

# STAKEHOLDERS HAVE A DIFFERENT PERSPECTIVE IN THE IDENTIFICATION AND RANKING OF SUCCESS FACTORS: EMPIRICAL EVIDENCE FROM PSDP PROJECTS

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## ABSTRACT

*The purpose of conducting research is to rank success factors and criteria that are imperative for project success keeping in view the perception of relevant stakeholders. A total of 233 questionnaires were filled by the relevant stakeholders from 26 projects under Public Sector Development Programs (PSDP) executed in different universities. These respondents were involved in projects in different capacities. Sponsor, project team, client, contractors, consultants, architect were the stakeholders in PSDP projects were the participants in the study. An adapted Likert based questionnaires were filled by the participants using convenience sampling method. SPSS was used for data analysis after getting input from subject experts. Results shows stakeholders are different in perception regarding success factors. Each group of stakeholders have diverged opinion and look the success factors and success criteria differently. The contribution of current study will be academically and knowledge addition to project management. In time identification of success factors (SF) and success criteria (SC) will lead to successful completion of construction project specifically and all projects in general in Pakistan as well as globally.*

**Keywords:** Projects, Higher Education Projects, Projects Success Factors, Stakeholders, Construction, PSDP

## INTRODUCTION

Project management processes, tools and techniques are imperative for success of any project. Project management playing vital role for the economic survival of any development economy. Project success factors and project success criteria are used to fill the gaps between project success and project failure in different industries. One thing is obvious despite of disbursing maximum resources but still projects are failed a dilemma. According to (Atkinson, 1999) many standards and criteria are developed but despite of all reference and checklists, projects are still miss the mark. According to Meredith, et al., (2017) in government projects for improving performance requires the stakeholders' engagement.

Some people within a project claims a project to be successful but about the same project many other have different views and considers it failed. Hence success is a vague and undefinable term for many scholars and attach to other context for make it clear. Hence the same study covers the concepts of numerous scholars about the subject matter within context. According to Egbert (2017), a project has not only aim to be delivered but also implemented for bringing more than change. A project can be considered successful if involve all stakeholders for delivery. A project is successful if deliver by ensuring involvement of all stakeholders in situation of uncertainty.

Again, the success criteria are not the same and vary from region to region (Okudan & Budayan, 2020). In developing countries funds are utilized very consciously because of scarce resources with them. Hence, funds are utilizing by using projects in development sector or social

sector for visible change or quick delivery. Study in construction industry was carried out on same notion of success in project management by Nyoni & Bonga (2017) where they involved limited stakeholders and recommend success factors should be molded according to industry and region. Therefore, to come up with real remedies and recommendation current study was conducted in the context of higher education with industry of construction.

Factors of success are different to organization and should be identified and ranked (Peltokorpi et al., 2008) for success of project. Furthermore, it is identified different stakeholders having an influence on projects. Success factors are different for different projects (Dvir et al., 2003). Context and stakeholders are important for success of project by Khan, et al., (2013). Several researchers (Freeman & Beale, 1992; Mengel & Thomas, 2004) urged to involving stakeholders for perception of project success and factors within type of project and context of project. Therefore, current study was carried out in context of higher education projects of construction industry with knowing perceptions of different stakeholders having different roles and involved in project in different capacities.

Research to be conducted in the construction industry to getting further insight about project success (Han et al., 2012). Research carried out by Ng, et al., (2010) for identification of success factors only by including related stakeholders in contracts that leads to enhancement of performance but did not segregate for their differences in their opinion. Governed projects must align portfolios to strategies with stakeholder's involvement in infrastructure projects (Khan et al., 2019) and identifying success factors causes in success of projects which ultimately lead to competitive advantage in construction projects (Nyoni & Bonga, 2017).

World Bank survey shown construction projects are completed with 3 time increase in schedule and 2 times in financial resources (World Bank, 2007). Increase in budget by 600 percent (from 200 to 800) was noticed in the data of planning commission in 1990s (Khan, 2007; Nizami et al., 2018) and 90 percent projects were overrun in 2018 both by budget and time in Pakistan. Only in the year 2014 PWD (Public works department) 2 projects were concluded in time out of total 77 projects (Haq, 2016). According to Zailani, et al., (2016), mainly quality concerns cause project's failure in construction industry and government may not have enough resources to invest in projects of developing economy (Ahmed & Mohamad, 2014). Most of the projects have not proper project management standards and practices (Yahya et al., 2019) due which the construction projects are failed.

According to Zaman, et al., (2020), Stakeholder's perceptions are required in investigation of project success, and they have different in opinion for which their consensus are required. Stakeholders' roles to be investigated in success factors research (Sato & Chages, 2014) as most of the studies only project managers are involved in conducting research (Felekoglu & Moultrie, 2014) because diverse stakeholders recognize success factors differently in construction industry (Gazder & Khan, 2018). Perception of Stakeholders are not the same about project success but different in opinions (Lindhard & Larsen, 2016).

## LITERATURE REVIEW

Generally, it is important to execute and complete project within schedule (Rosario, 2010) but in other word consideration of scope must be regularly monitored (Sumner, 2009). Both are essential for project success (Pretorius et al., 2012) if organization have proficiency in time management but also depends upon maturity (Project Manager) expertise, skills of labor and PM (Project Management) process (Gunduz & Almuajebh, 2020) where they have grouped forty factors in four groups by prioritizing factors with RII (Relative Importance Index). Success of projects is important for all the involved stakeholders as well as for the country national economy and success is actually meeting objectives (Nguyen et al., 2020).

Support of management especially top management is essential for success of Pakistani construction projects (Abas et al., 2015). Financial management is the essential factor for project success in construction projects of Pakistan that can influence both scope and plan as well as quality (Khan, Gazder & Ali, 2015). During project implementation by higher education

commission in PSDP projects facing several issues *i.e.*, feasibility, planning, objectives, land acquisition etc. (Javed, Mahmood & Sulaiman, 2012) and no as such investigation on project success or failure. Teamwork and selection of adequate and competent staff (Iqbal, Nawaz, Bahoo & Abdul, 2017) and (Iqbal et al. 2015) leadership quality of project manager and support of management support are the essential success factors in higher education construction projects.

Further study on success factors to be carried out (Albert et al., 2018) for the satisfaction of stakeholders and involve additional stakeholder to get exact success factors. Support from management, qualities of leaders in project and communication effectiveness are the success factors in a project (Fayaz et al., 2017) and stress on stakeholder's management for success factors identification in any project. According to Remington et al. (2009), projects are complex in nature, and it solely led to project failure if not properly investigated.

## **Project Success**

Strategy of any organizational can be transformed in best way by project initiation and implementation if the project objectives achieved and delivered successfully. Different researchers defined project success in different way and not established any specific definition (Lim & Mohammad, 1999). As it is a vague concept, hence it could be linked to stakeholder (Lam et al., 2008). Success Factors (SF) and Project Success (PS) are defined differently by each stakeholder (Kerzner, 2017).

Some authors limited project success to iron triangle, a conventional measure. These consisting of schedule, scope, costing and quality aspects. This required more study as it is more than just costing and others (Collins & Baccarini, 2004).

Current study define PS (Project success) both in term of efficiency and effectiveness and linked it to stakeholder's satisfaction. Like the current study is carried out in construction and in higher education sector. Hence including others education uplifting, societal benefit and professional capacity building were also taken into account.

## **Construction Industry**

Construction Industry (CI) is playing a vital role in the resumption and improvement of any economy. It also one of the critical contributors in job creation in European economy (Ye et al., 2009) and an engine for other sectors of economy. According to Farooqui, et al., (2008) the Construction Industry (CI) is the 2nd largest industry after agriculture for producing jobs which is almost 30 to 35 percent of total jobs and 2.39 % of Gross Domestic Product in Pakistan (Zahoor et al., 2015). This sector is under severe pressure due to poor policy making and government support. Current government is taking note of mass construction due to growing need of economy as well as increasing population. The well-known French quote is "If construction moves everything moves". The Construction industry advantageous for economy and society (Arshad, 2017) generating not only other activities but also thousands of jobs (Shaikh, 2020). The construction uplifting requires stability of governments but in Pakistan most of the time instability created hurdles for sustainability of this sector. According to Nielsen Company (2010) CI downward in the 2008 to 2009 from 03.90 to 10.80 % and Reportlinker (2019) reported PKR 26.70 (billion) from 2014-18.

## **Success Factors in Construction Industry**

Development of Construction project is not an easy task with the advent of advancement of technology. Because developing countries are lacking latest technology and machinery for high rise and sophisticated infrastructure. According to (Toor & Ogunlana, 2010) projects related to construction is a complex task and project with achieving success is itself a complex phenomenon.

Success Factors (SF) in construction projects are technically or organizational related, or people that ensure project success in construction industry (Chileshe & Haupt, 2005). As project success factors are different to each project or industry or region wise and till date no agreement on success criteria (Ahadzie et al., 2008). All projects are facing complexity problems and to solve management of stakeholders are vital. Project success linked to contractors by Banki, et al., (2009) others linked to all relevant stakeholders' satisfaction and context of project. Contractor's perception success factors are clear goal, manager and team competencies, cooperation of management and issuing of funds in time (Ghanbaripour, 2020). Construction projects success factors were costing, material availability, quality, safety, and technology (Adinyira et al., 2012). According to (Yong & Mustaffa, 2013) success factors are different in different countries whereas in UAE in a study of (Altarawneh & Samadi, 2019) found human resources factors have significant effect on PS while establishing relationship among SFs and SC.

The research has brought forth the involvement of the stakeholders with administrative components. The outcome of the study will affect the implication and poor management of the projects as criteria are not followed up to mark. According to the report Planning Commission in 2018, the budget of infrastructure was Rs. 575 bn which was 62 % of the budget and 17.4 % was based on the foreign debt. Further, it is also observed that Rs. 1.6 trillion of public money was invested in Public Sector Development Programme (PSDP) and Rs. 47 bn was allocated to higher education. The projects are initiated with identification of projects by an autonomous body and are called Planning Commission-I (PC-I) and further divided into infrastructure, production, and social sectors.

### **Problems in Construction Projects**

The failure of projects can be divided into two different domains. First, when they are unable to meet the required objectives or criteria. There in time completion, quality, profit margins and stakeholder's interests make them vulnerable. Second, according to Manifesto (2013) 43% didn't meet even success criteria and 18 % get cancelled owing to poor performance. Along with aforementioned major issues there are some hidden or minor problems that also cause failure *i.e.*, lack of skilled labour, unreliable subcontractors, availability of cash, high costs, communication gap, mismanagement (Larsen et al., 2015). Lu, et al., (2020) has mentioned another reason of joint venture that may cause obstacle as there is deficiency in organization culture compatibility and differences in policies.

Aziz & Hakam (2016) have analyzed factors causing hindrance in construction industry is political situation, bidding award, funding delays or lack of equipment. There are some other internal institutional factors as well that affect success of projects. Cost overrun leads to project abandonment that ultimately results in litigation (Rashid, 2020). In Pakistan there are several issues that create hamper in the successful execution of the projects like natural disasters, lack of planning, improper sites, inexperienced staff, lack of material and equipment. Haseeb, et al., (2011) brought to light the factor of changing government which affects smooth and unruffled completion of projects. There is a dire need to analyze the obstructers in order to avoid failure and acquire success. To counter impediments risk management strategy is the key to prevent unanticipated outcome.

### **Higher Education Sector Projects**

The best way to understand project success is to study project for context and project type like within industry, as mentioned by (Mengel & Thomas, 2004). All the relevant stakeholder's points of view and perception are evaluated for project success (Freeman & Beala, 1992). The current proposed study was carried out in the higher education sector to analyze the context and construction of the industry. According to Mengel & Thomas (2004), it is necessary

to understand context and type of project in order to make sure project success. Freeman & Beala (1992) focused the need of stakeholder's appropriate perception which is to be evaluated for project success. The study deals with the projects in higher education to analyze the context. Education takes vital place but unfortunately it is neglected and taken for granted. Huge amount is spent by public sector than private sector but still it cannot achieve better result. There are significant differences which are analyzed by many analysts. The increase in cost does not bring better results for the students or production rather it is only increased by administrative costs.

The study emphasizes on construction projects funded from PSDP by HEC for implementing these projects in universities of Pakistani. A total of 26 projects are included in the current study (Planning Commission, 2018). The social sector is receiving nine percent of the federal program which is 1% of total PSDP due to highest priority. This share is five percent of the total federal PSDP, followed by health 3% and other social sectors 1%. In PSDP 2018-19, a total of 176 projects are financed so the projects may be completed within forecasted time and cost. A total of 42 new projects were approved and included in the current year PSDP. Hence, give rise to PKR.1 billion contributions in total to the higher education sector by the current government.

### **Project Stakeholders**

Real success possible when all stakeholders are satisfied Freeman (2010) not only those who just receives profit or having shares in profit. According to Rajablu, et al., (2015) stakeholders' management is itself one of the important factors for success of project. Projects are failed only due to not including stakeholders in decision making from start of the project and Sharif, et al., (2019) employed stakeholder's theory by involving relevant stakeholders as participants in the study. Same Davis (2018) also advocated stakeholder's theory to satisfy each stakeholder is really a success of project and Magassouba, et al., (2019) mentioned in their study that stakeholder participation in a project rise the likelihoods of success. Therefore, relevant stakeholders were involved in current study to get perception as each one has specific role which made easy in identification and ranking of Success Factors (SF) and Success Criteria (SC) in construction projects executed in higher education sector.

## **METHODOLOGY**

This research was led by receiving a positivist point of view. The chosen methodology is a result of dependents on exact proof. A deductive methodology was utilized in the current investigation. Gathered information is in numeric structure, the review is utilized to get data about marvels. Alongside this, test theories are likewise joined in the current investigation. This investigation is cross-sectional as explicit respondents were chosen for information at a specific time which is a financially savvy and efficient method of directing exploration. The current investigation utilized a cross-sectional plan. This is the most proper plan to be finished inside a half year.

A five-point Likert scale was used to measure. The questionnaires were sent through email and personal settings. Closed-ended questionnaire was used for the collection of data. The current research as these may be analyzed easily endorsed by Naoum (2003).

To minimize any sort of ambiguity in the questionnaire, a pilot test was conducted. This includes the experts and project professionals working in the construction industry in government education department. Therefore, the logic of each question is checked out thoroughly.

The questionnaire is adapted from the study of Ling (2017). Serrador & Turner (2014) used the same instrument of efficiency after a pilot study. This study was conducted and responded by 30 participants.

The unit of the investigation was people that are Project colleagues/PMU (Project Management Unit), different partners are Sponsors comprising of VC/Steering committee and

client consisting of Director Civil Works/Director P and D, Finance and Management that is from the organization of concerned universities. Subject to variable proportion was utilized in flow research for the quantity of test or test size. As indicated by the number of subjects and variable proportion, 30:1 was chosen for a reasonable number of tests addressing the obscure populace. In past investigations, a few analysts utilized 15:1 or 30:1 subject to the variable proportion (Osborne, 2004; Osborne & Banjanovic, 2016) for speculation. By utilizing a similar technique for inspecting size came to 210 by taking seven (7) factors (5 IVs, 1 DV, and 1 MV). A similar example size was sufficient for addressing the populace and inspecting the subject to variable in various relapses. Thus, 233 finished surveys got from various key partners of the advanced education area of KPK.

## DATA ANALYSIS

### Demographic

The segment subtleties were asked in the initial segment of the survey. Various inquiries were posed about segment qualities from respondents, partners that were joined to PSDP projects in the development business of the advanced education area.

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Male	231	99.1
Female	2	0.9
<b>Age</b>		
20-29	24	10.3
30-39	116	49.8
40-49	78	33.5
50 & Above	15	6.4
<b>Qualification</b>		
Diploma	14	6
Bachelor Degree	44	18.9
Master Degree	123	52.8
PhD	52	22.3
<b>Type of stakeholder</b>		
Project Sponsor	55	23.6
Client	64	27.5
Contractors, Architects and Consultants	55	23.6
Project team (PD/PM and other PMU Staff)	59	25.3

An extensive reaction is found from male patrons in correlation with female supporters. 99.1% of male respondents contributed towards the investigation against an unimportant commitment of 2 female respondents out of an aggregate of 233 respondents (0.9% as it were). It is tracked down that the reaction from the male respondents is generally higher than females. Furthermore, the respondents are partitioned into five age gatherings. 49.8% commitment is concentrated from the respondents falling under the age gathering of 30-39 years. Separately, a reaction of 33.5% and 10.3% is noted from respondents old enough gathering 40 years-49 years and 20 years-29 years. The examination is limited to respondents of old age of people from 30 to 49 years. The reaction of 30 years-39 years age respondents is genuinely high among the picked scope old enough.

The respondents are separated into four gatherings regarding capability. An eminent reaction of 52.8% is concentrated from individuals having master's as their terminal degree. The following huge reaction of 22.3% is noted from individuals having Ph.D. where 52 respondents contributed out of aggregate. The reaction of 18.9% is noted from individuals having bachelor's considers. Actually, a reaction of 6% from individuals having Diploma is noted which is excessively low.

An example of 233 respondents is isolated into four classes based on the kind of partners. An outstanding reaction of 27.5% is uncovered from Client/Executing Agency/University (Register/Dir. P and D/Dir. Common Works/Dir. Account/Treasurer/Audit) respondents. 59 Project group (PD/PM and other PMU Staff) respondents (25.3% of the aggregate) reacted to the examination. Around 23.6% of the respondents are each from Project Sponsor (VC/Project Management/Technical advisory group/M and E project execution bodies/HED/HEC) and Contractors, Architects, and Consultants.

Almost similar reactions are found from the four classifications of the partners. Autonomous PMUs are fundamental however respondents uncovered that staff was employed on an impromptu premise from a standard stream of administrative or scholastic staff with twofold charges. A free Project Management Unit is featured for adjusted activities (Sanchez & Terlizzi, 2017).

## One-Way Anova

	Project Sponsor		Project Client		Contractors, Consultants		Project Team		F(3, 228)	P
	M	SD	M	SD	M	SD	M	SD		
SFA	3.67	1.13	4.06	1.08	3.39	1.08	3.59	1.05	4.093	0.007*
SFPM	3.04	1.07	3.92	1.03	3.37	0.92	3.39	0.96	4.441	0.005*
SFHR	3.5	1.06	4.19	0.98	3.44	0.95	3.53	1	7.61	0.000*
SFP	3.59	0.88	3.96	0.99	3.29	1.13	3.59	0.99	4.519	0.004*
SFC	3.2	0.94	3.4	1.09	2.87	1.02	3.23	0.9	2.813	0.040*
SFEE	3.5	0.99	3.75	0.88	3.21	0.82	3.35	0.89	3.942	0.009*
SC	3.27	1.03	4.04	1.07	3.03	1.03	3.44	1.12	10.206	0.000*

*Note:* SFA: xxx; SFPM: xxx; SFHR: xxx; SFP: xxx; SFC: xxx; SFEE: xxx; SC: xxx; and \* =  $p < 0.05$ .

To think about the effect of Stakeholders on FSA, SFPM, SFHR, SFP, SFC, SFEE and SC single direction ANOVA was applied. There are four gatherings of members for example project support, customer, worker for hire and venture group. Moreover, the respondents were separated into four gatherings.

The outcomes demonstrate a critical  $p < 0.05$  level in SFA about partners for four gatherings as  $F(3, 228) = 4.093$ ,  $p(0.007) < 0.05$  level. Insights show a critical worth at  $p < 0.05$  level in SFPM about partners for four gatherings as  $F(3, 228) = 4.441$ ,  $p(0.005) < 0.05$  level, SFHR likewise has huge contrast pretty much every one of the four subscales of partners (project support, customer, worker for hire and undertaking group) between the four regulatory division bunches as  $F(3, 228) = 7.610$ ,  $p(0.000) < 0.05$  level; SFP additionally has huge distinction pretty much each of the four subscales of partners (project support, customer, worker for hire and task group) between the four managerial division bunches as  $F(3, 228) = 4.519$ ,  $p(0.004) < 0.05$  level; SFC additionally has huge distinction pretty much each of the four subscales of partners (project support, customer, worker for hire and venture group) between the four authoritative division bunches as  $F(3, 228) = 2.813$ ,  $p(0.040) < 0.05$  level; SFEE additionally has huge distinction pretty

much every one of the four subscales of partners (project support, customer, worker for hire and task group) between the four authoritative division bunches as  $F(3, 228)=3.942$ ,  $p(0.009)<0.05$  level. The outcomes likewise showed that there was a genuinely huge at the  $p<0.05$  level in SC about partners for four gatherings as  $F(3, 228)=10.206$ ,  $p(0.000)<0.05$  level. Accordingly, it is set up from results that all partners has significant distinction in consequences of FSA, SFPM, SFHR, SFP, SFC, SFEE and SC.

## CONCLUSION

In the past research considers, viable arranging, booking, observing, criticism, clear agreements, able workers for hire granted, qualified task supervisory crew and top administration support were the variables that could influence the undertaking a positive outcome. The current examination uncovers the variables that have sway upon project achievement in Pakistani situation explicitly, in the development project industry and advanced education of Pakistan. Project Management related and Project Activities related, Human related, Procurement related and External environment related factors all playing vital role in the accomplishment of construction project. These all having impact in project effective achievement. The stakeholders have diverse interest identified with development project yet one interest that all offers has been the achievement and success. This achievement empowers them to have satisfaction of objective. The current investigation highlights the most impacting powers of development project in Pakistan.

Undertaking the Project management impacts most predominantly the achievement of a development project in Pakistan, explicitly in higher education settings. Project activities are second most influencing power that can cause achievement. Thus, coordination correspondence ought to be proceeding with all through the project. Unseemly HR are third success factors to the achievement and success of project. Obtainment factors lessly affect project than other previously mentioned three constituents. Outside natural components are least influencing aspect of task achievement sway factors.

In last the most important each relevant stakeholders must be involved for identification of success factors and success criteria as these four groups have different opinion regarding success. This should be done in the start of the project and project is successful if their needs are satisfied.

The proposed study is restricted to numerous perspectives. As the size of the example is little and may not be summed up to this or all enterprises. While whenever expanded the example may give various outcomes. In the following investigation, study analyst may utilize diverse success factors as per their sector and culture like hierarchical job, project qualities, the existence pattern of a task, size of undertakings, projects with public and worldwide administration/the board, and their correlations and activities credits. The study expects to give strategy suggestions, hypothesis, strategies, and commitment to rehearse.

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