Examining the Mediating Effect of Organizational Commitment and Job Satisfaction between Project Manager Emotional Intelligence and Project Success

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ABSTRACT

The main purpose of this study is to examine the impact of the Project Manager’s emotional Intelligence on HVAC project success in Pakistan settings along with the mediating effect of job satisfaction and organizational commitment to bring clarity to the assessment of the relationship between the Project Manager’s emotional intelligence and project success in Pakistan settings. A quantitative research strategy is applied to collect realistic data from 210 Project Managers (from all the entities involved in the execution phase of the project the important ones being Sub-Contractors, Equipment Distributors as well as Product Manufacturers) of the HVAC industry of Pakistan. The collected data was analyzed and examined by using Structured Equation Modeling through the Partial Least Square method. To analyze the collected data SPSS and Smart PLS software were used. The findings of this study showed that the Project Manager’s emotional intelligence is positively related to project success and suggest the most evident result that there is a healthy and positive effect of Job Satisfaction and organizational commitment towards the success of a project. These suggestions amplify the need of the upper management to understand the significance of the mediating roles and its willingness to take care of necessary steps for letting and giving room to the Intelligence of the Project Manager having a positive outcome on the project success. Originality: This is first study in project management in Pakistan settings and delivers an advanced knowledge of emotional intelligence along with its importance to Project Success.

INTRODUCTION

In project management, project managers have a specific responsibility and task to accomplish their project objectives towards success (Jain, 2021). Project Managers faced numerous challenges due to project complexity (e.g., technically, financially, or ethically) (Ahmad et al., 2022). Stakeholders of Project always try for a project success (Maqbool et al., 2017). Project success is affected by various factors; however, the effort of Project Managers plays a crucial role (Maqbool et al., 2017). The development of compound projects in different infrastructures such as information technology, social sector security and, construction industry enhances the responsibilities of Project...
Manager (Ahmad et al., 2022). The project manager will identify and execute the project by giving directions to the team members on how to handle the project tasks (Jain, 2021). Moreover, the role of the Project Manager has become very vital because of the innovation and complexities of projects in the project-based world economy (Butt et al., 2021). The globalization and fast growth of the construction and infrastructure industry have increased the importance of complex projects (Rezvani et al., 2016). The increase in infrastructure and the tropical conditions of Pakistan has increased the need to have proper heating, ventilation, and air conditioning system to cater to the heating and cooling demands of the building (Butt et al., 2021). In developing countries high-rise apartment buildings as the trend of high-rise residential buildings, high-rise commercial buildings, processing industries, etc. As well as providing a reasonable ambiance and job satisfaction (Acheampong et al., 2023). As the technology has progressed and we are moving towards high-rise and mega projects, the concept of having a proper central air conditioning system has flourished and increased its numbers many folds (Butt et al., 2021). "Most of the time the major projects suffer delays in timelines and do not realize the aims." (Williams et al., 2010). "Indeed, expertise in project management and leading skills are the most important attributes of a successful project" (Kaulio, 2008). Through looking at the concepts of the Affective-Events-Theory System (Weiss et al., 1996), it is assumed assertively that the work-related conditions result in the affective reactions of workers that, indeed, decide their resulting working behaviors. So, Project Managers with a higher EI shall be more satisfied with their jobs (Sy et al., 2006). The EI of project managers (Mayer et al., 2004), is the capacity to be knowledgeable, use, understand and control emotions between oneself and others. This study addresses the following research questions, what is the impact of Project Manager’s emotional Intelligence on project success in HVAC industry? And how does the mediating effect of job satisfaction and organizational commitment bring clarity to the assessment of the relationship between the Project Manager’s emotional intelligence and project success in a HVAC industry in Pakistan settings? The main objectives of this study are, to examine the impact of Project Manager’s emotional Intelligence on project success in a HVAC Pakistan setting and the mediating effect of job satisfaction and organizational commitment to brings clarity to the assessment of the relationship between the Project Manager’s emotional intelligence and project success in a HVAC Pakistan setting and delivers an advanced knowledge of Emotional Intelligence along with its importance to Project Success.

Müller and Turner, (2007) described EI as a major component of successful sensitive project management, can be utilized to support the use of emotional intelligence as a project management strategy. Project managers with upstream EI are able to tackle new tasks and assignments (Acheampong et al., 2023) and issues as well as interact effectively with their work fellows (Mazur et al. 2014) found, the relation in between work satisfaction and the success of a project was positive. However, EI of a Project Manager can resolve many complex issues that are raised during the execution of a project but still there is a need of studying mechanisms or factors, which can affect EI on project success (Rezvani et al., 2016) said that to study the outcomes of the project success criteria then it is necessary to study the variables that mediate the relationship between project manager features (such as EI) and the success of a project. Therefore, it is assumed that job satisfaction would
improve the degree of achievement in the metrics of project performance such as communication and troubleshooting, objective visibility and support of top management (Mazur et al., 2014). Studies have been carried out and evidence exists that the organizational commitments have an effect on EI of the Project Manager (Khattak et al., 2023). It is argued that the Project Managers with higher EI have a commitment to their organization (Acheampong et al., 2023). Such managers reveal a concern for each other's feelings and often support their subordinates.

The researchers have point view that higher education tends to increase the EI of the Project Manager, as well as one's loyalty to the organization (Hosseini et al., 2016). A study by Aghdasi et al. (2011) showed that EI and organizational Commitment have recorded a healthy partnership. An empirical model is developed to study the results of the Project Manager’s EI on mega and complex projects. Then a potential mediator is studied that may contribute to increasing the success rate of the project. This study is contributing to the literature of Project Manager’s EI and the success of a project-specific to HVAC industry.

LITERATURE REVIEW

The key variables in our study are the project manager’s emotional intelligence, job description, organizational commitments and project success. (Salovey, 1990) described EI as the skill to track self-emotions and feelings, to distinguish between them, and to utilize information gathered to derive self-thoughts and behavior. Job Satisfaction is termed as an aspect to one’s job competing for the cognitive & effective parts (Breif, 1998). Earlier research shows us that both cognitive & effective parts are deriving the behaviors and actions of a Project Manager (Weiss 2002). In 1991, Myer and Allen (1991) defined the three dimensions of organizational engagement as being derivative\effective, normative & continuing. Efficient dedication is correlated with the Project Manager’s emotional connection to the Company. “Affective-commitment (AC) addresses "the project-manager’s emotional contribution to the organization". (Mayer-1990). Defining the project success is a dynamic process and the characteristics of project success differ with each project, but there is consensus on two elements that define the project performance: success attributes and essential success pillars (Jugdev, 2012).

Project manager’s emotional intelligence and project success

It has been stated out by Weiss & Cropanzano, 1996 that feeling an emotional stance varies over timespans and that work behaviors also differentiate relying on an employee's flows of emotional experiences. Optimistic or pessimistic emotions are encountered by employees in the work ecosystem. (Lindebaum & Jordan, 2014). In general, Optimistic emotions have up stating impact and employees result in doing upholding work (Mayer et al., 2008); opposite to that, pessimistic emotions like despair and furiousness can lower the performance of employees (Fisher, 2003).

Several studies showed the association between emotional intelligence and job satisfaction (Arain et al., 2021). Findings of the study of Maqbool et al. (2017) on 107 firms Pakistani construction industry were research with a view to assessing the effects of various variables on the success of construction
projects. The findings of the study showed that high level of emotional intelligence of project managers ensure the higher success in projects. The literature review of previous studies proposes that the higher authorities or leadership of the projects should realize that the success of project cannot be accomplished without the meaningful role, efforts, skills and emotional intelligence of the project managers (Ahmad et al., 2022). Moreover, Project managers with higher emotional intelligence can feel and effectively convey their emotions (Al Hosani, Al Mheiri, & El Khatib, 2023). Indeed, researchers (Müller and Turner, 2010) have consistently found EI to be a requirement for successful projects. They found conclusive proof that EI is critical to project success when it comes to complex nature projects. Clarke (2010) also emphasized the criticality of EI for project managers. Thomas and Mengel (2008) found that lack of EI would lead to dissatisfaction, stress, and poor performance in complex problems.

**H1.** Project managers’ EI is positively related to project success.

**Project manager’s emotional intelligence and job satisfaction**

Researchers such as Barczak (2010) indicated that EI significantly affects the satisfaction of the work of team leaders and their confidence in others. Positive emotions build stronger social relationships with others, increase confidence in others (Christie et al., 2015), and produce a higher degree of work satisfaction compared with project managers experiencing frustration, despair, and furiousness (Jordan et al., 2006). Job satisfaction is essential it is a determinant of commitment, and effectiveness of project or organization success (Arain et al., 2021). Job satisfaction is the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating one’s job values (Locke 1969, p. 317). Emotional Intelligence of project manager can boost job satisfaction and control problem solving (Castro et al., 2022). Emotional intelligence awareness of project manager is a anchor-man that will academically shape a greater framework fairness and honest in organizational strategy and enhance the level of job satisfaction (Alismail et al., 2022). Researchers checked the imposition of EI on behaviors and results at work, found that satisfaction is positively related to emotional abilities. Thus, we next hypothesize:

**H2.** Project managers’ EI is positively related to their job satisfaction

**Project manager’s emotional intelligence and organizational commitment**

Shafiq & Rana (2016) have found a significant relationship between EI and organizational commitment. Project Managers with higher EI are more committed, have better work relationships, and do not let some workload, tension, or stress get in their way Maqbool et al. (2017). Lower emotional intelligence (EI) individual has a strong degree of effective and moral dedication to the organization. EI is positively linked with OC. Strong emotional intelligence has greater levels of OC (Kumar et al., 2021). Project Manager motivating their team members to attain transactional objectives, the goal of leaders is to arouse their team members self-actualization, as opposed to immediately meeting self-interest (Lee et al., 2022).
Individuals often show ethical engagement, because they feel responsible yet often legally committed to the company (Shahzad et al., 2023). Experimentally pointed out interpersonal abilities are trigger maximizing emotional intelligence (EI) (Tang et al., 2020), and organization. Salami (2008) found out that EI can be a tool to measure organizational commitment. Guleryuz et al. (2008) found a positive relation between EI and OC. We can hypothesize that: 

**H3.** Project managers’ EI is positively related to organizational commitment. 

**The mediating role of organizational commitment**

The studies have found a directly proportional relationship between organizational commitment and project success. It has been observed that a good organizational environment would attach employees to the organization resulting in employees making decisions and working in the direction benefiting the organization, in turn, guaranteeing project success. (Abdel-Razek, 2011). The researchers have seen that if a person has a commitment to the company, there is a higher possibility of project success as each decision would be in the interest of the firm (Naz et al., 2019). The success of project depends upon the commitment of project manager and his or her team members (Naz et al., 2019) Effective communication, positive attitude, team play is some of the outcomes of organizational commitment that help in Project Success (Viswanathan, 2015).

Based on the above-mentioned references and the prior detailed discussions we can argue that Project Managers with higher EI and having a positive approach shall not be getting carried away by some stress or some minor matters. In fact, higher EI shall enforce a higher bond with the organization, and decisions made would benefit the company by enhancing the possibility of successful project execution and a successful handover of the project. Thus, we hypothesize that:

**H4.** Organizational Commitment mediates the relationship between project managers’ EI and project success.

**The mediating role of job satisfaction**

Based on the discussion of the critical variable and the underlying principles of AET, we argue that work satisfaction acts as the mediator by which EI contributes to project performance (Shahzad et al., 2023). The mediating route (via work satisfaction) draws on the effect of EI on evaluative judgments or positive emotions of project managers with respect to their tasks (Shahzad et al. 2023). A study of Doan, Nguyen, & Nguyen, (2020) investigated the mediating effect of transformational leadership and organisational commitment however, this study focus on the mediating effect of organisational commitment to get generalize findings. We argue that the project managers with a higher EI and high job satisfaction shall have a clear mission clarity, further grip on resolving issues, and shall have effective communication. We therefore hypothesize:

**H5.** Project manager attitudes like job satisfaction mediate the relationship between project managers’ EI and project success.
EI: Emotional Intelligence  
OC: Organizational Commitment  
JS: Job Satisfaction  
HVAC: Heating, Ventilating and Air Conditioning

RESEARCH METHODOLOGY

Sample

This research is conducted to study the influence of Project Manager’s Emotional Intelligence on success of HVAC project with the mediating role of Organizational Commitment and Job Satisfaction. The data was collected and analyzed to answer the questions of this research, to achieve research objective and to accomplish the aim of this study. This study is based on Primary data collected from the Project Managers HVAC industry through the structured questionnaire survey, as Project Managers represent all the stakeholder in HVAC industry and they can be either from Equipment manufacturer, distributer or from contractor side. Secondary data for this research is collected from different journals, articles, books and from conferences to write introduction and literature. This study is quantitative in nature and completed by using convenient sampling method. It is questionnaire-based study and data is collected by using telephonic interviews, google forms, questionnaire distribution and emails. A total 300 questionnaires were distributed among the project managers but only 210 responses received and found appropriate for analysis. The collected responses are analyzed by using SPSS software and Smart PLS.

Descriptive statistics

There was total 210 responses. Based on the demographic data, all the respondents are male in gender (N=210, 100%) and no one is female. In HVAC industry trend of female workers is almost nil. To segregate the ages of our respondents, total five age groups were made. Out of total 210 respondents 52 belong to the ages of 22 to 28 years, 47 belong to 29 to 35 of ages, 52 belong to 36 to 45 of ages and 22 respondents are above 55 years of age. In marital status Out of total 210, 108 respondents are single whereas, 102 are married. In case of educational details of respondents, 72 respondents are DAE
qualified, 77 are graduated and 61 are post graduated. In the experience-related group, 64 respondents had lesser than 5 years of experience, 44 had 5-10 years, 56 have 10 – 15 years and 46 have more than 15 years of experience.

Table 1: Respondents Demographics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Respondent (N=210)</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>210</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22-28</td>
<td>52</td>
<td>24.8</td>
<td></td>
</tr>
<tr>
<td>29-35</td>
<td>47</td>
<td>22.4</td>
<td></td>
</tr>
<tr>
<td>36-45</td>
<td>52</td>
<td>24.8</td>
<td></td>
</tr>
<tr>
<td>46-55</td>
<td>37</td>
<td>17.6</td>
<td></td>
</tr>
<tr>
<td>Above 55</td>
<td>22</td>
<td>10.5</td>
<td></td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>108</td>
<td>51.4</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>102</td>
<td>48.6</td>
<td></td>
</tr>
<tr>
<td><strong>Highest Degree</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAE</td>
<td>72</td>
<td>34.3</td>
<td></td>
</tr>
<tr>
<td>Graduation</td>
<td>77</td>
<td>36.7</td>
<td></td>
</tr>
<tr>
<td>Post-Graduation</td>
<td>61</td>
<td>29.0</td>
<td></td>
</tr>
<tr>
<td><strong>Job Experience</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 5 years</td>
<td>64</td>
<td>30.5</td>
<td></td>
</tr>
<tr>
<td>5-10 years</td>
<td>44</td>
<td>21.0</td>
<td></td>
</tr>
<tr>
<td>11-15 years</td>
<td>56</td>
<td>26.7</td>
<td></td>
</tr>
<tr>
<td>Above 15</td>
<td>46</td>
<td>21.9</td>
<td></td>
</tr>
</tbody>
</table>
Measures

The questionnaire adapted for this study encompass questions related to Project Manager Emotional Intelligence, Project Success, Organizational Commitment and Job Satisfaction. To measure all the developed questions, a five-point Likert Scale was 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 adapted questionnaire, to measure Project Manager’s Emotional Intelligence this study has 16 questions. To measure Project Success, this study contains total 12 questions. To measure Organizational commitment, this study has 8 questions and for Job Satisfaction, 20 questions were used.

Statistical tools

The proposed hypotheses shown in the conceptual model have been endorsed by using Partial Least Square (PLS). Smart PLS (Partial Least Square version 3) v.3 and SPSS v.26 (Statistical Social Science System version 26) were used for the study. SEM (Structural Equation Modeling) has been used to check Smart-PLS study theories while SPSS has been used to implement population research and to establish relationships between variables. SEM is a technique used specifically in the social sciences to perform the data analysis (Leguina, 2015). SEM is commonly used for the determination of the relationship between multiple variables. This is commonly used in the social sciences since it is used continuously to check several variables to interpret the results. SEM assists in assessing the interdependencies between the different variables.

RESULT AND DISCUSSION

Measurement model

Reliability of the construct

If Cronbach’s Alpha vale of any instrument is 0.7 or higher, it is considered reliable. However, in certain circumstances we can accept the value till 0.6. Table 2 shows that all the construct item’s Cronbach_Alpha value is higher than the suggested value of 0.6. Higher Cronbach-Alpa value of all the construct than the suggested value of 0.6 specify the satisfactory internal reliability of each variable construct.

<table>
<thead>
<tr>
<th>Variables/Items</th>
<th>Cronbach_Alpha</th>
<th>Cronbach_Alpha Based on Standardized Items</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Manager Emotional Intelligence</td>
<td>0.758</td>
<td>0.765</td>
<td>5</td>
</tr>
<tr>
<td>Project Success</td>
<td>0.704</td>
<td>0.703</td>
<td>4</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>0.724</td>
<td>0.727</td>
<td>3</td>
</tr>
<tr>
<td>Organizational Commitment</td>
<td>0.872</td>
<td>0.875</td>
<td>5</td>
</tr>
</tbody>
</table>
Validity analysis

Validity Analysis ensure that every time these observations measure the same dimension of the data. KMO and Bartlett test & Itemized Extraction values are used to check the validity of the data.

KMO and Bartlett’s test

Validity analysis performed by using KMO and Bartlett test. A Chi Square value measure the association between the important variables and provides a basis to test our hypothesis. Validity Analysis ensure that every time these observations measure the same dimension of the data. KMO value > 0.6 shows that the values are valid for the purpose of reliability of statements (Kaiser 1974). Table 3 shows that KMO values of the current study is 0.698 which is greater than 0.6 which shows the validity of statement.

Table 3: KMO and Bartlett Test

<table>
<thead>
<tr>
<th>KMO and Bartlett</th>
<th>KMO</th>
<th>Bartlett Sphericity</th>
<th>Approx. Chi-Square</th>
<th>Df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure of Sampling Suitability.</td>
<td>.698</td>
<td></td>
<td>1874.315</td>
<td>136</td>
<td>.000</td>
</tr>
</tbody>
</table>

Correlation analysis

Table 4 display the relationship between all the variable of this study. The relationship between variables is determined by using Pearson correlation coefficient which says that the Pearson correlation coefficient value should be between +1 to -1 to have a strong relation. A correlation is considered significant if the values of correlation fall in the range of -1.000 to +1.00. If the values lie close to +1.000 or -1.000 then the correlation is considered strong and if close to zero, they are considered weak. According to the analysis shown in table 5, correlation between PMEI_Var and PS_Var is 0.589 showing a strong positive relationship between them. The correlation between PMEI_var and JS_var is 0.196 showing a moderate positive relationship between them. Whereas the correlation between JS_var and PS_var is 0.244 showing a strong positive relationship between them. Attached table shows there is a moderate positive relationship between OC.Vara and PMEI_var.
Table 4: Results of Correlation Ratio

<table>
<thead>
<tr>
<th></th>
<th>PMEI_Var</th>
<th>PS_Var</th>
<th>JS_Var</th>
<th>OC_Var</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.589**</td>
<td>.196**</td>
<td>.176**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.000</td>
<td>0.004</td>
<td>0.011</td>
</tr>
<tr>
<td>N</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>210</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.589**</td>
<td>1</td>
<td>.244**</td>
<td>0.113</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.000</td>
<td>0.000</td>
<td>0.101</td>
</tr>
<tr>
<td>N</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>210</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.196**</td>
<td>.244**</td>
<td>1</td>
<td>.191**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.004</td>
<td>0.000</td>
<td>0.005</td>
</tr>
<tr>
<td>N</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>210</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.176**</td>
<td>0.113</td>
<td>.191**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.011</td>
<td>0.101</td>
<td>0.005</td>
</tr>
<tr>
<td>N</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>210</td>
</tr>
</tbody>
</table>

** Correlation is significance at the level 0.01 level (2-tailed)
* Correlation is significance at the level 0.05 level (2-tailed)

** Structural Model**

The analysis was done in Smart PLS 3 and the model that was used is made on the basis of the conceptual framework of the study. In this model, one independent latent variable is constructed on left. In the center, we have two mediating variables, and the last variable PS is the dependent variable of the research model. All the variables in the model are depicted with their respective items. Structural model is used to check the developed hypothesis of the study which were developed after detailed review of the literature. This is an advance level regression as it provides better results than simple linear regression analysis. In Smart PLS, the bootstrapping uses randomly drawn observations to create subsamples from the original data. In this research, 2000 samples were generated through bootstrapping to figure out the path coefficients of the thesis hypotheses. In table 6, the results generated by the bootstrapping shows the direction and the magnitude of the variables and the general relationship between them. Greater path coefficient values mean a stronger relationship between dependent and independent variables. The P-value indicating a value lower than 0.05 means significant relationship which also corresponds to a greater T-value of more than 1.96. In this research data that shows 5 hypotheses are developed and all are found significant.
The Five hypotheses were developed in this research for assessing the relationship between dependent and independent variables. First hypothesis of the study signifies that there is a positive and significant relationship between Project Manager Emotional Intelligence and Project Success by t-value of 9.243, beta value of 0.571 and significance P-value of 0.000. The second hypothesis signifies there is a positive and significant relationship between Project Manager Emotional Intelligence and Job Satisfaction by t-value of 9.61, beta value of 0.519, and significance P-value of 0.000. The third hypothesis signifies there is a positive and significant relationship between Project Manager Emotional Intelligence and Organizational Commitment by t-value of 5.251, beta value of 0.343 and significance P-value 0.017. Job Satisfaction is also positively and significantly related to project success as its t-value is 3.961, beta value is 0.235 and P-value is 0.000. Organizational Commitment is also significantly related to Project Success as its t-value is 2.56, beta value is 0.108 and P-value is 0.011. In fourth hypothesis of this study. The Fourth hypothesis signifies that there is a positive and significant relationship between Project Managers Emotional Intelligence and Project Success through mediating role of Organizational Commitment by t-value of 2.019, the beta value of 0.037, and the significance P-value of 0.044. The fifth hypothesis signifies that there is a positive and significant relationship between Project Manager Emotional Intelligence and Project Success through mediating role of Job Satisfaction by t-value of 3.196, the beta value of 0.122, and significance P-value of 0.001.
In this model we have used two mediating variables Job Satisfaction and Organizational Commitment. Both the mediating variables are significantly mediating the effect of independent variable (Project Manager Emotional Intelligence) to dependent variable (Project Success). In this mediation the effect of the responses from independent variable is multiplied with the dependent variable. The results of bootstrapping algorithm when applied to the model are listed as path coefficient in the above Table 5.

**Table 5: Path Coefficient**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Original Sample (O)</th>
<th>Sample Mean (M)</th>
<th>Standard Deviation (STDEV)</th>
<th>T-Statistics (O/STDEV)</th>
<th>Significance (P-Value)</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>JS → PS</td>
<td>0.235</td>
<td>0.236</td>
<td>0.059</td>
<td>3.961</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>OC → PS</td>
<td>0.108</td>
<td>0.112</td>
<td>0.042</td>
<td>2.56</td>
<td>0.011</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1: PMEI → PS</td>
<td>0.571</td>
<td>0.569</td>
<td>0.062</td>
<td>9.243</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2: PMEI → JS</td>
<td>0.519</td>
<td>0.525</td>
<td>0.057</td>
<td>9.16</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3: PMEI → OC</td>
<td>0.343</td>
<td>0.354</td>
<td>0.065</td>
<td>5.251</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4: PMEI → OC → PS</td>
<td>0.037</td>
<td>0.040</td>
<td>0.018</td>
<td>2.019</td>
<td>0.044</td>
<td>Accepted</td>
</tr>
<tr>
<td>H5: PMEI → JS → PS</td>
<td>0.122</td>
<td>0.125</td>
<td>0.038</td>
<td>3.196</td>
<td>0.001</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

**Coefficient of determination ($R^2$)**

The coefficient of determination represents the relationship between dependent and independent variable. Analyzed value of R-Square is shown in Table 6, which provides insight of this relationship between dependent and independent variable either it is weak, moderate, or strong (Henseler et al., 2015), (Henseler et al., 2016). If there is 75% relation it shows strong relationship, 25% relation shows there is weak relationship which is near to 50% shows moderate relationship. Analyzed value R-Square of this study is 0.347 which shows that Project Manager Emotional Intelligence (Independent Variable) is 34.7% related to Project Success (Dependent Variable). The adjusted R-Square value is 0.344 which represents that project success is affected by Project Manager Emotional Intelligence with the mediating role of Job Satisfaction and Organizational Commitment by 34.4%. this represents a moderate relationship between them.

**Table 6: Result of R-Square**

<table>
<thead>
<tr>
<th></th>
<th>R-Square</th>
<th>R-Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS</td>
<td>0.347</td>
<td>0.344</td>
</tr>
</tbody>
</table>

Based on the earlier research of Zhang, Hao, and Chung (2023), meta-analysis 5329 observation from independent research during 1990 to 2021 showed that there is positive association between emotional intelligence and project success. We also found, and the researchers argued that Project Managers with
higher level of Emotional Intelligence develop a bond, a trust with his team which enables him to control the output of the workers. The develop mission clarity, communication Prior work done by Ashkanasy (2002) and Weiss & Cropanzano, 1996 set out earlier groundwork for the theory. Our results are in compliance with the work done by Rezvani et al. (2016) and Müller & Turner (2010). Wong & Law (2002) have earlier found out that the Emotional Intelligent managers have ability to recover quickly from stress and negative emotions (Zhu, Wang, Wang, & Yu, 2021). As they are always into the project, will everything they have exteriorly and interiorly. They can lead their team out of these tough situations by immense sense of attachment and can deliver the project successfully catering every little glitch that happens in the way by his wit and control which EI a lots him. Results of this study is also in compliance of the aforementioned prior research that Project Manager’s Emotional Intelligence is positively related to the Project Success (H1).

Based on the working done by Müller & Turner (2010), Müller & Jugdev's (2012) and Rezvani et.al. (2016) all have a consensus on a fact that Emotional Intelligence alone is not sufficient to completely describe the Project Success. There will be need of some accelerators (mediators or moderators) to completely define the process. The results agree with the earlier works done by Sy et al. (2006), Rezvani et al., (2016). These researchers have argued that Emotional Intelligence has a positive impact on Job Satisfaction. Our results have concluded that Emotional Intelligence has a positive impact on Job Satisfaction (H2). It is said that positive attitude is necessary, and the results seconds it. The emotional intelligence project managers develop positivity and let go of the negative emotions in himself and his team members as well. As a result, the manager feels more secure and contributes more positively. Same emotions are shared by the team. The sense of security that derives the Project Manager also derives his team in the same way and thus will a creation of the collectively secure environment create a wave of positivity that brings out best and the quickest of the results even sometimes unexpectedly. This also explains out hypothesis where we argued and conclude through results that Job Satisfaction mediates the relationship between Emotional Intelligence of a Project Manager and Project Success (H5). This has been discussed in earlier research and we have also found that Emotional Intelligence has positive impact on Job Satisfaction and when measured practically, job satisfaction shall mediate the relationship between Emotional Intelligence and Project Success. Practically it means that if a Project Manager will feel more secure at a job, he will use his emotional intelligence more effectively and which will in turn contribute to project success. In the HVAC field, it is said that normally a Project Manager who initiates the installation work on a project is not the one who commissions and hands over the project to the client. For this reason, the importance of the study is enhanced many folds.

The effect of Organizational Commitment is also checked. The results from Hosseini & Zirak, (2016) and Aghdasi et.al. (2011) were in complete agreement with the results from the study. We could not find any conclusive study that had measured the effect of Project Manager Emotional Intelligence and Organizational Commitment with mediating role of Organizational Commitment. In our study we have found conclusive results that Emotional Intelligence has a positive impact on organizational commitment (H3). We also found that Organizational Commitment mediates the relationship between Emotional Intelligence and Project Success (H4). This also shows that Companies must cater the
requirements of its Project Managers and must take necessary steps to keep its employees committed
to the organization, as it will help in project execution. For the same reason, we see that switching
organizations has become a norm in the HVAC industry and this could be interlinked with the
discussion in the earlier paragraph.

CONCLUSION AND POLICY IMPLICATION

The purpose of this study was to find the influence of Project Manager’s Emotional
Intelligence on Project Success in the HVAC industry and to study the mediating role of Job
Satisfaction and Organizational Commitment between an independent variable (Project Manager’s
Emotional Intelligence) and dependent variable (Project Success). This research is conducted in
HVAC industry of Pakistan to present a picture to show the relationship between Project Success and
Project Manager’s Emotional Intelligence. The observable variable is measured with its items and
found it significantly related to its independent variable of the Project Manager’s Emotional
Intelligence. This study is conducted by using a convenient sampling method. A SEM (Structured
Equation Model) by partial least square is applied to study the relationship between Project Manager’s
Emotional Intelligence and Project Success. The measured value of Cronbach Alpha represents the
reliability of the construct and of the complete survey.

It was found that there is an important positive relationship between the Emotional Intelligence project
manager and Project Success. We consider the Project Manager Emotional Intelligence's profoundly
beneficial impact on organizational engagement and job satisfaction. Findings of this study partially
corroborate the findings of Zhu, Wang, Wang, and Yu, (2021) that the emotional intelligence of
Project Manager is to affected project success The findings the study also showed that the emotional
intelligence also affects project success through the mediating effect of commitment. In addition,
mediating effect of organizational commitment and Job Satisfaction on the relationship between
Project Manager Emotional Intelligence and Project Success is also observed. The field of Heating
Ventilation & Air conditioning System is a complex one and it was tried to cover all the major pillars
of the industry present in Pakistan i.e., HVAC Consultants, Equipment Manufacturers, Distributors,
and Contractors. Each pillar is very important for the industry to survive. Each fields its own Project
Manager in a project to look after the project. They key factor in the success of the project is true
verbal and nonverbal communication between the managers as they all are very much needed to work
as a team. Hence a manager with a great deal of EI performs a great deal of betterment in this teamwork
and all parties involved are incorporated during the whole process.

One of the main concerns in this study is the population size. HVAC is a small industry and Project
Managers are few in numbers. If we limit the numbers to a particular area, the population gets very
low as in this case. One more fact is the association of researchers with the industry. Due to various
reasons and despite assurances, the project managers of other firms were reluctant to fill out the data.
This has also to do with a large number of questions in the questionnaire models which had to be used.
The development of a brief and effective questionnaire is also necessary. HVAC is an important field
as air conditioning is required in every building. For future research, we can involve the Pakistan
HVACR Society and ASHRAE Pakistan chapter since all the organizations are members of it. Further, future researchers can enhance the size from North Region to all of Pakistan. Future research can involve other key variables.

REFERENCES


