



FACTORS INFLUENCING STAKEHOLDERS' ENGAGEMENT PROCESS IN CONSTRUCTION PROJECTS: KP REGION PAKISTAN

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ABSTRACT

One of the major concerns coming forth in the management of construction projects is the engagement and management of project stakeholders in the region of KP. The successful construction project management can be carried out only, when the stakeholders are communicated and informed in well manner, and to shrink down and control potential influence of the project's stakeholders. The research aim is to find out the role of proper communication, exploring needs of the project and providing full information about the project, on stakeholders' engagement process. Literature, related to the topic has been conducted and reviewed. A questionnaire has been developed and then distributed among professionals to get their view point about the subjected topic. Total 82 questionnaires were distributed among Govt. agencies, NGO's and private sectors, targeting general managers, project managers, supervisors and engineering staff. It has been proved with numerical evidences from the respondent's point of view that all three elements i-e proper communication, exploring needs of the project and providing full information about the project, is like a key to successful engagement process for any construction project in KP. One of the main recommendations of this research is that it is the responsibility of every team member to communicate positively to stakeholders for the best result of the project.

Keywords: construction projects, stakeholder's engagement, communication, factors.

INTRODUCTION

According to HarandAzrin (2006) stakeholders are important elements of any project; if key stakeholders are ignored to engage, will defiantly lead the project to failure. The same statement is enhanced by Farida (2012) and stated, in construction project some of the common problems like over budgeting, over costing, poor communication and supply chain failure arises if stakeholders are not engaged properly. Bourne and Walker (2005) also described that

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stakeholders' engagement process must be taken as serious practice and not as mere one, keeping in consideration the entire intention, goal and need of the project there must be an engagement strategy through which a communication bond is created among different stakeholders which provide help for successful delivery of project.

Grabher (2002) added by eliminating and solving conflicts and by enhancing cooperation among different stakeholders and work groups leads the project towards success. It is important to emphasize that there must be an engagement strategy to be adopted through which a stakeholder can be reached and treated in such a way that lead the whole process towards the defined objective of the project. Bourne and Walker (2006) included, whole organization must play their role in order to reach to every stakeholder of the project. It appears to Achterkamp and Vos (2008) that the degree of significance of a project is related to and mainly depends upon the engagement of stakeholders. On the basis of responding, providing and receiving support from stakeholders it is therefore can be measured that what is the level of success of stakeholders' engagement. Different scholars like Newcombe (2003), El-Gohary et al. (2006), and Olander (2007) examining construction projects have concluded that stakeholders' engagement is significant for the best result of any project. Cleland and Ireland (2002) pointed that in order to get project objectives that meet and satisfy stakeholders' expectation; every stakeholder must be engaged throughout life cycle of the project.

McCab et al., (2006) studied some important and unavoidable issues and problems faced in stakeholders' engagement process i.e., poor communication, exploring needs and encourage partnerships, provide all necessary information, promote trust and willingness to collaborate among various characters of project. Olander, and Landin(2005) stated that in past decades globally the construction industry has poor record of stakeholder engagement. Similarly in KP the case is same for construction industry there is a need to analyze and study stakeholders' expectations, needs and the factor that impact these engagement process. The aim of this research paper is to find out the role of proper communication, exploring needs and full information disclosure to stakeholders on their engagement process.

REVIEW OF LITERATURE

Why to engage stakeholders?: Although it is not possible for lonely project manager, agency or organization to figure out issues facing in stakeholders' engagement process just because of their

multifaceted features, such as supporter, financier, owner of the area where the projects are taking place, local and national actors who seek to engage national and local stakeholders effectively and understands local interests of the communities etc., but without their involvement engagement process can never be fruit full. Local communities are critical in this regards because they help out in empowering local communities to participate and informed. Project and its success might be destroyed by poor and absent effective communication. Engagement of national and local stakeholders effectively may result the project successfully. Engagement in this framework means the capability to identify key local stakeholders, map them, engage them in project related activities and uphold their involvement often beyond the project life cycle. Communication among local community and donor agency, sponsors and clients means building trust and partnerships that target effective response to risks as well as long term development of effective engagement process. RJ-Yang and Shen (2014)in his study founded that many problems can be overcome if the stakeholders are actively engaged in early stages and kept them updated throughout the life cycle of project. Aaltonen and Sivonen (2009) stated that management of the relationships between the project team and its stakeholders is the key issue in project stakeholder engagement process.

Stakeholders in construction projects: Newcombe (2003) described that in construction project or undertakings, there are stakeholders just like there are stakeholders in other activities.

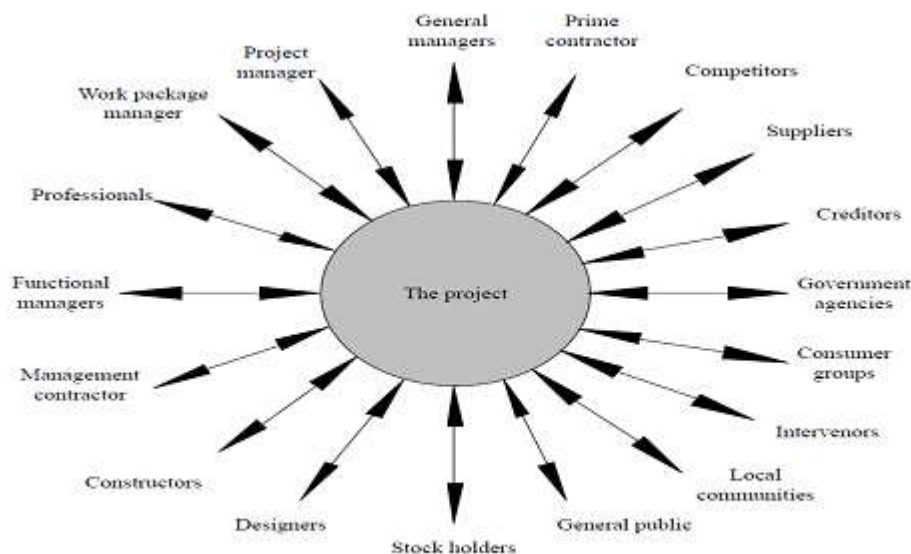


Figure 1: Different project stakeholders by Nabil (2013)

In a construction project the number of stakeholders are often big including project managers, owners, designers, legal authorities, neighbors, shareholders, community representatives, employees, insurance companies, banks, media, subcontractor's suppliers, competitors, service providers, process providers, civic institutions, general public, pressure groups, government establishments, the natural environment, regional development agencies, customers, visitors, etc.

Process of engaging stakeholders in construction project: Olander (2006) agreed to Ireland and Cleland (2002) and described that for the improvement of a stakeholders' engagement process manager must follow basic premises. This process must consists of planning, motivating, organizing, controlling and directing, communicating with them, sharing information, exploring needs etc.

Factors influencing stakeholders' engagement: Numbers of different factors have been identified from literature but these three i.e. proper communication, full information disclosure and exploring the need of the project are ranked on the top and considered as more critical in KP, so this particular study will only focus on these three factors. These factors were plot into three ranked order.

- Proper communication
- Full information disclosure
- Exploring need

Communication process: For project managers it is critically important for engagement purpose to communicate with not only to supportive stakeholders, close stakeholders but also those that may be harmful to the main concern of project vision and goal. All stakeholders have unique and complicated type of power structures which is some changing constantly so these types of issue need maintenance at high level. Briner et al. (1996) explained that maintenance containing a system in which every stakeholder is kept in touch with proper dynamic communication system. Unavoidably those form of stakeholders who tends to remain partially in project team or trying to develop their dominance over other member of team, will give birth to conflicts or cause inconveniencies for engagement process. If these troubles are failed to cover will definitely enhance to drop the project, change the scope, reduce the funding, or even more terrible. If foundation of understanding stakeholder intensity and influence is once created by project manager and team in well manner then it will be easier to engage and handle influential

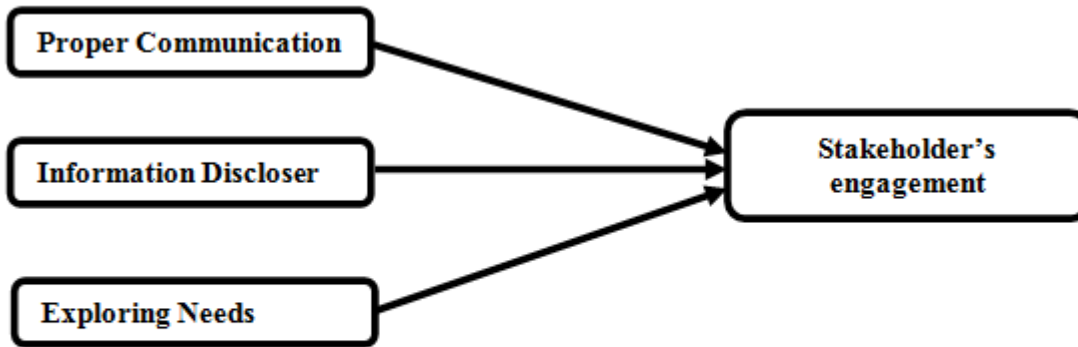


Figure 2: Conceptual Model

stakeholders through active communication, and calamity may be turned away in challenging circumstances. Sometime the same influence of the stakeholder can be used as slight push to word success of the project. With the help of appropriate communication a project manager must also be able to recognize the threatening signs like the warning of possible trouble etc. Buchanan and Boddy (1999) listed these threatening signs as poor communication links, not providing support when needed, interfering without consultation, countless reporting levels between stakeholders and project manager, failing to fulfill commitments and promises etc.

RESEARCH METHODOLOGY

By survey through questionnaire and semi-structured interview, quantitative and qualitative data has been collected in KP from different respondents selected from community stakeholders in KP (Peshawar). In KP region main groups of interest are the respondents from the different communities. Engineers and builders, quantity surveyors, architects and other professional are also interviewed for collecting data. Prior to the field work, to identify parameters for assessing factors influencing stakeholder's engagement, literature is also recourse and examined to subject the issues from practice.

The respondents are selected based on their previous participation in consultation and experience in construction projects. Non probability (purposive sampling) has been used in this data collection process because size of the population is quite small. All participants have been selected randomly. Based on similar grounds (Li et al., 2013) also adopted similar approach in

their earlier study. Questionnaire used for this study has two major portions. In first part respondents have been asked about their previous experience in stakeholder's engagement and their personal profile. . Second part is about respondent's perception on the severity of these three factors collectively generated from literature, practice and interviews.

Projects have been investigated in this research include flyovers, overhead bridges, offices and administration buildings, school building, medical center, drinking water supply schemes, irrigation channels, children parks, play grounds and other related civil engineering projects. The survey of questionnaires' has been conducted in (Peshawar) KP. 40 projects have been selected and 82 questionnaires have been distributed to same sample. In order to find out the reliability of the questionnaire for each field and for the mean of the whole fields of the questionnaire, Cronbach's Alpha has been applied. The normal range of Cronbach's coefficient alpha (α) is value between 0.0 and + 1.0, the higher values reflects a higher degree of reliability. Test statistics include Spearman rank correlation coefficient. Relative importance index Non-parametric sign test.

RESULT AND DISCUSSIONS

Table 1 illustrate that 42.68 % (total 35 out of 82) of the respondents are governmental and institution 24.3 % (total 20 out of 82) are NGO,S, and 32.9% (total 27 out of 82) are private sectors such as private school were taking part in the questionnaire. It is important to highlight that in KP most of the constructed projects were executed by govt. agencies. This high percentage of this type reflects a good sign to ensure from quality information beside the other general information. Table 1also illustrate that 57.31% (total 47 out of 82) of respondents were project managers, 09.77 % (total 8 out 82) were general manager, 15.85 %.

Table 1: Demographic Data

General information	Sub. Categories	Frequencies	Percentage
Types of Institutions	Govt. agencies	35	42.68%
	NGO,S	20	24.39%
	Private sector	27	32.92%
Position	General manager	08	09.77%
	Project manager	47	57.31%
	Supervisors	14	17.07%
	Engineering staff	13	15.85%
Experience (years)	5-10	23	28.04%
	11-15	27	32.92%
	+15	32	39.02%

Source: Amin, 015.

Total 13 out of 82 are engineer staff and 17.07% (total 14 out of 82) of respondents were supervisor. This high percentage of 57.31 and 9.77 for project manager and general manager shows that respondents have key positions that support the quality of obtained information. This same table also illustrate that 39.02 % (total 32 out of 82) of respondents from the total sample have 15 or more years of experience. 32.92 % (total 27 out of 82) of the respondents from the total sample have years of experience between 11 to 15 years while only 28.04 % (total 23 out of 82) of the respondents have years of experience between 5 to 10 years. So this collectively high percentage of more than 70% shows that the respondents have an experience more than 10 years. This gives a good sign that the respondents have good level of experiences.

Table 2; Illustrate the Relative Importance Index and the ranks of each factor influencing the stakeholder engagement process. Three factors have been identified as most critical through the literature review. These critical factors will be discussed based on the following assumption: Factors with mean score greater than 4 will be discussed related to the research questionnaire,

and at the end of the discussion of each factor the statistical verification with analysis will be presented.

Table 2:Engagement process analysis

Categories	Mean	RII (%)	Rank
Proper communication	4.45	87.95	1
Full information disclosure	4.40	85.30	2
Exploring need	4.30	83.27	3

Analysis of factor “Effective Communication”: Respondents placed the factor “effective communication” on the top and ranked it with first position as shown in table 2. This factor has RII value (87.95%) and mean of this factor is significantly greater than the hypothesized value. So these results guides that respondents are fully agreed that effective communication between the stakeholder and project is significance. The relation between communication and its influence on the engagement in construction project have been studied by different researchers and they found that factors such as misunderstanding and poor communications may cause over budgeting and time overruns in construction project.

Testing hypothesis

H₁₀: Proper and fluent communication with stakeholder has insignificant effects on engagement process.

Table 3: Hypothesis test summary

Null hypothesis	Test	Significance	Decision
The median of difference between variables equals 0.	Related sample sign test	.038	Not supported the H₁₀

Asymptotic significances are displayed. The level of significance is 0.05.

H₁: Proper and fluent communication with stakeholder has significant effects on engagement process.

This result clearly indicates that there is a significant positive effect of proper and fluent communication on engagement process at 0.05 levels. Therefore it is concluded that this result provides sufficient indication to support alternative hypothesis **H1₁** and to reject the null hypothesis **H1₀** see in table 3. Hence, proper and fluent communication has significant positive effect at 0.05 levels.

Analysis of factor “Full Information Disclosure”: Respondent ranked this factor on second position as shown in table 2. This factor has RII value (85.30%) and mean of this factor is significantly greater than the hypothesized value. So these results guides that respondents are fully agreed that Full information disclosure to stakeholder has positive effect on project objectives.

Testing hypothesis

H2₀: Full information disclosure of the project to stakeholders is negatively related to engagement process.

Table 4: Hypothesis test summary

Null hypothesis	Test	Significance	Decision
The median of difference between variables equals 0.	Related sample sign test	.002	Not supported the H₀

Asymptotic significances are displayed. The level of significance is 0.05.

H2₁: Full information disclosure of the project to stakeholders is positively related to engagement process.

This result clearly indicates that there is a significant positive effect of proper and full information disclosure on engagement process at 0.05 levels. Therefore it is concluded that this result provides sufficient sign to support alternative hypothesis **H2₁** and to not support the null hypothesis **H2₀** see in table 4. Hence, full information disclosure has significant positive effect at 0.05 levels.

Analysis of factor “Exploring Stakeholders Needs”: Respondent ranked this factor on third position as shown in table 2. This factor has RII value (83.27%) and mean of this factor is significantly greater than the hypothesized value. So these results guides that respondents are

fully agreed that exploring needs of the project to stakeholder has positive effect on project objectives.

Testing hypothesis

H3₀: Exploring stakeholders' needs of the projects to the stakeholders has no importance in engagement process.

H3₁: Exploring stakeholders' needs of the projects to the stakeholders has importance in engagement process.

Table 5. Hypothesis test summary

Null hypothesis	Test	Significance	Decision
The median of difference between variables equals 0.	Related sample sign test	.018	Not supported the H₀

Asymptotic significances are displayed. The level of significance is 0.05.

This result clearly indicates that there is a significant positive effect of exploring stakeholders' needs on engagement process at 0.05 levels. Therefore it is concluded that this result provides sufficient sign to support alternative hypothesis **H3₁** and to not support the null hypothesis **H3₀** see in table 5. Hence, exploring stakeholders' needs has significant positive effect at 0.05 levels.

CONCLUSION

This research has different key objectives and they are realized and gained through a systematic process of collecting data using questionnaire and survey techniques, and then same data has been analyzed through different statistical tools and techniques. Identification and ranking of most common factors that affect the stakeholders' engagement process in construction projects. Secondly it was aimed to find out some solid numerical proves to enhance the idea that stakeholders are most important part of the project and must be communicated properly and can never be neglected at any stage of the project.

As discussed plenty of factors influencing the stakeholder engagement process were identified through studying literature but only three were taken in to account because of their rank and

position placed by different respondents. Data has been collected from government institution and different private sector and the above mention factors are considered to be the critical for any stakeholder engagement process. These most top three factors that affect the stakeholder engagement process in construction project in the KP were ranked based on their *Relative Importance Index* are: fluent and proper communication (RII = 87.95%), full information disclosure (RII = 85.30%), and exploring the need of the project (RII = 83.27 %).

During interviews different types of stakeholders are also identified as follow:

Customer or the end user of the project:

- Sponsor or Donor
- Consultant
- NGO's
- Contractor
- Beneficiary
- Governmental authority
- Landowner and Neighborhood

These stakeholders can be easily treated with effective communication strategy. The results and reply of different respondents place the factor proper communication on the top it means this factor can play an important role in engagement process. It is therefore recommended the medium of communication should also be clear and understandable, face to face meeting is highly suggested by the respondents while interviewing them but some time workshop, seminar and building social interaction can also make a difference in communication process. In order to get long lasting results of a project all these three factors are vital and can never be ignored at any level of the project. During interviews and short meeting with different stakeholders they have pointed out that it is the responsibility of every responsible member of the project team to keep the interest and power of the stakeholders in view and then treat them accordingly. Project success has strong connection to manage relationships and to communicate effectively with different stakeholders of the project. Project managers has to communicate properly and frequently throughout life cycle of the project. Mutual trust among project team and stakeholders can also enhance positive relationships in project. To enhance stakeholders' relationships trust is

considered the most important among project team, consultant, contractor, governmental ministries, beneficiaries and other related stakeholder.

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