



Research Article

Does role clarity moderate between project stakeholders and success? Exploring the relationship between project stakeholders and success in Punjab Pakistan.

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Submitted: 10 January 2022

Revised: 19 March 2022

Accepted: 26 March 2022

ABSTRACT

A predominantly quantitative research strategy from 187 respondents who work in construction firms in Lahore (Pakistan). A questionnaire survey was conducted with project managers from construction companies in Lahore, Pakistan. Measurement and structural models were developed for stakeholder management and project success measures by using Process Macro. The results show a positive and significant direct relationship between Internal & External stakeholders over project success. The finding of this research shows that Resident Engineer, Role of Clarity, and Supplier/Vendor have a positive significant relationship with project success, while Subcontractor has an insignificant relationship with project success. Findings of this research also show that Role of Clarity moderates significantly between Resident Engineer and Project success and between Supplier/Vendor and project success. Findings of this research also show that the Role of Clarity moderates in-significantly between Subcontractors and project success. Study findings are very useful for construction projects strategy makers, internal and external stakeholders, and for policymakers.

Keywords: *Sub- Contractors Involvement; Project success; Supplier/Vendor Innovativeness; Role of Clarity*

1. INTRODUCTION

For the development and progress of any nation construction industry plays a very important role. The measurement and scale of economic growth is directly related to the infrastructure of that country and are also directly proportional to the physical development of construction projects such as buildings, roads, and bridges in the country. Due to more complexity in the design of construction projects such as buildings and the involvement of multiple stakeholders in modern construction projects, there are numerous problems and challenges for both contractors and clients to deliver the project objectives successfully (Doloi, 2009). To predict and achieve consistency in the successful delivery of projects, the process of monitoring and controlling is done regularly in high-profile project failure which is to be reported in the public domain, tools for organizations, practices, and the adequacy of prevailing project management concepts are the major questions that arise in the public domain (Ojiako & Stanleigh, 2012). 43% of the projects were challenged and 18% of the undertaking projects failed which is observed from the survey (The Standish Group, 2012). For this reason, project management is a field where there is a focus on the prevention and monitoring, and controlling of project failures in the project management field. In addition to Turner and Zolin (2012) stated that the perceived project outcome as a success is the result of stakeholder perception, The demonstration announced by others that the outcome which perceived failure from the success (Dalcher, Drevin, Morris & Turner 2009).

The authoritative examination has shown that job lucidity decidedly impacts both venture achievement and task fulfillment (Bolino, Turnley, Podsakoff, Salamon and Deutsch, 2006) (Martins, Moynihan and Pandey, 2007). The necessity shows up high for development projects individuals to comprehend their jobs and viably convey their assumptions and prerequisites (Wong, 2007). As (Daim, 2012) noticed, "All around the world dispensed venture groups are presently the new standard in each industry". The past examination has exhibited that

development project group bunches standardized all in all on undertakings can limit coordination issues and decidedly critical effect on venture execution (Janicik and Bartel, 2003), and project fulfillment specifically among appropriated colleagues have been appeared to limit false impressions that defer project conveyances or goals that prompts project achievement (Verburg, 2013). The success of construction projects is mainly considered that the key stakeholder of the projects is satisfied with the quality and all other parameters of the project, the project should be completed on time, within budget. The main Internal Stakeholders and Project Success as well as Use of Role of Clarity as Moderator between External Stakeholders and Project success. Stakeholders are the cause and effect of any project, therefore their interests should be noticed they can either delay your project or create hurdles to achieve the project's ultimate objective. The objective of this study is to highlight the Impact of Internal and External Stakeholders Management on Construction Project Success and the Use of the Role of Clarity as a Moderator between Stakeholders (Internal and External) and Project Success. The critical factors in our examination are Inward Partners, Outer partners, Job of lucidity, and Undertaking Achievement. The partner thought was first brought into the organization region by the Stanford Investigation Foundation in 1963, where accomplices were depicted as any social occasions or individuals who are vital for various leveled perseverance (Freeman, 2000). Following its origin, the accomplice thought isolated into four key headings concerning progressive assessments: corporate orchestrating, structures speculation, corporate social obligation, and, definitive theory. An esteemed book of (Freeman, 2000), Key Organization: an Accomplice Approach, has been by and large perceived as an accomplishment in the headway of SM research, where (Freeman, 2000) described accomplices as the ones "who can impact or is affected by the achievement of the affiliation's objectives".

1.1. RELATIONSHIP BETWEEN RESIDENT ENGINEER AND PROJECT SUCCESS

To accomplish the objectives of an undertaking, some occupant engineers build up a specific authority style and exertion. For improving task achievement, these inhabitant engineers are likewise analyzing collaboration all through the entire venture. The initiative practices of Inhabitant Architect have eased back or forestalled the execution of authority speculations, and the advantages of administration style are somewhat theoretical. For the development industry and scholastic fields, the significant issues happen because of the effect of inhabitant engineer practices on venture execution (Kendra, Taplin, Turner and Muller, 2005). There is a requirement for the estimation of the advantages got from occupant engineer practices and execution, to comprehend the advantages of the inhabitant engineer execution on the venture. On the significance of administration style of inhabitant engineer, a various extensive assemblage of examination led on occupant engineer initiative burdens. Six schools of administration have developed in the course of recent many years. The inhabitant engineer should have the conditional and groundbreaking initiative visionary school found two kinds of authority, value-based and groundbreaking administration.

H1: *Resident Engineer significantly influences the Project Success.*

1.2. RELATIONSHIP BETWEEN SUPPLIER/VENDOR AND PROJECT SUCCESS

Drawing in outer partners, for example, administrative offices and nearby networks that have no authority or legally binding connect to the undertaking association however may impact or be affected by the task (Winch, 2004), is significant for the achievement and worth making of between authoritative ventures (Bayiley, Teklu, Oppong, Chan, and Dansoh, 2017).

Outside partner commitment can be characterized as the methods, including authoritative exercises and courses of action, used to include outer partners in the undertaking's activities or dynamic (Greenwood, 2007). Nonetheless, captivating outside partners such that adds esteem has demonstrated profoundly testing both in principle and practically speaking (Eslerod and Huemann, 2014), particularly in between hierarchical tasks, where partner clashes are normal (Derakhshan, Mancini, Turner, Jepsen, and Eslerod, 2019). Standard partner research has embraced an intra-hierarchical spotlight on how a solitary association coordinates its commitment exercises (Fassin, 2009). Conveying complex undertakings in different enterprises ordinarily requires the inclusion of numerous inexactly coupled at this point related associations (Bakker and Winch, 2014). Great or incredible results need between authoritative joint effort and participation (Sydow and Braun, 2018). Against

this foundation, research has required a social way to deal with study between hierarchical ventures that attention on connections and their elements (Smyth, Pryke, and Steen, 2018).

The term 'providers' alludes to firms that give expert products and ventures to project-based firms. The connections between project-based firms and customers have been explored to a degree (Laan, and Suprpto, 2015). Less consideration is paid to the connections between project-based firms and their providers including their progression and improvement inside and across projects (Ahola, Martinsuo, and Ahola, 2017).

H2: *Supplier/Vendor significantly influences the Project Success.*

1.3. RELATIONSHIP BETWEEN ROLE OF CLARITY AND PROJECT SUCCESS.

Alongside expanding the significance of the tasks and undertaking-based associations, ventures are grappling with huge difficulties in dealing with their activities yet extends keep on fizzling at an astounding rate. In numerous tasks, the normal presentation of an occupant engineer expert, gathering of inhabitant engineers, or the inhabitant engineer execute from office is not exactly the genuinely seen execution (Hammoud, Jergeas, Jergeas, Ruwanpura, Pomfret, Stanley, Uden & Tabernik, 2013). For instance, as indicated by the Disarray Report of 2009, 68% of all activities wind up fizzling (Johnson, 2009). Analysts accept that to beat difficulties in overseeing projects, new ways to deal with professional advancement are required (Atkinson, Córdoba, Piki, Mitri, Rolstadås, and Winter 2012). Educating and learning occupant engineers has become the focal point of various examination recommendations, discussions, and studies. In the unpredictable and dynamic climate of virtual work, particularly with respect to worldwide groups, trouble can emerge in getting lucidity of the standard between project colleagues, correspondence is the major to get the job free from everybody except if a cognizant exertion is made to characterize them (DeSanctis and Monge, 2003). Standards likewise expect time to arise (Krumm, 2013). For instance, in a longitudinal investigation of a circulated new business, Ghosh et al. (2004) found that correspondence standards arose "gradually over the long haul as individuals unpretentiously and regularly implicitly changed and adjusted their individual practices, inclinations, and assumptions to be more lined up with those of other colleagues or the gathering in general."

Ongoing exploration on brief hierarchical setups by (Curnin, 2015) found that job lucidity goes about as a basic empowering agent in framing transitory associations, like worldwide virtual tasks, and keeping up their shared work rehearses.

Job lucidity alludes to the degree to which people unmistakably comprehend the obligations, errands, goals, and assumptions for their work jobs (Hinkin and Schriesheim, 2008). The authoritative examination has exhibited that job clearness emphatically impacts both execution (Bolino, Turnley, Podsakoff, Salamon, and Deutsch, 2006) and fulfillment (Martins, Moynihan, and Pandey, 2007). Correspondence standards in virtual group conditions empower a common perspective among individuals that can "frequently forestall hazardous astonishments" (Ghosh, 2004). The lucidity or vagueness of undertaking colleagues' jobs can likewise incorporate a person's emotional inclination of having or not having as much job data as that individual might want to have. Making this lucidity isn't cultivated in separation (at the individual level) however should be haggled through correspondence across people (at the venture group level). The significant prerequisite for brief associations is to "complete things" affected by the capacity to build up a common perspective of (advancing) circumstances and the individual jobs of the various partners included" (Meyerson, 1996).

H3: *Role of Clarity significantly moderates the impact of Resident Engineer on Project Success.*

H4: *Role of Clarity significantly moderates the impact of Supplier/Vendor on Project Success.*

The below-attached Fig. 1 represents the hypotheses and research model established on the basis of earlier discussion and literature review.

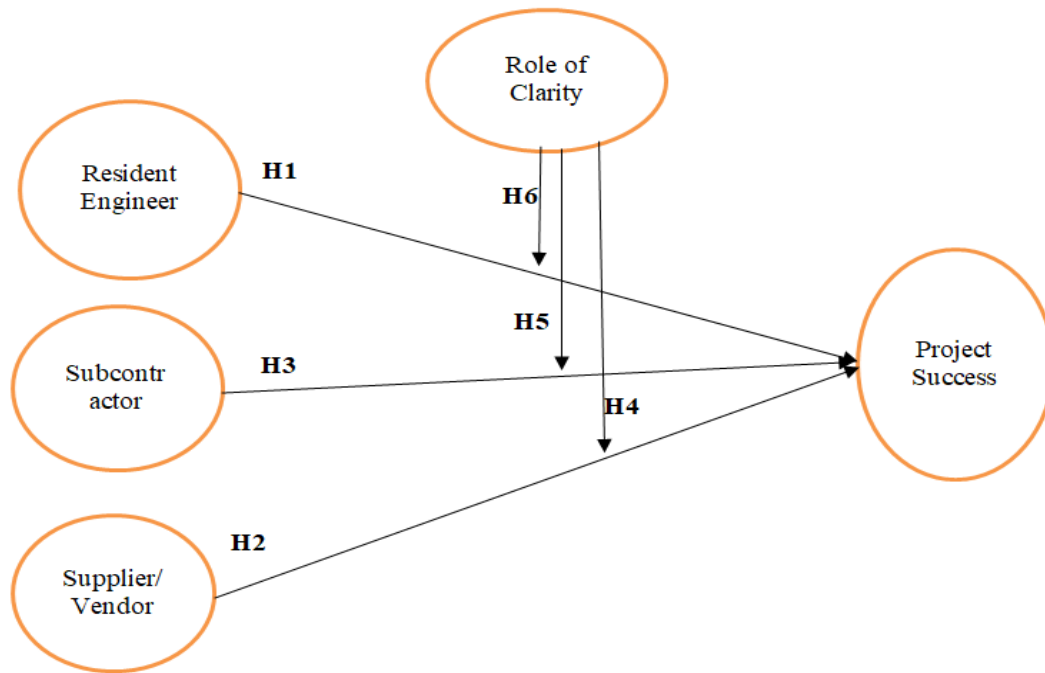


Fig. 1. Hypotheses and research model

2. METHODOLOGY

2.1. DATA COLLECTION PROCESS

All the project managers, of different construction companies conducting projects in Lahore, Pakistan would be the community of this study. Projects can involve construction industries including private and government projects. Companies covering all construction projects have been set up to recognize that all questionnaires cannot be returned or evaluated. (Clark and Watson, 1995) suggested a heterogeneous sample to be used which could reflect the target population. A mixture of easy and judgment screening has been used to select construction companies from Lahore Pakistan. Judgment was exercised to ensure the sample represents construction industries in Lahore, Pakistan. Questionnaires have been circulated in certain construction companies to project managers, resident engineers, suppliers, and subcontractors. A total of 287 questionnaires have been distributed and 187 responses have been returned and considered suitable for analysis. The methodology adopted to collect data for this research will be based on questionnaire formation with different statements of questions that are adopted. It was filled by methods of surveys through online Google forms.

2.2. QUESTIONNAIRE DEVELOPMENT

The questionnaire developed for this study encompasses questions related to Resident Engineer, Subcontractors, Supplier / Vendors, Project Success, and Role of Clarity. To measure all the developed questions, a five-point Likert Scale is used. This Likert scale ranges from strongly disagree to strongly agree (where 1- Strongly disagree, 2-disagree, 3-Neutral, 4- Agree and 5-Strongly agree). In this developed questionnaire, there are 5 questions related to Resident Engineer. To measure subcontractors' impact this study has 5 questions, for suppliers/vendors, this study has 5 questions. To measure Project Success, this study contains a total of 5 questions. To study the Role of Clarity, this study has 5 questions.

2.3. DESCRIPTIVE STATISTICS

Total 187 responses were found appropriate. On the basis of demographic data shown in table 1, it can be seen that all the respondents are male (N=187, 100%) and no female respondent answered. To separate the ages of our respondents, a total of four age groups were made. Out of 187, 34 respondents were from age group less than 25 years which is about 18.2% of the total responses, 44 respondents were from the age group of 26-35

years, 97 respondents were from the age group of 36-45 years and only 12 respondents belong to the age group of more than 45 years. Out of 187 respondents, 94 respondents are those who have 3-5 years of experience in their current organization and 49 are those who have 5 years of stay in their current organization. In the educational level, out of 187 respondents, 64 respondents have matric degrees, 22 respondents have an intermediate degree, 54 of the respondents have bachelor's degrees and 47 respondents have Professional certification in Project Management. In professional experience out of 187 respondents, 76 respondents belong to the group having 6-10 years of experience, 52 respondents belong to a group of respondents having experience of 11-15 years, 47 respondents belong to a group of having experience 16-20 years and only 12 respondents belong to the group having experience above 20 years. In the classification of organization type out of 187, 117 respondents were from contractors, and 70 respondents were from the client department.

Table 1. Demographic of Respondents

		Frequency	Percentage
Gender	Male	187	100
Age	Less than 25	34	18.2
	26-35	44	23.5
	36-45	97	51.9
	More than 45 years	12	6.4
Stay in Current Organization	Less than 1 year	15	8.0
	1-2 years	29	15.5
	3-5 years	94	50.3
	Above 5 years	49	26.2
Education	Matric	64	34.2
	Intermediate	22	11.8
	Bachelors	54	28.9
	Professional Certifications	47	25.1
Organization Type	Contractor	117	62.6
	Client	70	37.4
Work Experience	6-10 years	76	40.6
	11– 15	52	27.8
	16 – 20	47	25.1
	Above 20 years	12	6.4

3. RESULTS

The developed hypotheses presented in the conceptual model have been advocated by SPSS v.26 for the research. Structural Equation Modeling (SEM) is used to verify the Smart-PLS study theories while SPSS is used to execute population research and to develop relationships between different variables. Structural Equation Modeling is a technique which is specifically used in social sciences studies to compute data analysis (Leguina, 2015). Structural Equation Modeling is most widely used to study the inter-relationship among various variables. In the field of social sciences, it is used commonly as it is applied for continuous checking of multiple variables to affect the results.

3.1. RELIABILITY AND VALIDITY ANALYSIS

Table no. 2 represents the Cronbach Alpha value observed for this performed survey. To determine the internal consistency of the variables their reliability (Cronbach's alpha) is checked, and its value should be more than 0.7 to be acceptable. For this research, Cronbach's alpha value of all the variables is checked and found that all variables have values higher than the minimum threshold of 0.7. The minimum value of Cronbach's alpha of this study is 0.725 associated with the observed variable SV. Internal consistency of the survey can also be shown by using composite reliability, and for being acceptable its value should be between 0.70 to 0.90. If the value of composite reliability goes beyond 0.95, it's an indication that the variable is displaying a similar phenomenon. Composite Reliability and Cronbach's Alpha value of this study lies in the acceptable range, as displayed in the table. Table no. 2 also represents the Average Variance Extracted (AVE), which displays the validity of the developed survey and shows that all the elements of that construct are determining the construct.

Table 2. . Reliability and Validity of the Construct

	Alpha		Reliability	Extracted (AVE)
PS	0.734	0.812	0.765	0.560
RE	0.733	0.880	0.732	0.655
ROC	0.784	0.839	0.684	0.571
SC	0.777	0.848	0.751	0.611
SV	0.725	0.880	0.635	0.611

3.2 DISCRIMINANT VALIDITY

Discriminant validity is defined as a state where more than two independently different ideas are correlated or not related with each other (Lambert & Larcker, 1987). The below-attached table no. 3 shows the discriminant validity by Fornell-Larcker criterion and table no. 4 shows discriminant validity by Heterotrait–Monotrait Ratio (HTMT). To check how much a construct varies from the other, discriminant validity is analyzed. In the study of discriminant validity, the square root of average variance extracted (AVE) is calculated to observe that if it is more than the correlation among variables. The below-attached table represents the discriminant validity where the values at the topmost of diagonals must be more than the below values of every column. In the attached table no. 3, the AVE square root values are greater than the correlation among variables, and the results of analyses represent that the construct does not have any issue of discriminant validity

Table 3. Fornell-Larcker criterion

	PS	RE	ROC	SC	SV
PS	0.748				
RE	0.681	0.809			
ROC	0.462	0.799	0.756		
SC	0.640	0.710	0.618	0.782	
SV	0.706	0.760	0.579	0.784	0.782

3.3. HETEROTRAIT-MONOTRAIT RATIO (HTMT)

According to (Edmans & Holderness, 2017) the HTMT value must be less than the value of 0.9. the attached table no. 4 represents the HTMT value of the construct, and the highest value of this construct is 0.872 that develops a sufficient standard of discriminant validity and presents an adequate standard of the measurement model.

Table 4. Heterotrait-Monotrait Ratio (HTMT)

	PS	RE	ROC	SC	SV
PS					
RE	0.798				
ROC	0.543	0.872			
SC	0.767	0.846	0.773		
SV	0.826	0.862	0.693	0.789	

3.4. CORRELATION

The relationship between variables is determined by using the Pearson correlation coefficient which says that the Pearson correlation coefficient value should be between +1 to -1 to have a strong relation. For the correlation to be significant, its value must be between the range of +1 to -1. If the correlation value is near -1 or +1 then it is perceived as strong and if it is near to 0, it is perceived as a weak correlation. The below-listed table represents the correlation among variables and according to that RE & SV have a correlation value of 0.546 which indicates a moderate positive relation while SV & SC have a correlation of 0.813 which indicates a strong positive correlation.

4. HYPOTHESES TESTING

The smart PLS 3 is used for the analysis and the model used for this study is developed based on the conceptual framework. In the model, all of the variables are represented along with their corresponding items. Even though the moderating variable is visible but its moderation has not yet been functioned. During the bootstrapping analysis, their moderation also functioned. About 2000 subsamples were generated through the process of bootstrapping to determine the path coefficients associated with the hypotheses of this study. The below-attached table no. 5 represents the results obtained through bootstrapping and it indicates the direction and extent to which the relationship exists among them. Higher the value of the path coefficient indicates a strong relationship between independent and dependent variables. The P-value of a relationship shows its significance, and it should be less than 0.05 for a T-value of greater than 1.96. For this study, out of 6 hypotheses, 4 have a P-value less than 0.05 which made them significant while 2 hypotheses are insignificant as their P-value is more than 0.05.

Table 5. Path Coefficients Results

RE → PS	-0.424	0.136	3.196	0.001	Supported
SC → PS	0.283	0.133	2.122	0.034	Supported
SV → PS	-0.134	0.094	1.584	0.114	Supported
RE-ROC → PS	-0.028	0.091	0.312	0.755	Un-Supported
SC-ROC → PS	0.260	0.086	3.377	0.001	Supported
SV-ROC → PS	0.181	0.076	2.403	0.017	Supported

Role of clarity (ROC) is used as a moderating variable in this model. From the results, it can be observed that ROC is playing as moderator and moderating the effect of our selected independent variables (RE, SC & SV) on the dependent variable PS. When the end result of bootstrapping was applied to the developed model, the obtained results are enlisted as path coefficients in the attached table. The moderating effect of ROC is found insignificant on RE.

4.1 COEFFICIENT OF DETERMINATION (R^2)

The coefficient of determination represents the relationship between dependent and independent variables. The analyzed value of R-Square provides insight of this relationship between dependent and independent variables whether it is weak, strong, or moderate (Henseler et al., 2015), (Henseler et al., 2016). If there is a 75% relation it shows a strong relationship, 25% relation shows there is a weak relationship which is near to 50% shows a moderate relationship. The analyzed value R-Square of this study is 0.581 which shows that Independent Variables are 58.1% related to Project Success (Dependent Variable). The adjusted R-Square for this study is 0.570 which represents that project success is affected by Resident Engineer, Subcontractor, and Supplier/Vendor with moderating role of Clarity by 57.0% and this represents a solid association between them.

4.2 CONCLUSION

The results of this study describe that the selected independent variables of internal and external stakeholder management explain 58.1% of the project success (PS). These results indicate a positive direct relationship between Stakeholders over project success which is also significantly proven from H1 & H3. In the results, the one variable of stakeholder H2 shows a non-significant relationship over project success and is also significantly proven and hence can be rejected. In these hypotheses tests of the direct relations between independent variables and dependent variable, the t-value was higher than cut off value 1.96 and the significance (p-values) were also less than cut off value 0.05, while one variable of Stakeholder H1 & H3 shows a significant relationship over the project success and hence H1 & H3 can be accepted. In these hypotheses tests of the direct relations between independent variables and dependent variable, the t-value was higher than the cut-off value of 1.96 and the significance (p-values) were also less than the cut-off value of 0.05. The results obtained from the complete analysis validate the previously developed relationship between independent variables and the dependent variable of this study from the literature review. These obtained results also imply that project success can be enhanced if construction firms focus on Stakeholder Management. By using the moderation of Role of Clarity

(H4, H5, H6), it can be seen that hypothesis H5 is non-significant, and hence can be rejected whereas H4 & H6 are significant and hence can be accepted. H4 & H6 show that Role of Clarity positively moderates the impact of Resident Engineer & Supplier/Vendor on project success. However, the Role of Clarity does not significantly moderate the impact of the Subcontractor on project success.

By using the moderation of Role of Clarity, it can be recognized that it positively moderates the relation of Resident Engineer, Supplier/Vendor, and Subcontractor on project success. The significant findings of moderation of Role of Clarity imply that the joint effect of ROC and RE reveals significant results on Project Success. The joint effect of ROC and SV also shows a significant result on Project Success. When RE & SV moderated with ROC, it shows a significant result on Project Success. Hence, it can be said that ROC shows a positive impact of the Stakeholder on project success. By the results, it can be observed that in an organization the project success could be increased by implementing the Role of Clarity and concentrating the management practices described by stakeholder management that focuses on Resident Engineer, Supplier/Vendor, and Subcontractor's behavior. Truly the conception of venture accomplishment models has been established from the shortsighted triple requirement idea, known as the iron triangle, that covers several extra accomplishment rules like partner fulfillment, quality, and information the board. (Judgev and Müller, 2005; Müller and Judgev, 2012; Shenhar and Dvir, 2007). As far as estimating achievement, an assortment of models for estimating project achievement were grown, for example, the famous ones are by Pinto and Prescott (1988); Shenhar et al. (2002); Hoegl and Gemünden (2001), and Turner and Müller (2006), which are completely planned with various basic suspicions. A mixture of these models was ended by Khan et al. 2013, who investigated the text on progress standards of the prior 40 years. Their model for approximating accomplishment was chosen for this study as it depends on the most recent writing, which is a superset of the accomplishment rules from the main specialists on venture achievement. This is exemplified by the venture the board writing which verifiably stressed the significance of partners in and for project achievement (for example Eskerod and Huemann, 2013).

4.3 IMPLICATIONS

In the domain of research, this thesis uncovers the depth of the commitment of stakeholder management to project success. Broadly this research adds to the enhancement of studies linking project management and strengthens the connection between stakeholder management and project success. Also, this research paly its contribution to comprehend the elements that affect the Project Success, just as it adds up to the benefits of Internal and External stakeholder management for various construction firms. Mulled over the predominant gap in this stud that connects Project success to Internal and External stakeholder management, this study assists with restraining it and additionally stimulates research in this field. In the practical fields, knowing the components or features that can include in Project success and are also capable to affect the progress of firms (like ROC), could help out organizations with gaining the upper hand. This study reinforces the hypothetical model to bring up to the organization's top management, resident engineer, supplier/vendor, and subcontractor the importance of producing in their construction firms to attain project success by the implementation of moderating role of "Role of Clarity" between Internal & External Stakeholders and Project success.

Hence, the outcomes of this study recommend that the internal & external stakeholder management practices can be adapted in the construction firms to the right path along with the role of clarity to encourage firms to make improvements in their projects and attain an upper hand between the contestants. It is important that the top management & resident engineers having project management skills grow up their point of view to understand different variables (for example ROC and SM) that impact the achievement of a venture. Results show, with the degree of the impact of inward and outside partner the executives on the accomplishment of the ventures (58.1%) referenced in this exploration.

4.4. LIMITATIONS

In the limitations of this study, it is important that the results are limited to the population of companies conducting construction projects in Lahore, Pakistan. This hindrance produces an opportunity for coming researchers in this field on the expansion of the model for specific fields of project sections and considering other variables for moderation just like ROC that we used Role of Clarity as a Moderator in our study.

Moreover, this study is conducted at the time of Pandemic COVID-19 when respondents were reluctant to give any information due to avoiding physical contact. So, most of the data were collected by using online means and observed non-serious attitudes of the respondents.

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