A Thesis on

Identification of success factor in construction projects:The contractors perspective

Submitted in the partial fulfillment of the award of

Master of Technology

In

CONSTRUCTION TECHNOLOGY & MANAGEMENT

by

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Session-2021-22

DECLARATION

I declare that the dessertation entitled "**Identification of success factor in construction projects : The contractors perspective**" is the bonafide research work carried out by me, under the guidance of Mr. Rajiv Banerjee Associate Professor, Department of Civil Engineering, Integral University, Lucknow. Further I declare that this has not previously formed the basis of award of any degree, diploma, associate-ship or other similar degrees or diplomas, and has not been submitted anywhere else.

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CERTIFICATE

Certified that the dissertation entitled **"Identification of success factor in construction projects : The contractors perspective "** *is being submitted by Mr Mohammed Salem (Roll no:* 2001103002*) in partial fulfillment of the requirement for the award of degree of Master of Technology (Construction Technology And Management) of Integral University, Lucknow , is a record of candidate's own work carried out by him under my supervision and guidance.*

The results presented in this thesis have not been submitted to any other university or institute for the award of any other degree or diploma.

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Abstract

The review was directed to compose a survey paper on the ID of most significant variables arranged by significance in the wake of evaluating different examinations regarding the matter. These variables can act as a rule while undertaking any task connected with the development business. Besides, different parts of the venture have additionally been investigated with respect to key qualities of Project Team, Project partners, and Project the board rehearses. These featured regions can assume a significant part in the fruitful task the executives of any undertaking connected with the development business. There are many variables that should be considered during the course project arranging, Project execution/execution, and completing of the activities. These elements assume fundamental part for on-time finish of the development Project. Out of the various elements required, there are a few basic variables which are mandatory to be considered for the progress of the development project.

Key words -Construction project success, Literature review, Project success factor, Project success criteria

CHAPTER 1

1.1 INTRODUCTION

The success of a construction projects is an important issue for most of the governments, users and communities. In modern construction projects there are significant challenges for both the clients and contractors to deliver the project successfully due to increasing complexity in design and the involvement of stakeholders . In the project management literature, project success has been widely discussed by many researchers. Most of the studies in project success have been focus on dimensionsin how it is measured and other specific factors influencing the project success. For an architect, a project is success base on the aesthetic performance, and for a contractor, project is success when the contractor gets a profit from the project.Project will be considered as success when the project is completed on time, within budget and the quality is satisfied by all. Success also can defined as much better results than the expected or normally obtained in term of cost, schedule, quality, and safety.

The meaning of ‘success’ itself has undergone many changes due to involvement of so many stakeholders in nowadays complex project environment .

A basic achievement element might sound confounded, yet it's really a straightforward idea. A basic achievement factor (frequently contracted "CSF") is an undeniable level objective that is basic for a business to meet. To be viable, a basic achievement factor must:

i. Be crucial to the association's prosperity.

ii. Benefit the organization or office overall.

iii. Be inseparable from a significant level objective.

iv. Interface straightforwardly to the business system.

1.1.1 Project Success Factors

Project the board covers a couple of elements that are fundamental to broaden accomplishment, as progress variables will be factors that effect, include as well as determine the end result of an endeavor. This definition is changed in this paper. essential accomplishment factors (CSFs) are "parts in an errand that are fundamental to the endeavor achieving its focal objective or goal.

1.1.2 Project Success Criteria

As the accomplishment factor alone wouldn't be great without the accomplishment models as it expects fundamental part in project the chiefs as it is an exercise in futility to conclude accomplishment factors until one has perceived the accomplishment norms at the essential spot. Besides, the endeavor a decent result is apparently more complete with both undertaking accomplishment components and accomplishment guidelines are contemplated in general .The some of progress rules for an endeavor are cost, expansion and time by Hampannaver, P. R. (2022).While the nuances might be different depending upon the business, association or objective of the endeavor anyway project accomplishment models accept fundamental part in project accomplishment factor.

The undertaking execution actually balancing out there by the undertaking credits, project quality, assistants, project cost, and the correspondence relationship of the undertakings. Audrius, B. (2018). suggest that the undertaking time, quality, and cost are the key show markers that get to the powerful improvement task; flourishing. Besides, formal game plan and booking of the undertaking resolves, genuine financial course of action arranging, and utilizing incredible norms increment the task;s show. In like manner, the task contract is immense as it reasonably depicts the bet dissipating. On the other, the qualities of the endeavor accessories checked as between different evened out clashes horribly influence the progression of the activities. Sharp cycles like getting sorted out, correspondence, checking, and control draw in the synchronization of undertaking rehearses from the very start till project fulfillment. Consistent different evened out assist plays a gigantic work in with projecting achievement. Past evaluation features assortment factors which add to project achievement. They coordinate the undertaking chief, project social event,

association, and outside climate. Similarly, client coordinated effort, pack limits, trailblazer support, objective clearness, mechanical assets, project purposes, assets, and moderate help are likewise included as CSF of PS. Subsequently, after carefully examining the past spotlights on the going with CSFs are famous (1) correspondence factors, (2) bundle factors, (3) specific parts, and (4) standard elements. Four essential accomplishment factor that influence the advancement projects. Correspondence factors are the strategy for sending or getting information, for instance, phone lines or PCs. Strong and brief correspondence is of most outrageous need in forming an environment that conveys project accomplishment. A gathering is a social occasion of individuals collaborating to achieve a common goal. Helpful endeavors a critical work in project accomplishment or disillusionment by DOBARIYA, H. (2020). . It is by and large recognized that versatile organization drops the errand achievement on a minor level; while the gathering conduct reduces the set focuses of a general endeavor. Regardless, the filed discussions and past assignments reports were helpful for the endeavor gathering to see the client essentials. Specific Factors Technical components are the plans of limits or data used to perform rational tasks in the space of adventure the board. Regular components mean the factors that were not intensely affected by the endeavor bunch. They, generally, are the external components, for instance Government plans, political shakiness, public catastrophe, pandemic, etc.

1.2 WHAT IS CRITICAL SUCCESS FACTOR ?

Critical success factor (CSF) is an administration term for a component that is essential for an association or project to accomplish its main goal. To accomplish their objectives they should know about each key success factor (KSF) and the varieties between the keys and the various jobs key outcome region (KRA).
A CSF is a basic component or movement expected for guaranteeing the outcome of an organization or an association. The term was at first utilized in the realm of information examination and business examination. For instance, a CSF for an effective Information Technology project is client involvement.

Basic achievement elements ought not be mistaken for progress rules. The last option are results of a venture or accomplishments of an association important to consider the task a triumph or the association fruitful. Achievement measures are characterized with the targets and might be evaluated by key execution pointers (KPIs).

The organization should know that it is fundamental for arrange the group that will be working with the CSFs, its important to have representatives present their thoughts or give criticism. Always remember to have different structures to look at the vital components of your drawn out objectives. Prior to executing your extensive smart course of action considering your basic achievement factors, figure out which elements are key in accomplishing your drawn out authoritative arrangement.

A decent cooperation is the way to progress, when all the staff team up additional thoughts and feelings can be examined to track down the most effective way to make progress.

To utilize the CSFs everything should be arranged, how workers will make it happen and why. Devices can be utilized to make arranging work quicker and simpler. A system for every office can be arranged independently.
The factors analysis reveals nine underlying clusternamely:

(i) safety and quality

(ii) past performance

(iii) environment

(iv) management and technical aspects

(v) resource

(vi) organization

(vii) experience

(viii) size/type of previous projects

(ix) finance .

Factors such as turnover history, quality policy, adequacy of labour and plant resource, waste disposal,size of past project completed, and company image aremost significant factors affecting project success.

CHAPTER -2

2.1 LITERATURE REVIEW

In an improvement project setting, assessment into project accomplishment overall falls into both of the streets that glance at project accomplishment factors or oversee accomplishment models Additionally, the ascent of undertaking accomplishment factors and accomplishment rules as a fundamental for the examination of adventure accomplishment is settled upon across composing world This designs the reason of composing study that is discussed in the going with subsections.

S.no	Name of the authors	Study on	Year of the study	Outcome
1	Noah Mwelu	International Journal of Construction Management Success factors	2019	A validated project success model is established to guide public road construction project implementa-tion. It is suggested that utilizing the model couldsave
2	Terry williams	Identifying Success Factors in Construction Projects: A Case Study	2016	The study also identifies some specific factors—some generic, some context-dependent—none of these is uncommon but

				here they come together synergistically.
3	Susil Kumara Silva	Critical Success Factors: En Route for Success of Construction Projects	2016	When important projects fail, the investigation is often focused on the engineering and technical reasons for the failure.
4	ABDELNASER OMRAN, MOHAMMED ALNOR ABDULBAGEI, ABDELWAHAB O. GEBRIL	AN EVALUATION OF THE CRITICAL SUCCESS FACTORS FOR CONSTRUCTION PROJECTS IN LIBYA	2002	This paper identifies ten critical success factors are important and will impact positively on construction projects if they are focused on by all the stakeholders and it can be concluded future work which examines different situations and environments.
5	Muhammad Saqib Rizwan U. Farooqui Sarosh Lodi	Assessment of critical success factors for construction projects in pakistan	2010	The initial objective of thus research were to define the critical factors that lead to project success and provide a forecasting tool to enable parties to rapidly asses the

				possibility of project success from their view
6	Sameh M. El-Sayegh, Solair Manjikian, Ahmed Ibrahim, Ahmed Abouelyousr & Raed Jabbour	Risk identification and assessment in sustainable construction projects in the UAE	2018	This will help them overcome risks and think about professional solutions before starting the project. Employing experienced labor and engineers and trained managers can hugely affect the project success.
7	Neringa GUDIENĖa , Audrius BANAITISa , Valentinas PODVEZKO	IDENTIFICATION AND EVALUATION OF THE CRITICAL SUCCESS FACTORS FOR CONSTRUCTION PROJECTS IN LITHUANIA: AHP	2018	This paper proposes the AHP approach as a tool to rank different critical success factors for construction projects.
8	Adrien Fariala1 & Olawumi Dele Awolusi2	AN EVALUATION OF THE CRITICAL SUCCESS FACTORS FOR CONSTRUCTION PROJECTS IN	2002	This paper identifies ten critical success factors are important and will impact positively on construction projects if

		LIBYA		they are focused on by all the stakeholders and it can be concluded future work which examines different situations and environments.
9	Adrien Fariala1 & Olawumi Dele Awolusi2	An assessment of Key Success Factors for Construction Projects in the Democratic Republic of Congo	2021	Based on the preceding discussion, the following are conclusions that can be drawn: · Effective and efficient risk management enhances the success of construction projects would be successful.
10	Mohammad Hosein Ramin a , Parviz Ghoddosi	Success Factors Evaluation in Construction Projects	2020	This study aims to investigate the success factors in civil projects. The five project success factors were ranked highest points to lowest, respectively, which include employer satisfaction, team satisfaction, project accidents, the project financial budgeting, and project scheduling. According to the

				observed studies, the findings were expected to be close to the same results.
11	Neringa GUDIENĖa , Audrius BANAITISa , Valentinas PODVEZKO	CRITICAL SUCCESS FACTORS FOR 6 7 COST MANAGEMENT IN PUBLIC- 9 8 HOUSING PROJECTS	2019	This paper analyses the vital underlying factors surrounding the successful Cost Management Process (CMP) outcomes in Public Housing Projects (PHPs).
12	Idris OTHMAN , Mohanad Kamil , Riza Yosia SUNINDIJO	AN EVALUATION OF THE CRITICAL SUCCESS FACTORS FOR CONSTRUCTION PROJECTS IN LIBYA	2002	This paper identifies ten critical success factors are important and will impact positively on construction projects if they are focused on by all the stakeholders and it can be concluded future work which examines different situations and environments.

13	Idris OTHMAN1 , Mohanad Kamil , Riza Yosia SUNINDIJO	Critical success factors influencing construction safety program implementation in developing countries	2020	The aim of this study is to identify the critical success factors that influencing safety program implementation in developing countries. Interviews conducted with industry practitioners in the Iraqi construction industry.
14	Nguyen Le, Oswald Chong	Success Factors for Project Risk Management in Construction Projects: A Vietnam Case Study	2020	The main research objective is to identify success factors that could address common risks and improve project performance in the VCI. The research first identified the success factors through extensive literature review for developing countries, and prior research in the field.

15	Janusz Sobieraj and Dominik Metelsk	Quantifying Critical Success Factors (CSFs) in Management of Investment-Construction Projects: Insights from Bayesian Model Averaging	2019	This paper focuses on those CSFs that have been most frequently cited in the world and Polish literature. For this purpose, an in-depth review of the literature of successful investment project management was performed.
16	Tadesse AYALEW, Zakaria DAKHLI	Assessment on Performance and Challenges of Ethiopian Construction Industry	2002	This paper identifies ten critical success factors are important and will impact positively on construction projects if they are focused on by all the stakeholders and it can be concluded future work which examines different situations and environments.
17	Antonio Carlos Pacagnella Junior, Marcelo Sales Paschoal	Identification and Evaluation of Critical Success Factors for Construction Projects	2018	In the last decade, the Brazilian economic scenario was favorable to the construction sector, fostering its growth especially in large infrastructure projects such as the

				expansion and construction of airports, roads, stadiums, among others.
18	PEJMAN REZAKHANI	CLASSIFYING KEY RISK FACTORS IN CONSTRUCTION PROJECTS	2012	Risk management is an important step in project success. It is the process of identifying, classifying, analysing and assessing of inherent risks in a project.
19	Ibrahim Yahya , Qipin Shen	Developing critical success factors for integrating circular economy into modular construction projects in Hong Kong Author	2022	Circular construction practices and business models are considered essential to reduce the profound impact of the construction sector to the widening global circularity gap.
20	Dinh Tuan Hin	Critical success factors for implementing PPP infrastructure projects in developing countries: the case of Vietnam	2022	The success or failure of a Public–Private Partnership (PPP) project depends on various factors. This study aims to identify and assess critical success factors (CSFs)

				for PPP infrastructure project implementation.
21	Isaac Skaayi	Assessing public sector road construction projects' critical success factors in a developing economy: Definitive stakeholders' perspective	2021	This study assessed the critical success factors (CSFs) of public-sector road construction projects execution from the perspective of definitive stakeholders associated with such projects by drawing on in-depth semi-structured interviews .
22	Katrin Knot , Mamu Fufa	Barriers, success factors, and perspectives for the reuse of construction products in Norway Author	2022	Reuse of construction materials and products has great potential to reducethe environmental footprint of a building.
23	Saud Mohammad Bin juabir	Critical Success Factors of Public-private Partnership (PPP) Projects in the Kingdom of Saudi Arabia	2022	In a world where governments are looking at alternative ways of developing economies, infrastructure

				development remains a key aspect of these aspirations. For Middle East economies, which have relied on oil proceeds, the growth strategy is not as before as the oil prices have been fluctuating and resulting in low fiscal incomes. Saudi Arabia is one such economy.
22	Bilal Ktaish and Milkos Hajdu	Success Factors in Projects	2022	The literature of project success is very wide one. Various articles focus on the evolution of the understanding of project success. Every party in the project has its own perception thus forming different criteria of project success.

23	Enas Abu Namous and Mohammed Al Battah	Evaluating the actors That Cause Cost and Time Overrun in the ResidentialConstructi on Projects in the UAE: Project Manager Perspective	2021	The most significant factors that contribute to time overrun are "the inadequate experience of contractor" and "delay in material delivery" as well. The construction industry is considered an essential element to stabilize countries economically.
24	Shawn H. Charles, Alice Chan g-Richards	New success factors for construction projects: a systematic review of post-2004 literature	2021	The purpose of this study is to elicit the success factors from empirical evidence, as construction industry requires an improved understanding of factors for managing projects to positive outcomes.
25	Mashwama, N., Aigbavboa, C., & Thwala , D.	An ssessment of the Critical Success factor for The Reduction of Cost of Poor Quality in Construction Projects	2017	The implementation of quality management systems at the beginning of the project and encouraging team work in the project could assist construction projects.

26	Joanna Moczydłowska, Joanna Sadkowska	Project culture as a key project success factor: the perspective of Polish project managers	2021	The results of the empirical studies indicate that inclusion of project culture, with special attention paid to its openness, significantly contributes to the clarification of the way project attributes affect project outcome.
27	Mujahed M. Theneid	Critical success factors for value management techniques in construction projects: case in Jordan	2021	This study aims to identify the critical success factors (CSFs) of Value Management (VM) in construction projects in the context of developing countries.
28	Ibrahim Yahaya Wuni	Developing critical success factors for integrating circular economy into modular construction projects in Hong Kong	2022	Round about development practices and plans of action are viewed as fundamental to decrease the significant effect of the development area to the broadening worldwide circularity hole.
29	Zakari Tsiga	Decision making in Engineering Projects.	2022	Even though risk management is a vital aspect of project management, the way that risk-based decisions are taken in projects is not well documented.

30	Rashmi Shahu , Ashok K. Pundir & L. Ganapathy	An Empirical Study on Flexibility: A Critical Success Factor of Construction Projects	2012	There are several factors that have been identified as the critical success factors for the performance of construction projects. A lot of research work is available identifying the critical success factors for construction projects.

2.2 OBJECTIVE

- To Identify success factor in construction projectsbased on previous studies .
- To conduct a comparative analysis of identifying factors.
- To compare co-relation among contractors, project managers and engineers.

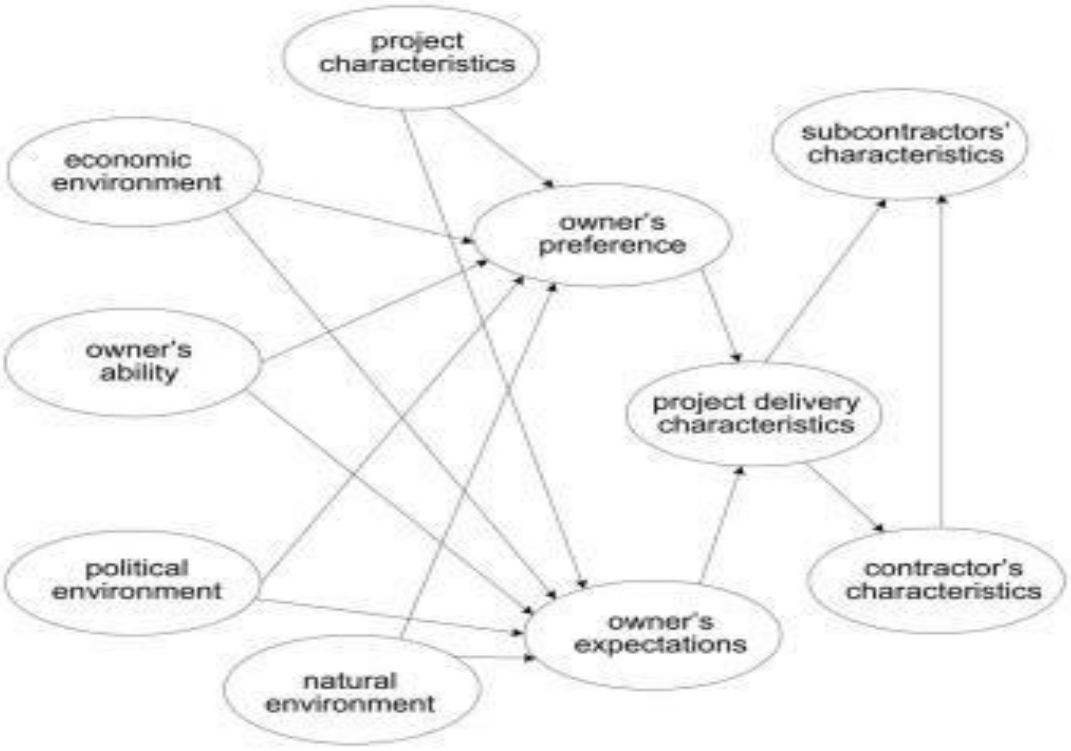


Fig 1 Inter-relationship among success factor in Construction of project(Daboun O., Md Yusof, A., Khoso A.R. 2022)

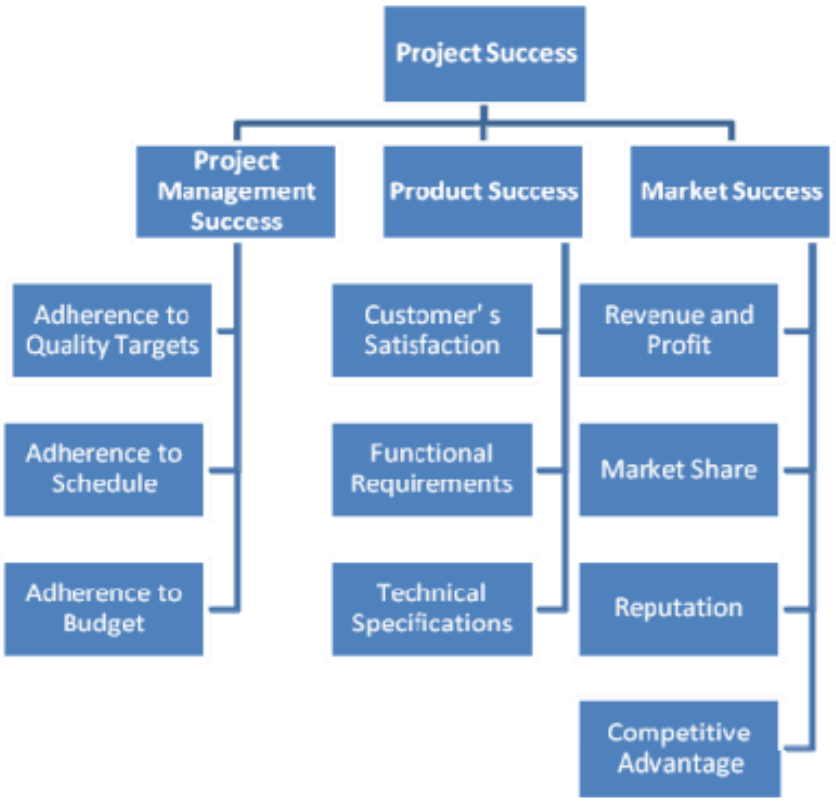
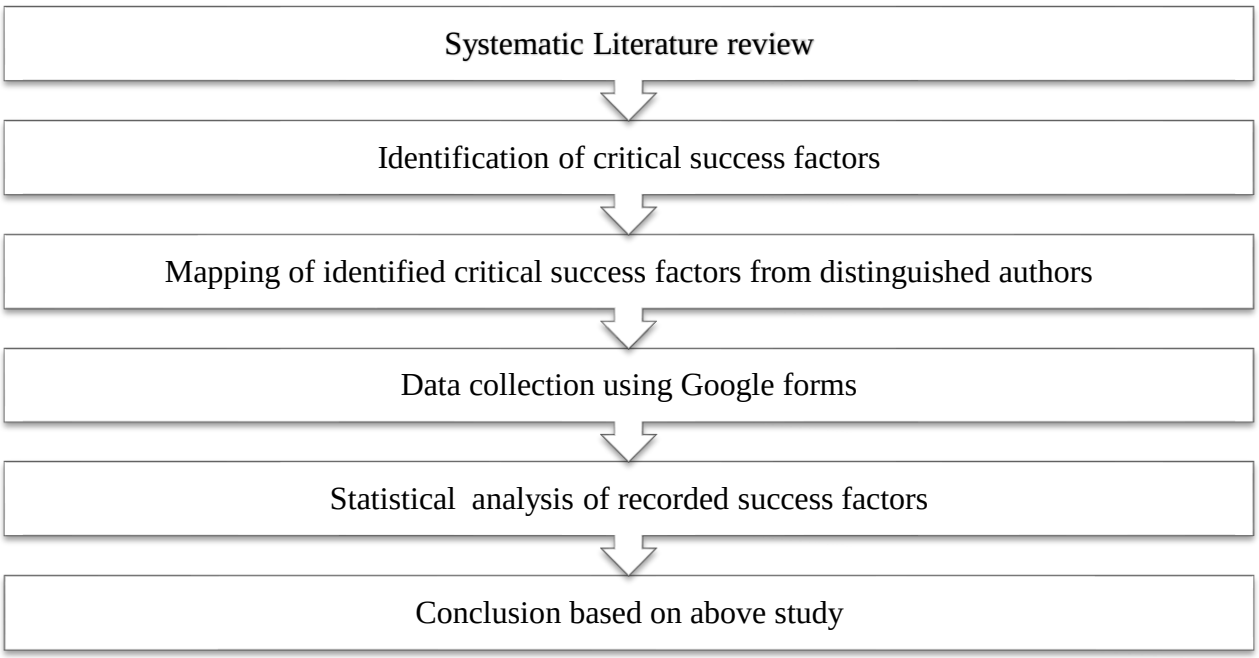


Figure 1. Success criteria for building projects (Al-Tmeemy, Abdul-Rahman & Harun, 2011)

CHAPTER 3

3.1 METHODOLOGY



Methodical Literature audit has been worked for Identification of basic achievement factors. Planning could be fixed for recognized basic achievement factors from recognized creators with the information gathered through quantitative study . Google structures were planned to get reactions from the experts. Information examination were achieved by factual investigation of recorded achievement factors. The headway of the undertaking can't be accomplished without seeing the fundamental achievement factors, the principal dissatisfaction factors regardless of the achievement models, Determine the rules for progress is the fundamental part in aiding the level of the task achievement, these activities are the essential focuses on that the association of connection and experience need to guarantee its accomplishment, After that, the perceiving of the parts that lead to of gain such rules and use them in raising the level of the undertaking flourishing and the variables that would ruin the accomplishment of these activities to prevent their event or limit the hostile outcomes on the consequence of the undertaking. In sales to get these models and factors and following zeroing in on the related creation, it has been wiped out various parts and models and separated into seven get-togethers. Get-togethers expect a critical part with

various task chiefs, organizers, and specialists in the field of evaluation who have the particular and cognizant capacity to figure out the reasons, issues, obstructions, and different things that lead to the disappointment of tries likewise as seeing whatever could lessen or take out their threatening impacts, a d to pick the rules for progress and the parts that lead to getting these standards. After the finishing of this open review, a shut development overview has been coordinated and familiar with various specialists to assess.

3.2 DATA COLLECTION AND ANALYSIS

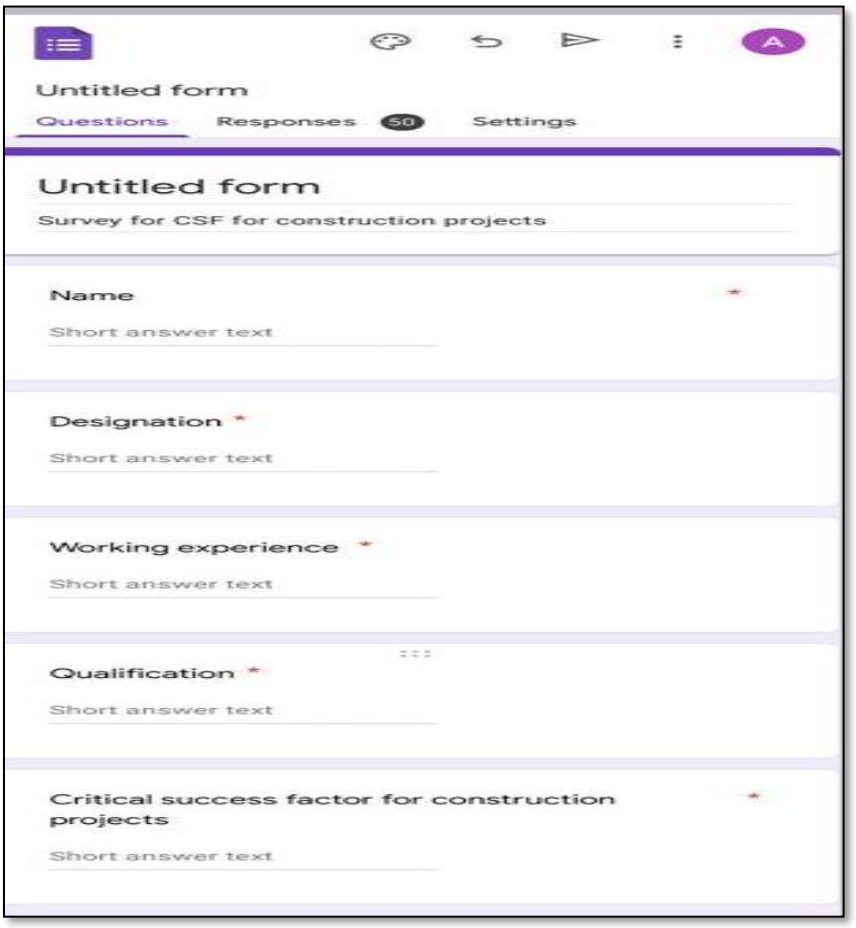


Figure1. Screenshot of the designed Google form

GOOGLE FORM LINK:

https://docs.google.com/forms/d/e/1FAIpQLSc618x4N5_PSae41CaMnqviK74Hg3kYasB4iFS7acAReIy1Aw/viewform?usp=sf_link

3.2.1 DATA ANALYSIS

These rating are done by the following causes that may lead to selecting most suitable type for identification of success factors in construction projects.

(Engineer, project managers and contractors are given rating on the scale of 1 to 5 for each factors.

1 = Not important

2= slightly important

3 = moderately important

4= Important

5= very important

Relative important Index

Relative Weight Analysis is a useful technique to calculate the relative importance of predictors (independent variables) when independent variables are correlated to each other. It is an alternative to multiple regression technique and it addresses multi co-linearity problem and also helps to calculate the importance rank of variables. It helps to answer "Which variable is the most important and rank variables based on their contribution to R-Square".

All the data of these tables were analyzed by a RII index.

RII=∑ W/ (Ax N)

Where W= weight given to each factor by the respondents, ranges from 1 to 5,

A= highest weight (i.e. 5 in this case)

N= Total number of responses

Weighted Average Index Method

Weighted average is a calculation that takes into account the varying degrees of importance of the numbers in a data set. In calculating a weighted average, each number in the data set 5 multiplied by a predetermined weight before the final calculation is made.

A weighted average can be more accurate than a simple average in which all numbers in a data set are assigned an identical weight.

Calculation of these data for all these tables were analyzed by weighted average was calculated

$WAI=(W_1 * X_1) / N$

W_1 is the weight assign to the 1st option

X_1 is the number of respondents who selected the 1st option

N is the total number of respondent.

Table 3.2.1 Ranked by Engineers

S.no.	Factors	Numbers Respondent Scoring 5	4	3	2	1	Total (N)	Weighting	RII Value	Rank
1	Training the HR. in the skill demanded by Project	11	5	2	1	1	20	84	0.84	1
2	Constructability program	8	6	4	2	0	20	80	0.80	4
3	Motivation/Incentives Forma dispute resolution process	5	3	4	5	3	20	62	0.62	13
4	Risk identification and allocation	10	4	3	3	0	20	81	0.81	3
5	Prior project management experience	4	5	3	4	4	20	61	0.61	14
6	Control of sub-contractors‟ work	4	3	6	5	2	20	62	0.62	10
7	Planning effort	6	3	2	5	4	20	62	0.62	11
8	Troubleshooting	8	3	2	2	5	20	67	0.67	8

9	Feedback capabilities	11	5	1	1	2	20	82	0.82	2
10	Control mechanism	3	5	0	3	5	20	46	0.46	16
11	Communication system	7	5	5	3	0	20	76	0.76	6
12	Formal dispute resolution process	7	4	2	4	3	20	68	0.68	7
13	Involvement of Stakeholders	9	5	4	0	2	20	79	0.79	5
14	Project delivery system (e.g. design-bid-build, design build)	3	3	6	3	5	20	56	0.56	15
15	Awarding bids to the right project manager/contractor	4	6	3	4	3	20	64	0.64	9
16	Project bidding method (e.g. price based competitive bidding, negotiated bidding, best value bidding)	3	5	5	5	2	20	62	0.62	12

Table 3.2.2 Ranked by Contractors

S.no.	Factors	Numbers Respondent Scoring 5	4	3	2	1	Total (N)	Weighting	RII Value	Rank
1	Training the HR. in the skill demanded by Project	7	8	5	0	0	20	82	0.82	2
2	Constructability program	7	6	4	3	0	20	79	0.79	3
3	Motivation/Incentives Forma dispute resolution process	3	3	2	5	7	20	50	0.50	13
4	Risk identification and allocation	4	3	2	4	7	20	53	0.53	12
5	Prior project management experience	4	4	3	3	6	20	57	0.57	10
6	Control of sub-contractors‟ work	6	7	4	2	1	20	75	0.75	4
7	Planning effort	4	4	2	3	7	20	54	0.54	11
8	Troubleshooting	5	5	4	4	2	20	67	0.67	8
9	Feedback capabilities	10	8	2	0	0	20	88	0.88	1
10	Control mechanism	2	0	3	6	9	20	40	0.40	16
11	Communication system	6	6	3	4	1	20	72	0.72	6
12	Formal dispute resolution process	5	6	3	4	2	20	68	0.68	7
13	Involvement of Stakeholders	6	6	4	3	1	20	76	0.76	5

14	Project delivery system (e.g. design-bid-build, design build)	3	0	4	5	8	20	45	0.45	15
15	Awarding bids to the right project manager/contractor	3	2	2	5	8	20	47	0.47	14
16	Project bidding method (e.g. price based competitive bidding, negotiated bidding, best value bidding)	5	4	4	4	3	20	70	0.70	9

Table 3.2.3 Ranked by project managers

S.no.	Factors	Numbers Respondent Scoring 5	4	3	2	1	Total (N)	Weighting	RII Value	Rank
1	Training the HR. in the skill demanded by Project	3	1	3	2	1	10	33	0.66	7
2	Constructability program	6	1	2	0	1	10	41	0.82	3
3	Motivation/Incentives Forma dispute resolution process	2	3	4	0	1	10	35	0.7	5
4	Risk identification and allocation	6	1	2	1	0	10	42	0.84	2
5	Prior project management	2	2	3	1	1	10	30	0.6	10

	experience									
6	Control of sub-contractors‟ work	3	3	2	1	1	10	36	0.72	4
7	Planning effort	3	1	0	3	3	10	28	0.56	13
8	Troubleshooting	1	3	2	2	2	10	29	0.58	12
9	Feedback capabilities	5	4	0	1	0	10	43	0.86	1
10	Control mechanism	2	1	3	1	3	10	28	0.56	14
11	Communication system	3	3	1	3	0	10	34	0.68	6
12	Formal dispute resolution process	3	1	2	3	1	10	30	0.6	9
13	Involvement of Stakeholders	2	2	2	3	1	10	31	0.62	8
14	Project delivery system (e.g. design-bid-build, design build)	1	1	1	4	3	10	23	0.46	16
15	Awarding bids to the right project manager/contractor	2	1	1	2	4	10	25	0.5	15
16	Project bidding method (e.g. price based competitive bidding, negotiated bidding, best value bidding)	1	2	4	1	2	10	29	0.58	11

3.4 SPEARMAN'S RANK CORRELATION CORFFICIENT

In statistics, SPEARMAN'S RANK CORRELATION COEFFICIENT or Spearmen's (p), named after The Spearmen correlation between two variables is equal to the Pearson correlation between the rank value of those two variables; while Parsons correlation assess linear relationships, Spearman's correlation assesses monotonic relationship (whether linear or not).If there are no repeated data values, a perfect Spearman's correlation of +1 or -1 occurs when each of the variables is a perfect monotone function of the other .

Intuitively, the Spearman correlation between two variables will be high when observations have a similar (or identical for a correlation of 1)rank (I.e. relative position label of the observations within the variable: 1st , 2nd, 3rd, etc) between the two variables, and low when Observations have a dissimilar (or fully opposed for a correlation of -1) rank between the two variables.

$$\boldsymbol{\rho = 1 - \frac{6\sum d_i^2}{n(n^2 - 1)}}$$

$\boldsymbol{\rho}$ = Spearman's correlation coefficient

d_1= Difference between the two ranks of each observation

n= Number of observations

Table 3.4.1 Spearman's Rank Correlation between Engineers and Contractors.

S.no.	Questions	Rank by engineers (R1)	Rank by Contractors (R2)	Diff. $\sum$	Diff^2 $\sum^2$
1	Training the HR. in the skill demanded by Project	1	2	-1	1
2	Constructability program	4	3	1	1
3	Motivation/Incentives Forma dispute resolution process	13	13	0	0
4	Risk identification and allocation	3	12	-9	81
5	Prior project management experience	14	10	4	16
6	Control of sub-contractors‟ work	10	4	6	36
7	Planning effort	11	11	0	0
8	Troubleshooting	8	8	0	0
9	Feedback capabilities	2	1	1	1
10	Control mechanism	16	16	0	0
11	Communication system	6	6	0	0
12	Formal dispute resolution process	7	7	0	0
13	Involvement of Stakeholders	5	5	0	0
14	Project delivery system (e.g. design-bid-build, design build)	15	15	0	0
15	Awarding bids to the right project manager/contractor	9	14	-5	25

16	Project bidding method (e.g. price based competitive bidding, negotiated bidding, best value bidding)	12	9	3	9

$\sum D^2=170$

Spearman's Rank Correlation result is 0.75, hence the value is near by 1, that's why result is reliable.

Table 3.4.2 Spearman's Rank Correlation between Contractors and project managers

S.no.	Questions	Rank by Contractors (R2)	Rank by project managers (R3)	Diff $\sum$	Diff^2 $\sum d^2$
1	Training the HR. in the skill demanded by Project	2	7	-5	25
2	Constructability program	3	3	0	0
3	Motivation/Incentives Forma dispute resolution process	13	5	8	64
4	Risk identification and allocation	12	2	10	100
5	Prior project management experience	10	10	0	0
6	Control of sub-contractors‟ work	4	4	0	0
7	Planning effort	11	13	-2	4
8	Troubleshooting	8	12	-4	16
9	Feedback capabilities	1	1	0	0

10	Control mechanism	16	14	2	0
11	Communication system	6	6	0	0
12	Formal dispute resolution process	7	9	-2	4
13	Involvement of Stakeholders	5	8	-3	9
14	Project delivery system (e.g. design-bid-build, design build)	15	16	-1	1
15	Awarding bids to the right project manager/contractor	14	15	-1	1
16	Project bidding method (e.g. price based competitive bidding, negotiated bidding, best value bidding)	9	11	-2	4

$\sum D^2=230$

Spearman's Rank Correlation result is 0.67, hence the value is near by 1, that's why result is reliable.

Table 3.4.3 Spearman's Rank Correlation between Project managers and contractors

S.no.	Questions	Rank by project managers (R3)	Rank by Engineers (R1)	Diff ∑d	Diff^2 ∑d^2
1	Training the HR. in the skill demanded by Project	7	1	6	36
2	Constructability program	3	4	-1	1
3	Motivation/Incentives Forma dispute resolution process	5	13	-8	64
4	Risk identification and allocation	2	3	-1	1
5	Prior project management experience	10	14	-4	16
6	Control of sub-contractors‟ work	4	10	-6	36
7	Planning effort	13	11	2	4
8	Troubleshooting	12	8	4	16
9	Feedback capabilities	1	2	-1	1
10	Control mechanism	14	16	-2	4
11	Communication system	6	6	0	0
12	Formal dispute resolution process	9	7	2	4
13	Involvement of Stakeholders	8	5	3	9
14	Project delivery system (e.g. design-bid-build, design build)	16	15	1	1
15	Awarding bids to the right project manager/contractor	15	9	6	36

16	Project bidding method (e.g. price based competitive bidding, negotiated bidding, best value bidding)	11	12	-1	1

$\sum D^2=230$

Spearman's Rank Correlation result is 0.715, hence the value is near by 1, that's why result is reliable.

3.5 RESPONDENT'S PROFILE

Respondents	Frequency (percentage) %
Gender	
Male	40
Female	05
Total	50
Type of respondents position	
1. Engineer	20
2. Contractor	20
3. Project managers	10
Working experience	
0-5 years	33
6-10 years	14
Greater than 10 years	3

CHAPTER-4

CONCLUSION

There are 16 basic achievement factors which assume a main part in project achievement restricted to the zone of study. Contracting technique recognized by significant defilement cases probably exorbitant costs prompts a colossal number of parts orders in government projects considers adversely the expense of the undertaking. Basic achievement factors that have been recognized spotlights on the variables that prompt extraordinary wastage of cash with the feeble encounters of the project workers .

These are the important factors – Construction Program , Risk Management , Planning efforts , Feedback Capabilities, Risk Identification and Allocation , Involvement of Stakeholders etc. are focused and they are important factors for selecting most suitable success factors in construction projects .

So we conclude that from this research work the result of spearman's rank correlation between

i. Engineer – Contractor are 0.75

ii. Contractor – Project Manager are 0.67

iii. Project Manager – Engineer are 0.71

That means the data are reliable and ranking given by engineer contractor and project manger are correlated strongly .

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Appendices

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Mohammed Salem

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Good luck for your future endeavors

By

Editor in Chief, **iJRASET**

IDENTIFICATION OF SUCCESS FACTOR IN CONSTRUCTION PROJECTS : THE CONTRACTORS PERSPECTIVE

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Abstract*—The study was conducted to write a review paper on the identification of most important factors in order of importance after reviewing various studies on the subject. These factors can serve as a guideline while undertaking any project related to the construction industry. Moreover, var- ious aspects of the project have also been explored regarding key traits of Project Team, Project stakeholders, and Project management practices. These highlighted areas can play an important role in the successful project management of any project related to the construction industry. There are many factors that need to be considered during the course project planning, Project execution/implementation, and finishing of the projects. These factors play vital role for on-time completion of the construction Project. Out of the numerous factors involved, there are some critical factors which are compulsory to be considered for the success of the construction project.

Index Terms-Construction project success, Project success factor, Project success criteria, Literature review

I. INTRODUCTION

Project success analyses and critical factors for performance are widely used to enhance project quality and effectiveness. According to, the idea of project success was often elusive to the minds of industry professionals. Success factors were defined by Rockart et al. (2018) as "those few areas of activity in which favorable results are necessary for a manager to reach his/her goals." The methodology of CSFs is a process that tried to determine the important areas that management requires to improve their efforts to achieve pre-determined objectives. There are many factors that need to be considered during the course project planning, project execution/implementation, and finishing of the projects. These factors play vital role for on time completion of the construction Project. Out of the numerous factors involved, there are some critical factors which are compulsory to be considered for the success of the construction project.

II. LITERATURE REVIEW

In a construction project context, research into project success generally falls into either one of the avenues that examine project success factors or deal with success criteria Additionally, the emergence of project success factors and success criteria as a prerequisite to the study of project success is agreed upon across literature world .This forms the basis of literature review that is discussed in the following subsections.

2.1 Project Success Factors.

Project management covers several factors that are critical to project success, as success factors are factors that influence, constitute as well as determine the success of a project. This definition is adapted in this paper. critical success factors (CSFs) are “elements in a project that are critical to the project achieving its mission or goal.

2.2 Project Success Criteria.

As the success factor alone would not be perfect without the success criteria as it plays very important role in project management as there is no point in determining success factors until one has identified the success criteria at the first place. In addition, the project success seems to be more complete with both project success factors and success criteria are taken into consideration as a whole .The some of success criteria for a project are cost, scope and time.. While the details might be different depending on the industry, company or objective of the project but project success criteria play very important role in project success factor.

2.3Critical Success Factors
The undertaking execution still up in the air by the venture attributes, project quality, partners,
project cost, and the correspondence interaction of the undertakings. Hussain, Xuetong propose
that the undertaking time, quality, and cost are the key presentation markers that improve
development task; prosperity. In addition, formal preparation and booking of the undertaking exercises, legitimate financial plan arranging, and utilizing excellent norms increment the task;s exhibition. Also, the task contract is significant as it unbiasedly characterizes the gamble dispersion. On the other, the qualities of the task partners checked as between hierarchical discords adversely influence the progress of the activities. Intelligent cycles like arranging, correspondence, checking, and control empower the synchronization of undertaking exercises from the beginning till project fulfilment. Ceaseless hierarchical help plays a huge job in project achievement. Past examination features variation factors which add to project achievement. They incorporate the project chief, project group, association, and outside climate. Also, client cooperation, group abilities, leader support, objective lucidity, mechanical assets, project purposes, assets, and hierarchical help are additionally featured as CSF of PS.
Hence, after cautiously exploring the past concentrates on the accompanying CSFs are famous
(1) correspondence factors, (2) group factors, (3) specialized elements, and (4) natural
variables.

Four critical success factor that effect the construction projects. Communication factors are the means of sending or

receiving information, such as phone lines or computers. Effective and concise communication is of utmost necessity in forming an environment that delivers project success. A team is a group of individuals working together to achieve a common goal. Team plays an important role in project success or failure. It is widely accepted that flexible management descends the project success on a minor level; whereas the team behaviour diminishes the set objectives of an overall project. However, the documented discussions and previous projects reports were helpful for the project team to recognize the client requirements. Technical Factors Technical factors are the sets of abilities or knowledge used to perform practical tasks in the areas of project management. Environmental factors mean the factors that were not under the control of the project team. They, generally, are the external factors, i.e. Government policies, political instability, national disaster, pandemic etc.

Critical Success Factors								
Author	Finance	Schedule	Quality	Content	Administration	Safety	Resources	Environment
Twang (2022)	*	*	*		*			
M Maiwald (2022)	*	*	*	*			*	
J Goedert (2021)	*	*	*		*			
W Hao (2020)	*	*	*		*		*	*
V Rogo (2020)	*	*	*	*		*		*
GU Ojiako (2019)	*	*	*	*				
WA SHAWISH (2018)	*	*	*		*		*	*
Note: '*' is refer to the conclusion of CSFs from previous researchers/studies								

Action Plan

The progress of the undertaking cant be accomplished without recognizing the basic achievement factors, the basic disappointment factors notwithstanding the achievement models, Determine the standards for progress is the primary component in boosting the extent of the task prosperity, these measures are the fundamental objectives that the administration of association and venture need to guarantee its accomplishment, After that, the distinguishing of
the elements that lead to of gain such rules and utilize them in raising the extent of the venture prosperity and the variables that would forestall the accomplishment of these measures toforestall their event or limit the adverse consequences on the outcome of the venture. In request to get these models and factors and in the wake of concentrating on the connected writing, it has been removed various elements and models and isolated into seven gatherings. Meetings play an important role with various task administrators, architects, and specialists in the field of examination who have the specialized and logical skill to figure out the reasons, issues, deterrents, and different things that lead to the disappointment of undertakings as well as recognizing whatever could lessen or eliminate their antagonistic impacts, and to decide the rules for progress and the elements that lead to getting these standards. After the finishing of this open survey, a shut structure poll has been arranged and introduced to various specialists to assess

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IDENTIFICATION OF SUCCESS FACTOR IN CONSTRUCTION PROJECTS : THE CONTRACTORS PERSPECTIVE

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Abstract— The review was directed to compose a survey paper on the ID of most significant variables arranged by significance in the wake of evaluating different examinations regarding the matter. These variables can act as a rule while undertaking any task connected with the development business. Besides, different parts of the venture have additionally been investigated with respect to key qualities of Project Team, Project partners, and Project the board rehearses. These featured regions can assume a significant part in the fruitful task the executives of any undertaking connected with the development business. There are many variables that should be considered during the course project arranging, Project execution/execution, and completing of the activities. These elements assume fundamental part for on-time finish of the development Project. Out of the various elements required, there are a few basic variables which are mandatory to be considered for the progress of the development project.

Key words -Construction project success, Literature review, Project success factor, Project success criteria

1. INTRODUCTION

Project accomplishment assessments and fundamental components for execution are by and large used to further develop project quality and reasonability. According to, project accomplishment was habitually interesting to the characters of industry specialists. Accomplishment factors were portrayed by Tan, O. K. (2022) as "those two or three areas of development where extraordinary results are crucial for a boss to show up at his/her goals." The strategy of CSFs is a cycle that endeavored to conclude the huge locales that organization hopes to chip away at their undertakings to achieve pre-chosen targets. There are

numerous components that ought to be considered during the course project orchestrating, project execution/execution, and finishing of the endeavors. These factors expect basic part for on time realization of the advancement Project. Out of the different factors expected, there are a couple of essential components which are required to be considered for the advancement of the improvement project.

2. LITERATURE REVIEW

In an improvement project setting, assessment into project accomplishment overall falls into both of the streets that glance at project accomplishment factors or oversee accomplishment models Additionally, the ascent of undertaking accomplishment factors and accomplishment rules as a fundamental for the examination of adventure accomplishment is settled upon across composing world This designs the reason of composing study that is discussed in the going with subsections.

Analyze down the regularizing writing on PPP achievement variables to infer a set
factors inside various the lifetime periods of PPP foundation projects, with various achievement factors inside the inception/arranging stage, the obtainment stage, and the association stage. The case talked about in this article was to a great extent worried about the first of these two stages.
Past these efforts to make a scientific classification of settings, be that as it may, the writing presently frequently draws decisions about the achievement or disappointment of undertakings inside their particular settings and chronicles, which is the means by which we will check out at these tasks in the accompanying segment. This additionally lines up with the expanding worry to explore "projects as work on" taking a gander at the praxis, the specialists, and the practices inside the arranged setting

2.1 Project Success Factors

Project the board covers a couple of elements that are fundamental to broaden accomplishment, as progress variables will be factors that effect, include as well as determine the end result of an endeavor. This definition is changed in this paper. essential accomplishment factors (CSFs) are "parts in an errand that are fundamental to the endeavor achieving its focal objective or goal.

2.2 Project Success Criteria

As the accomplishment factor alone wouldn't be great without the accomplishment models as it expects fundamental part in project the chiefs as it is an exercise in futility to conclude accomplishment factors until one has perceived the accomplishment norms at the essential spot. Besides, the endeavor a decent result is apparently more complete with both undertaking accomplishment components and accomplishment guidelines are contemplated in general .The some of progress rules for an endeavor are cost, expansion and time by Hampannaver, P. R. (2022).While the nuances might be different depending upon the business, association or objective of the endeavor anyway project accomplishment models accept fundamental part in project accomplishment factor.

The undertaking execution actually balancing out there by the undertaking credits, project quality, assistants, project cost, and the correspondence relationship of the undertakings. Audrius, B. (2018). suggest that the undertaking time, quality, and cost are the key show markers that get to the powerful improvement task; flourishing. Besides, formal game plan and booking of the undertaking resolves, genuine financial course of action arranging, and utilizing incredible norms increment the task;s show. In like manner, the task contract is immense as it reasonably depicts the bet dissipating. On the other, the qualities of the endeavor accessories checked as between different evened out clashes horribly influence the progression of the activities. Sharp cycles like getting sorted out, correspondence, checking, and control draw in the synchronization of undertaking rehearses from the very start till project fulfillment. Consistent different evened out assist plays a gigantic work in with projecting achievement. Past evaluation features assortment factors which add to project achievement. They coordinate the undertaking chief, project social event, association, and outside climate. Similarly, client coordinated effort, pack limits, trailblazer support, objective clearness, mechanical assets, project purposes, assets, and moderate help are likewise included as CSF of PS. Subsequently, after carefully examining the past spotlights on the going with CSFs are famous (1) correspondence factors, (2) bundle factors, (3) specific parts, and (4) standard elements. Four essential accomplishment factor that influence the advancement projects. Correspondence factors are the strategy for sending or getting information, for instance, phone lines or PCs. Strong and brief correspondence is of most

outrageous need in forming an environment that conveys project accomplishment. A gathering is a social occasion of individuals collaborating to achieve a common goal. Helpful endeavors a critical work in project accomplishment or disillusionment by DOBARIYA, H. (2020). . It is by and large recognized that versatile organization drops the errand achievement on a minor level; while the gathering conduct reduces the set focuses of a general endeavor. Regardless, the filed discussions and past assignments reports were helpful for the endeavor gathering to see the client essentials. Specific Factors Technical components are the plans of limits or data used to perform rational tasks in the space of adventure the board. Regular components mean the factors that were not intensely affected by the endeavor bunch. They, generally, are the external components, for instance Government plans, political shakiness, public catastrophe, pandemic, etc.

WHAT IS CRITICAL SUCCESS FACTOR ?

Critical success factor (CSF) is an administration term for a component that is essential for an association or project to accomplish its main goal. To accomplish their objectives they should know about each key success factor (KSF) and the varieties between the keys and the various jobs key outcome region (KRA).

A CSF is a basic component or movement expected for guaranteeing the outcome of an organization or an association. The term was at first utilized in the realm of information examination and business examination. For instance, a CSF for an effective Information Technology project is client involvement.

Basic achievement elements ought not be mistaken for progress rules. The last option are results of a venture or accomplishments of an association important to consider the task a triumph or the association fruitful. Achievement measures are characterized with the targets and might be evaluated by key execution pointers (KPIs).

The organization should know that it is fundamental for arrange the group that will be working with the CSFs, its important to have representatives present their thoughts or give criticism. Always remember to have different structures to look at the vital components of your drawn out objectives. Prior to executing your extensive smart course of action considering your basic achievement factors, figure out which elements are key in accomplishing your drawn out authoritative arrangement.

A decent cooperation is the way to progress, when all the staff team up additional thoughts and feelings can be examined to track down the most effective way to make progress.

To utilize the CSFs everything should be arranged, how workers will make it happen and why. Devices can be utilized to make arranging work quicker and simpler. A system for every office can be arranged independently.

3. Research Methodology

Methodical Literature audit has been worked for Identification of basic achievement factors. Planning could be fixed for recognized basic achievement factors from recognized creators with the information gathered through quantitative study . Google structures were planned to get reactions from the experts. Information examination were achieved by factual investigation of recorded achievement factors. The headway of the undertaking can't be accomplished without seeing the fundamental achievement factors, the principal dissatisfaction factors regardless of the achievement models, Determine the rules for progress is the fundamental part in aiding the level of the task achievement, these activities are the essential focuses on that the association of connection and experience need to guarantee its accomplishment, After that, the perceiving of the parts that lead to of gain such rules and use them in raising the level of the undertaking flourishing and the variables that would ruin the accomplishment of these activities to prevent their event or limit the hostile outcomes on the consequence of the undertaking. In sales to get these models and factors and following zeroing in on the related creation, it has been wiped out various parts and models and separated into seven get-togethers. Get-togethers expect a critical part with various task chiefs, organizers, and specialists in the field of evaluation who have the particular and cognizant capacity to figure out the reasons, issues, obstructions, and different things that lead to the disappointment of tries likewise as seeing whatever could lessen or take out their threatening impacts, a d to pick the rules for progress and the parts that lead to getting these standards. After the finishing of this open review, a shut development overview has been coordinated and familiar with various specialists to assess.

4. STUDY OBJECTIVE

To recognize basic achievement elements of development projects considering past examinations. This study searches for the meaning of coordinating position of development project managers in progress factors for advancement of undertaking and its organization. Degree of the audit is limited to LUCKNOW.

5. DATA COLLECTION AND ANALYSIS

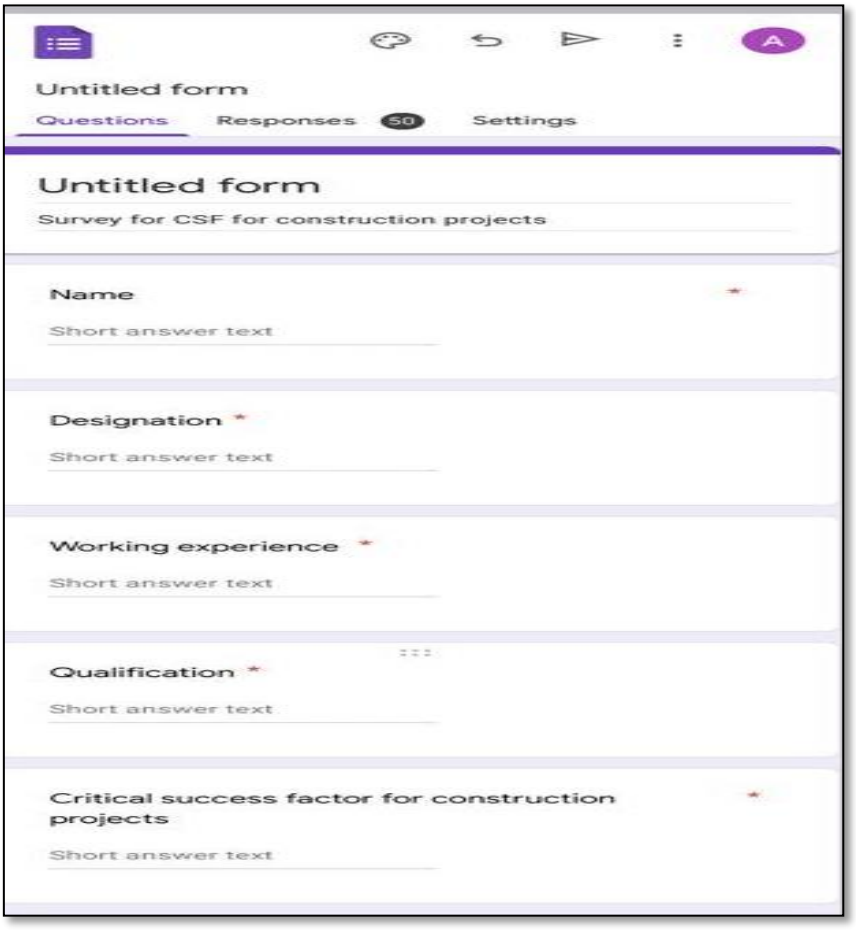

Figure1. Screenshot of the designed Google form

GOOGLE FORM LINK:
https://docs.google.com/forms/d/e/1FAIpQLSc618x4N5_PSae41CaMnqviK74Hg3kYasB4iFS7acAReIy1Aw/viewform?usp=sf_link

Table 1. Statistical Analysis Of Success Factor

ITEM	Success factors group	Success factors	Mean	Sd.
1	Project Management Factors	Training the HR. in the skill demanded by project	0.36	0.069
2	Project Management Factors	Constructability program	0.42	0.078
3	Project Management Factors	Motivation/Incentives Forma dispute resolution process	0.30	0.072
4	Project Management Factors	Risk identification and allocation	0.42	0.059
5	Project Management Factors	Prior project management experience	0.18	0.05
6	Project Management Factors	Control of sub-contractors‟ work	0.06	0.07
7	Project Management Factors	Planning effort	0.16	0.074
8	Project Management Factors	Troubleshooting	0.06	0.077
9	Project Management Factors	Feedback capabilities	0.32	0.079
10	Project Management Factors	Control mechanism	0.04	0.073
11	Project Management Factors	Communication system	0.22	0.074
12	Project Management Factors	Formal dispute resolution process	0.08	0.073

13	Project Management Factors	Involvement of Stakeholders	0.22	0.083
14	Procurement Related Factors	Project delivery system (e.g. design-bid-build, design build)	0.04	0.011
15	Procurement Related Factors	Awarding bids to the right project manager/contractor	0.06	0.003
16	Procurement Related Factors	Project bidding method (e.g. price based competitive bidding, negotiated bidding, best value bidding)	0.06	0.003

6. Ranked by Engineers

S.no.	Factors	Numbers Respondent Scoring 5	4	3	2	1	Total (N)	Weighting	RII Value	Rank
1	Training the HR. in the skill demanded by project	11	8	5	2	4	30	110	0.73	4
2	Constructability program	15	10	3	0	2	30	126	0.84	1
3	Motivation/Incentives Forma dispute resolution process	10	8	8	2	2	30	112	0.74	3
4	Risk identification and allocation	17	5	6	0	2	30	125	0.83	2
5	Prior project	8	5	10	5	2	30	102	0.68	8

	management experience									
6	Control of sub-contractors‟ work	7	8	8	5	2	30	103	0.68	7
7	Planning effort	4	6	10	6	4	30	96	0.64	12
8	Troubleshooting	5	8	9	6	2	30	98	0.65	9
9	Feedback capabilities	7	5	6	9	3	30	94	0.62	13
10	Control mechanism	9	6	7	3	5	30	104	0.69	6
11	Communication system	4	10	6	8	2	30	96	0.64	11
12	Formal dispute resolution process	9	5	2	8	6	30	93	0.62	14
13	Involvement of Stakeholders	8	9	8	0	5	30	105	0.70	5
14	Project delivery system (e.g. design-bid-build, design build)	6	7	4	5	8	30	88	0.58	16
15	Awarding bids to the right project manager/contractor	4	8	10	7	1	30	97	0.64	10
16	Project bidding method (e.g. price based competitive bidding, negotiated bidding, best value bidding)	7	5	4	8	6	30	89	0.58	15

7. Ranked by Contractors

S.no.	Factors	Numbers Respondent Scoring 5	4	3	2	1	Total (N)	Weighting	RII Value	Rank
1	Training the HR. in the skill demanded by project	8	4	4	3	1	20	75	0.75	2
2	Constructability program	7	6	3	4	0	20	75	0.75	3
3	Motivation/Incentives Forma dispute resolution process	5	6	5	3	1	20	71	0.71	5
4	Risk identification and allocation	4	6	5	3	2	20	67	0.67	10
5	Prior project management experience	5	4	5	3	3	20	65	0.65	15
6	Control of sub-contractors‟ work	5	3	6	5	1	20	66	0.66	13
7	Planning effort	4	5	7	0	4	20	65	0.65	14
8	Troubleshooting	3	5	5	6	1	20	63	0.63	16
9	Feedback capabilities	7	6	5	2	0	20	78	0.78	1
10	Control mechanism	6	5	6	2	1	20	73	0.73	4
11	Communication system	5	6	4	3	2	20	69	0.69	8
12	Formal dispute resolution process	4	6	5	2	3	20	66	0.66	12
13	Involvement of Stakeholders	5	4	5	5	1	20	67	0.67	11

14	Project delivery system (e.g. design-bid-build, design build)	4	7	6	1	2	20	70	0.70	7
15	Awarding bids to the right project manager/contractor	5	4	3	5	3	20	71	0.71	6
16	Project bidding method (e.g. price based competitive bidding, negotiated bidding, best value bidding)	3	7	6	3	1	20	68	0.68	9

8. RESPONDENT'S PROFILE

TABLE 2

Respondents	Frequency (percentage) %
Gender	
Male	40
Female	10
Total	50
Type of respondents position	
1. Engineer	30
2. Contractor	20
Working experience	
0-5 years	33
6-10 years	14
Greater than 10 years	3

9. CONCLUSION

There are 16 basic achievement factors which assume a main part in project achievement restricted to the zone of study. Contracting technique recognized by significant defilement cases probably exorbitant costs prompts a colossal number of parts orders in government projects considers adversely the expense of the undertaking . Basic achievement factors that has been recognized spotlights on the variables that prompts extraordinary wastage of cash with the feeble encounters of the project workers .

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