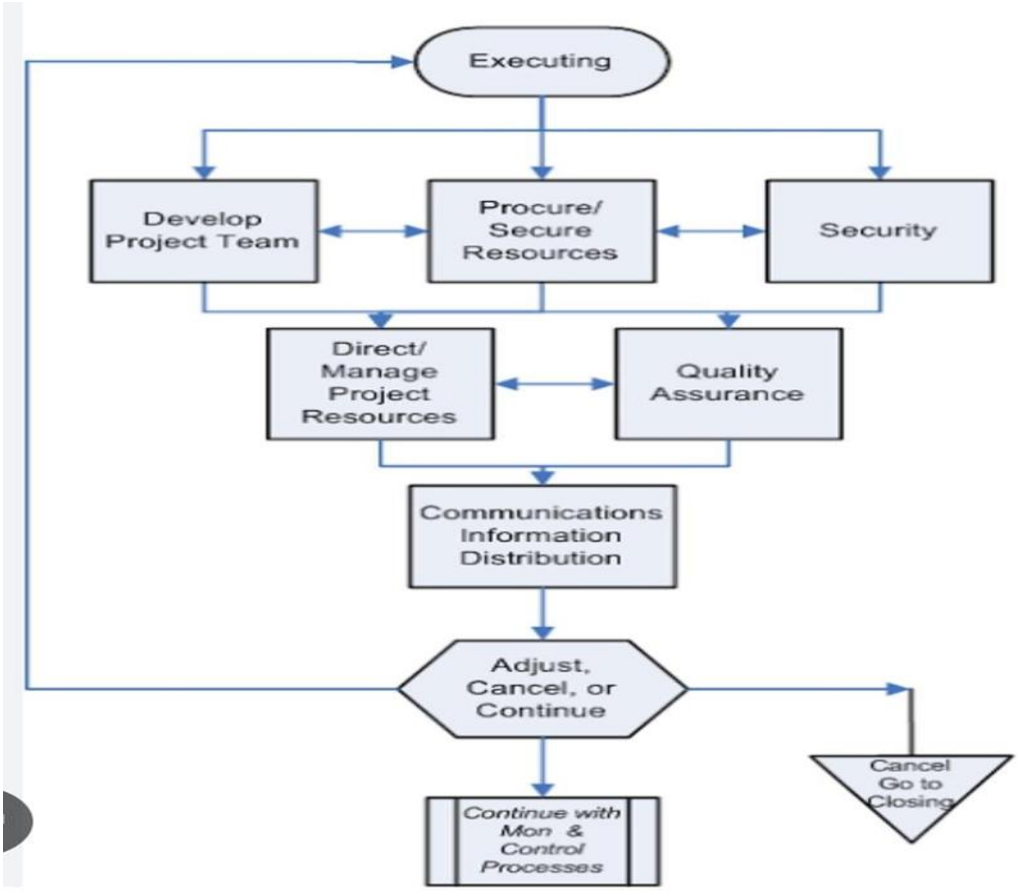


**Figure 3:** Project Management Process Guideline.

The construction industry is perhaps the most affected by a stalemate of project success. Various scholars and stakeholders have explored options to ensure that a standard criterion is availed to firms to measure the rate of success. Two models have since been identified to ensure uniformity when it comes to the definition of a project's success. Integrated Performance Index and the Key Performance Indicators have been identified as the models to help in rating the success of a project. The former was developed to measure the performance of R&D projects, while the latter was for UK construction industries in response to the Egan report of 1998, which strives to evaluate the success of a project on a 10-parameter basis. Projects are time-bound activities, and most of the time, they should be completed within the specified time. However, most project managers face challenges that make them delay the delivery of projects to the clients.

While in most instances, a project is deemed successful upon completion, most projects do not merit success as the managers strive to complete them within the specified time. Project success can be termed an illusion since it is nearly impossible to complete a project within the specified time using the few available resources. Management of various firms must go out of their means to ensure the success of a project, which sometimes gets them into fights with the team members. When team members are pushed beyond what they consider their limits to ensure a project is completed within time, they might not take it positively. Thus, it will still require the wisdom of a manager to contain such situations. Managers often strive to protect their jobs by protecting the company's reputation. To achieve this fete, the managers must ensure the projects assigned to them are successful. According to Irfan & and Hassan (2017), the success of a project restores the image and reputation of a company, thus making it competitive to attract more clients with similar projects to be completed. To ensure trust between the public and the government, the government always strives to be successful in all its undertakings. A failed project during a particular regime would go into history, and people will always talk about it all the time. Good governments are known for the successful projects completed, which makes the public confident of their leaders.


**Figure 4:** Classes of project failure.

To increase the chances of a project's success, there needs to be appropriate planning for the particular project. Determining tasks, actions, and resources to push for the completion of a project is widely viewed as the project plan. However, the planning of a project goes beyond the procedures mentioned above. Project planning, in most cases, is initiated by the management of an organization, and it involves monitoring, directing, communicating, and cooperating between the client, managers, and the team players of a given project. The stakeholders of a project must agree with all the undertakings without any fracture within the ranks. This is what constitutes a project plan. The actions to be undertaken during the implementation of a project should be predetermined, and one can predict the project's outcome before its implementation in the initial stages. When a

project is planned and designed appropriately, it is likely to be executed within the required duration as the firm undertaking the project will minimize wastages likely to occur due to no preparations. Gomes and his colleagues 2012 attribute three major steps of planning to define the success or failure of a project. The three factors include the technical skills required to drive the project, the knowledge and expertise of the management in handling projects, and the approach an organization takes towards every project they are to handle. An astute firm with competent managers should be able to clarify risks likely to occur in the project development during the planning stage. When the risks are identified early enough, they can be rectified without wasting resources. It is at the planning stage that a project's scope should be defined, thus increasing the chances of success.

When it comes to project management and success, the burden of project implementation lies with the project manager. A competent manager would ensure that any project assigned to them becomes a success. Competency is evaluated using three parameters; skill, knowledge, and the ability to understand all the project requirements and consolidate the team to have polished work on the assigned project. Competency could also mean the technical and motivational drive a manager gives to the rest of the team. It is the manager who takes the credit for success or the repercussions that come with the failure of the project. The competency of a manager is not pegged on the project's outcome. However, it should also be seen in the worker's ability to adapt to the system of the manager and their zeal to work on particular projects without having to be pushed. The work of team players should be seen as self-driven and not forced by external forces to do what they have been assigned to work on. According to Pinto and Slevin, when an organization is scheduled to appoint a project manager, they should be able to appoint an individual with managerial skills alongside technical know-how in handling related projects. It would then mean an engineering project must have an engineer as the project manager. In addition to their qualification as engineers, they must have managerial skills to handle those with whom they will be working together for the success of a particular project.

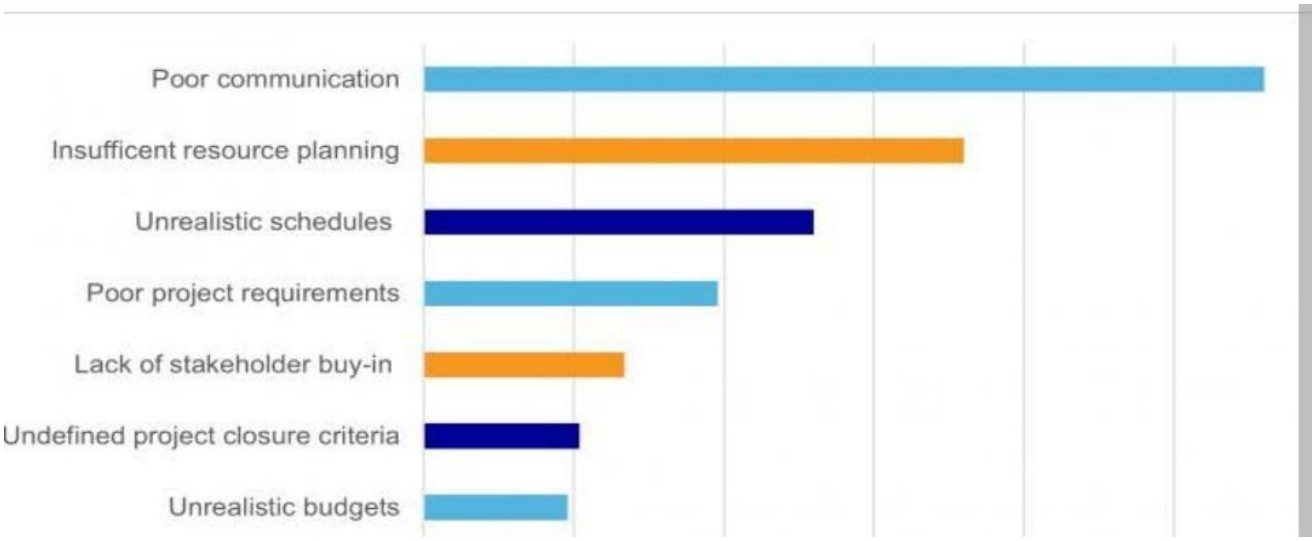


**Figure 5:** Reasons for Project Failures.

Time is a crucial factor in the success of a project. All projects are time-bound and should be delivered within the specified period. However, some factors have been attributed to the failure of several projects. Thus, projects

could fail due to other technicalities rather than time. The delays could be from the client, contractor, design technicalities, social factors, and failure of the entire project could also be a factor in the delivery delay.

Projects are owned by individuals who initiate their workability and delivery. Surprisingly, the delay in delivery could have been caused by the project owners. Some project owners' irresponsibility leads to delays in the delivery of their orders. Inadequate allocation of funds to a project is the greatest undoing by a project owner. All projects run on funds, and timely delivery of the same is crucial for the success of a project. When funds are allocated on time, the project manager gets enough time to plan for the next action and assign duties to the respective team players. When funds are paid beforehand as agreed, no project phase will stall, and the transition from one phase to the other will be effortless. All stakeholders will be occupied in their work, and there will be no work breakdown at any point. When the bidding process is not managed successfully, projects are bound to be delayed and might fail. The bidding procedure and process are the responsibility of the project owner and should be done to perfection. Projects could also be delayed when the owners fail to assign responsibility to their representatives. When there is no proper structure for the representatives, the firm handling the projects might not know whom to report to. In any case, there is a point to be clarified. According to Frimpong, delays in construction sites are sometimes caused by communication breakdowns resulting from the project's owner with the project handlers.

Contractors have been responsible for some project delays as well. The technical aspect of a project is the responsibility of the assigned contractor. When a project fails on the technical aspects, then the contractor takes the blame since it is in their capacity to fault-find defects in a given project. Poor material selection, misappropriation of budget, inadequate site inspections, poor planning, and lack of managerial skills by a contractor could jeopardize the success of a project (Ngowi, 2020).

Before the execution of a project, designs are made to project what the work will look like upon delivery. Instances of incomplete and poor designs have led to a delay in project delivery. When designing a project, it should be considered a while phase in implementing it. However, some scenarios have been recorded where the design phase was never completed. Failure to complete the design of a project will derail the work since, upon discovery, the project would have to be stopped to finish the remaining design. Poor designs that force redesigns have been attributed to delays as well since the construction has to stop momentarily to check on the defects of the design before the contractor resumes working on the project. Other factors for delay in delivery are classified as social factors. When working in an environment, the progress and rate of work will likely be driven by the attitude of those around the place. According to Majid and McCaffer, labor-related issues have compromised the timely delivery of some projects. When workers continuously strike for low wages, it would take time to resolve the wage stalemate before they resume work. By the time they report to work, much time would have been wasted, thereby increasing the number of days the project would have to be delivered. It is ideal that when a project is developed in a particular area, the inhabitants are always contracted to provide labor. However, sourcing labor from them could be risky as their artistry can be poor. Poor artistry would mean many corrections to the project, which would consume much time.

A project that fails to meet expectations is considered to have failed. This chapter outlines some of the

parameters that could lead to the failure of a project. The factors could be amongst the stakeholders or from the external forces surrounding the project to be executed.

A disagreement among the stakeholders on the project's progress can be a project failure (FORMOSO and his colleagues 2002). Project owners have a role to play since they define the success of their projects to a great extent. The role of a contractor is to give precise information regarding the bill of items required for a particular project. Misappropriation of funds, poor designs, and inadequate site visits could lead to delays in the delivery of information and, in some cases, project failure.

Every stakeholder in a project execution needs to perform their role as desired to avoid failure. When the investments made in a project fail to produce the desired results, then such projects are classified to have failed (Nelson, 2008). According to Nisar and Asif (2023), the reasons leading to project failure are multifaceted. This means that when a project fails, the blame for failure should not be on one individual but rather on the major stakeholders.

## 4. Research Gaps

Chapter 2 of this research fails to recognize the role of the project owner in the failure of a project. A firm will be credited for the success of a project while at the same time discredited due to failure. On the flip side, clients are never considered for a failed project, even if all factors of failure came from the clients' side.

When a project fails due to the client's negligence, there should be compensation to the firm authorized to handle the project because of the losses encountered. Some of the losses a firm will likely encounter include a damaged reputation, loss of working morale among the team players, and the resources used by the firm to make the project run. Upon completion of a project, it should be prudent to assess the failure or success factors to account for responsibility.

## 5. Summary of the Article

The article emphasizes project success or failure. Projects are designed to succeed; the success of a project is defined by the input of various stakeholders. Proper communication between various ranks can prevent the failure of a project. Lack of communication is a recipe for failure since an individual might ignore crucial information under it not being within their jurisdiction. A good manager ensures that the junior employees are handled with care and decorum. When they are valued within the firm, all team players feel to are part of the project and would not wish to see it ruined.

However, harsh managers with poor leadership skills could be a result of failure because their subordinates will never point to an erroneous activity for fear of victimization. Managers, team players, and project owners should collaborate to deliver success to any project. When every stakeholder plays their role as required and works with the rest of the team members, there would be no reason for any project to fail.

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