

**Emotional Intelligence and Project Success with Mediating Effect of Transformational Leadership in Construction Sector Projects in Pakistan****Bilal Khan, Naveed***Qurtuba University of Science and Technology, Peshawar***Abstract**

*The number of complex projects is increasing across many sectors and the associated challenges are substantial. Using a field study, the present dissertation aims to understand how project managers' emotional intelligence (EI) contributes to project success. Further, the study proposes and tests a model linking EI to project success and examines the mediating effects of project managers' transformational leadership style on this relationship. To achieve the objectives of the study data were collected through self-administered questionnaires from a sample of 218 project managers and project employees. The descriptive stats and partial least square structural equation model were applied through SPSS and SmartPLS for data analysis. The results of the study revealed that the emotional intelligence of project managers has a significant and positive effect on project success of construction projects. Furthermore, the study found evidence that the transformational leadership style mediates the relationship between EI and project success. The study has practical implications for construction companies and recommends the need to look for cognitive intelligence and experience in hardcore management skills to recruit emotionally intelligent managers which result in project success.*

**Keywords:** Emotional Intelligence, Project Success, Transformational Leadership

Many studies have looked into the value of emotional intelligence for leaders and how it influences managerial behavior at work (Druskat, Mount, & Sala, 2013; Jung & Yoon, 2012). The use of emotions by leaders has also been studied, with a focus on the traits and effects of transformational, transactional, and charismatic leadership (Avolio & Yammarino, 2013; Kark & Shamir, 2013; McCleskey, 2014; Tyssen, Wald, & Spieth, 2014).

In order to boost the positive conditions and enjoyment of team members, emotionally powerful leaders who show their feelings may engage in emotional impurity (Ilies, Curseu, Dimotakis, & Spitz-muller, 2013). They add that it's crucial for project managers to have strong emotional intelligence in order to minimize the risk associated with project team members, including member selection, job involvement, and JS. An emotionally intelligent project manager seeks to create a work environment that values emotional intelligence and recruits and retains emotionally intelligent team members. Similar to this, emotionally intelligent managers boost their team members' self-assurance and sense of belonging, which is crucial to developing team EI (Druskat & Wolff, 2001). This study supports the idea that project managers' emotional intelligence positively affects project success (Ahmad, T., Rasheed S., Khan, N., 2022).

The value of emotional intelligence is directly correlated with one's level of status. This association leads to the idea that emotional intelligence is a crucial leadership characteristic because it raises the chance that team leaders' emotional outbursts may negatively impact the team's performance (Goleman et al., 2013). Many studies have looked into the value of emotional intelligence for leaders and how it influences managerial behavior at work (Druskat, Mount, & Sala, 2013; Jung & Yoon, 2012). The use of emotions by leaders has also been studied, with a focus on the traits and effects of transformational, transactional, and charismatic leadership (Avolio & Yammarino, 2013; Kark & Shamir, 2013; McCleskey, 2014; Tyssen, Wald, & Spieth, 2014).

To guarantee that team members are in line with organizational expectations, the leadership in project management has a vital responsibility (Agarwal et al., 2021). Any project's success is dependent on a variety of circumstances, but the project manager's position is crucial (Davis, 2011; Maqbool et al., 2017). The success of projects in a complex and unpredictable environment depends heavily on leadership, and existing research has called for a more systemic and collective investigation of leadership as a social process in the field of project management (Agarwal

et al., 2021; Bhatti et al., 2021).

Because of its captivating and inspiring qualities, studies have demonstrated that transformational leadership, among the different leadership philosophies accessible, is essential for teams whose communication levels are restricted by technology (Braun, Peus, Weisweiler, & Frey, 2013). Effective leaders, especially transformational leaders, often exhibit high levels of emotional intelligence, which is the ability to detect and control emotions so that they may be used in problem-solving and decision-making, according to Goleman, Boyatzis, and McKee (2013). The author argues as a result that transformational leadership considerably mediates the link between project managers' emotional intelligence and success.

Existing literature emphasizes the significance of project managers' trust in projects' success in addition to their leadership role in determining projects' success (Bond-Barnard et al., 2014; Buvik and Rolfsen, 2015). Because project teams are frequently diverse and cross-functional, there is a high degree of interdependence between team members; because the nature of project work frequently involves high levels of uncertainty, deadline pressure, and risk; and because continuous coordination, integration, and collaboration within the team is necessary to produce project outcomes. These traits highlight the importance of developing strong working relationships among project team members.

There are at least two significant reasons why trust in organizations is receiving scholarly attention. One is that tasks at work are getting more intricate, cooperative, and knowledge-intensive (Hauser, Perkmann, Puntischer, Walde, & Tappeiner, 2015), which amplifies the importance of trust in encouraging cooperative behavior (Jones & George, 1998). The increasing understanding of social factors as a source of competitive advantage in organizations is another factor (Putnam, 2000). Similar to this, the author makes the case that trust is crucial to the success of construction projects in Khyber Pakhtunkhwa. By looking into the mediating role of trust between the relationship of the project manager's emotional intelligence and project success, this research is an attempt to close the gap.

The construction industry in Pakistan was chosen as the study backdrop for this aim by the study's author. The construction industry was chosen for a number of reasons. First off, the building sector is crucial to a nation's socioeconomic development. The actions of the sector are crucial to achieving the objectives of the country's socioeconomic development, including the provision of infrastructure, refuge, and employment. Second, it covers all economic activity related to the construction, remodeling, maintenance, or extension of fixed assets such as buildings and engineering-related land improvements. Third, in addition, the building industry creates a significant amount of jobs and stimulates the growth of other industries through backward and forward connections (Khan, 2008). Last but not least, given that Pakistan is a developing nation, the sector of the construction industry is currently experiencing rather rapid growth. Currently, behind agriculture, construction is Pakistan's second-largest economic industry. Approximately 30–35% of jobs are either directly or indirectly related to the construction industry. As a result, Pakistan's building industry has been crucial in fostering job growth and economic recovery (Farooqui, et al., 2008).

### **Research Questions**

- I. Is emotional intelligence related to project success?
- II. Does transformational leadership mediate the relationship between emotional intelligence and project success?

### **Research Objectives**

- I. To investigate the relationship between emotional intelligence and project success in construction sector projects in Pakistan.
- II. To analyze the mediating effect of transformational leadership emotional intelligence and project success in construction sector projects in Pakistan.

## **Literature Review**

### ***Emotional Intelligence and Project Success***

Weiss and Cropanzano (1996) stated that depending on employee's flow of emotional experience, both working behaviors and emotional experiences change over time. Individuals at workplace might experience both positive and negative emotions (Lindbaum and Jordan, 2014). Positive emotions increase the performance of employees in general at work (Khatib, et al., 2021;

Mayer et al., 2008; Sy et al., 2006; Wong and Law, 2002), and frustration, irritation, and anger as negative emotions diminishes the enthusiasm of employees and ultimately, this leads towards low performance of employees (Fisher, 2003; McColl-Kennedy and Anderson, 2002; Von Glinow et al., 2004).

Project managers with emotional intelligence show positive emotions (Peslak, 2005). The enthusiasm of project managers with positive emotions is increased and makes their communication as effective with team members and they creatively manage their challenging tasks (Carmeli, 2003). Mount, (2006) urged that the high level of emotional intelligence of project managers motivate them to create positive impacts on their team members and they find new ways to solve the issues arose by the complex projects also indicated by (Montenegro, et al., 2021).

Emotional intelligence has been identified as a necessary condition for project success by researchers (Clarke, 2010; Mazur et al., 2014; Müller and Turner, 2010). In their research, Muller and Turner (2007, 2010) also discovered that EI increases the likelihood of project success in extremely complex projects. High emotionally intelligent project managers, according to Thomas and Mengel (2008), may deal with stress and negative emotions quickly in challenging circumstances. They added that EI aids project managers in determining the appropriate response in challenging project circumstances. In addition, Thomas and Mengel (2008) discovered that a lack of emotional intelligence will exacerbate irritation, stress, and subpar performance when there is room for misunderstanding and pressure in complicated project situations. Using data from 373 project managers in the Australian defense industry, Rezvani, Chang, Wiewiora, Ashkanasy, N.M., Jordan, P.J., and Zolin (2016) conducted a study. The results showed that EI had a favorable impact on project success, work satisfaction, and trust. From the aforementioned findings, it is clear that EI plays a crucial role in identifying project success elements. Consequently, it is assumed:

H<sub>1</sub>. Project manager's emotional intelligence is significantly related to project success

### ***Emotional Intelligence and Transformation Leadership***

In an effort to improve the organization, researchers have recently focused on leaders' emotional intelligence (Hsu, et al., 2022; Hesselbein and others, 1996; 1997 Cooper; 1997, Harrison) Transformational leadership has been found to be a significant factor in effectiveness in a variety of organizational contexts (Patterson et al., 1995; Barling and others, 1996; Lowe and others, 1996; 1998 (Geyer and Steyrer) In order to increase a leader's commitment to the organization, emotional intelligence has been identified as a milestone of effective leadership (Kailola, 2020; Emotions were favorable toward organizational commitment (George, 2000) and improved organizational performance (Watkin, 2000), according to Abraham (2000).

Goleman (1998b), stated that a significant element in leader effectiveness is emotional intelligence. Barling, Slater and Kelloway (2000) suggested that individuals who are emotionally intelligent are mostly indicate transformational leadership behaviors. Researchers observed that leaders with transformational leadership skills rather than transformational leadership showed that transformational leaders were more effective in knowing others' emotions and they were more creative to solve the problems. Gardner and Stough (2002) investigated in a research on association between leadership style and emotional intelligence. They collected data from 110 senior level managers. The findings of their research showed that both transformational leadership and emotional intelligence were positively and strongly related in contrast to transaction leadership.

Researchers (Barczak et al., 2010; Christie et al., 2015; Kafetsios and Zampetakis, 2008; Sy et al., 2006) have found in their researches that emotional intelligence has positive and significant impacts on job satisfaction and trust in others of team members. It has also been observed that the level of emotional intelligence managers have are more better than as compare to those managers with low emotional intelligence. Better social relationships and building trust with others are developed and linked by positive emotions (Barczak et al., 2010; Christie et al., 2015) and it also create higher level of job satisfaction in comparison with those employees who face disappointment, depression and anger types of emotions (Jordan et al., 2006). Dunn and Schwetzer (2005) urged that trust in others is created by positive emotions while trust is decreased by negative emotions like anger. Boden and Berencaum (2007) conducted a study in which they found that lower awareness of emotional intelligence individuals are found to be higher in suspicion and frustration.

Mayer and Salovey, (1997) stated that emotional awareness is a part of EI, they further suggested that there should be relationship of Ei with the perceptions of team members of trust in others. Sy et al., (2006) and Christie et al., (2015) investigated in a research on the emotional intelligence's impacts on work attitudes and outcomes, they found from their findings that emotional

skills are directly related to the perceptions of job satisfaction and trust. Therefore it is hypothesized:  
H<sub>2</sub>. Project Managers' EI is significantly related to their transformational leadership

### ***Transformational Leadership and Project Success***

Studies indicated that there is significant effect of transformational leadership on the workplace outcomes and project success (Waglay, et al., 2020; Anantatmula, 2010; Yang et al., 2011). However, there is very little work performed on leadership in the project context (Turner and Muller, 2005) and in the project environment the work of transformational leadership might be different from the work which is performed in the permanent organizations (Mukhtar, 2020; Keegan and Den Hatog, 2004). It has been observed from the previous literature that the role of project managers is very crucial in achieving project success (Scott-Young and Samson, 2008; Zwikael and Unger-Aviram, 2010). Transformational leaders try to create healthy relationships in the working environment (Sohmen, 2013). Team cohesion and mutual understanding is increased by such types of project managers, they encourage the team members to share their ideas with themselves and self-management and self-leadership skills of the followers are developed by these leaders. Thus it is stated that in such environment team members present such efforts through which project success may be achieved (Burke et al., 2006). Therefore it is hypothesized:

H<sub>3</sub>. Project managers' transformational leadership is significantly related to project success.

### ***The Mediating Role of Transformational Leadership***

The study in hands sought to develop relationships between project managers' EI and one work attitude – transformational leadership and project success (H3). It is further argued by the author of current study that transformational leadership serve as the attitudinal mediator underlying the principles of affective events theory (AET) due to which emotional intelligence leads to project success. Transformational leadership as the mediating path expresses that highly emotionally intelligent project managers and having transformational leadership skills are in a state to appreciate effective communication, troubleshooting, and project mission clarity. Tan, Song and Fu, (2011) conducted a research on impact of leaders' passion at work on leader effectiveness and mediating role of transformational leadership. The findings showed that the relationship was fully mediated by the transformational leadership and further suggested that positive emotions of leader increase his/her outcomes. Therefore it is hypothesized:

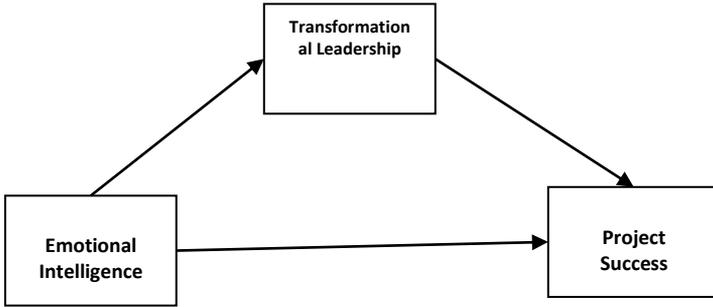
H<sub>4</sub>. Project managers' attitudes, transformational leadership mediates the relationship between project managers' EI and project success.

### ***Literature and Theoretical Gap***

Positive emotions are helpful in increasing the employees' performance in the organization (Mayer et al., 2008; Sy et al., 2006; Wong and Law, 2000). On the other hand, researchers identified in their studies that negative emotions lower the eagerness to perform well in an organization of employees (Fisher, 2003; McColl-Kennedy and Anderson, 2002; Von Glinow et al., 2004). Peslak, (2005) found in his research that emotionally intelligent project managers use positive emotions in the project execution stages. Literature identified that emotional intelligence has the ability to achieve project success and is a prerequisite for the success of projects (Clarke, 2010; Mazur et al., 2014; Müller and Turner, 2010). Rezvani, et al., (2016) studied in their research about the emotional intelligence and its influence on project success and found that project success is achieved by adopting the skills of emotional intelligence by project managers in Australian defense industry. They used job satisfaction and trust as mediators in their study. Researchers studied emotional intelligence and its different dimensions with project success but used different variables in different sectors and in various countries however, this research is an attempt to fill the gap by investigating EI with PS and using transformational leadership as mediators (Akgün, and et. al., 2008; Clarke, 2010; Tang et. al., 2010; Fazlani, et. al., 2012; Hutchinson & Hurley, 2013).

As it is understood that leadership styles play important role in the success of organization as well as projects so researchers examined emotional intelligence and other aspects to check the reasons for project success but specifically in construction projects in the context of Pakistan using transformational leadership as a mediator is missing mostly in literature. Therefore, the paper provides new insights to the theory that is Affective Events Theory (AET) to investigate that how transformational leadership mediates the linkage between emotional intelligence and Project success, so the theoretical contribution of this study is utilizing AET and transformational leadership as mediator between EI and PS.

**Figure 1.**  
*Project Success Model*



### **Research Methodology**

The research design, sampling technique, study measures, and data collection procedure are all covered in detail in this section. Participants' sample characteristics are also discussed. The information was gathered from project managers in Khyber Pakhtunkhwa-based construction projects and businesses. According to the list that was provided by Pakistan Engineering Counsel in 2018, there were a total of 398 construction companies as a percentage of the population working in Khyber Pakhtunkhwa. Bull (2005) suggested that the term "population" encompasses all elements, cases, and members in which researchers have a particular interest in conducting research. Therefore, the population of the current study would consist of all project managers employed by 398 construction firms, according to a list provided by Pakistan Engineering Counsel (2018). A structured questionnaire was used for this study's data collection process. The Pakistan Engineering Council provided the list of project managers. The variables used in this study influenced the selection of the questionnaire. The study's sample would be chosen at random. Depending on the ease with which respondents were available, the questionnaire was distributed to the selected sample via email and postal mail.

### **Measurement**

The author of this study used a self-report measure of emotional intelligence that adheres to the ability definition of emotional intelligence developed by Salovey and Mayer (1990) (Jordan and Lawrence, 2009). The scale has 16 items, all of which were developed specifically for use in teams and organizations. In addition, this scale is broken down into four primary aspects of emotional intelligence: 1) Being aware of one's own emotions; 2) Being aware of the emotions of others; 3) Managing one's own emotions; and 4) Managing the emotions of others. In this study, a 20-item scale developed by the Pintos (1990) was used to measure project success and analyze respondents' evaluations against four factors: 1) communication, 2) troubleshooting, 3) a clear mission, and 4) support from upper management. A 21-item scale for transformational leadership was used in Bass and Avolio's (1990) multifactor leadership questionnaire for this study.

The questionnaires distributed among the respondents were 250 in total. The author personally distributed and visited construction companies and requested the respondents to provide the requested data through questionnaires. 223 questionnaires returned out of which only 218 were fully filled by respondents. So the response rate was 87% which was quite good for a study.

### **Results & Discussion**

#### **Validity & Reliability Test Analysis**

The first criterion for determining internal consistency is cronbach alpha. Cronbach's alpha uses correlation between variables to estimate reliability, making the assumption that all variables are equally reliable. Table 1 shows that the values for each variable ranged from 0.87 to 0.949. According to Fornell and Larcker (1981), cronbach alpha greater than 0.70 indicated that all

variables have high internal consistency. The composite reliability of all variables is the second criterion used to determine the internal consistency. The composite reliability of all variables uses outer loadings to check the internal consistency. Table 4.6 shows that all of the variables had values between 0.88 and 0.95. According to Arnold and Reynolds, this indicates that all of the variables are reliable because its internal consistency is greater than 0.70.

To find out how all variables are related to one another, convergent validity is used. Variables' convergent validity can be determined using averaged extracted variance. The results for convergent validity are shown in Table 1. All of the constructs, with the exception of trust and transformational leadership, have AVE values greater than 0.5, indicating convergent validity (Fornell and Larcker, 1981). Transformational leadership, on the other hand, has an AVE value of 0.479; which is close to 0.5, and its composite reliability of 0.950, which is higher than 0.6, implying that an AVE of less than 0.4 is acceptable (Lam, L. W., 2012; 1981, Fornell and Larcker). In addition, these two constructs' internal consistency reliability and discriminant validity all have acceptable values, so they remain in the model for analysis (Kay and Wong, 2016).

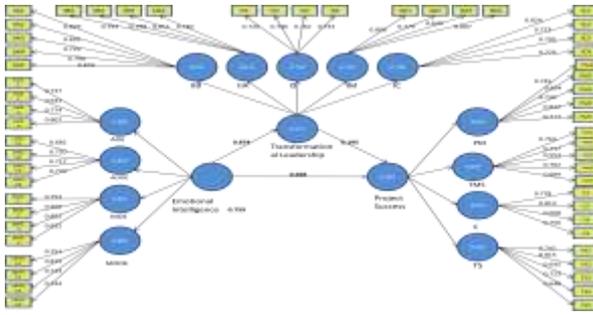
**Table 1**  
*Reliability Analysis Summary*

<b>Dimensions</b>	<b>Cronbach's Alpha</b>	<b>Composite Reliability</b>	<b>AVE</b>
AOE1	0.818	0.880	0.647
AOE2	0.818	0.880	0.648
C	0.847	0.897	0.686
EI	0.945	0.952	0.554
IC	0.802	0.871	0.628
IIA	0.794	0.866	0.618
IIB	0.877	0.910	0.670
IM	0.758	0.847	0.582
IS	0.726	0.829	0.548
MOE1	0.846	0.897	0.685
MOE2	0.810	0.877	0.646
MS	0.802	0.864	0.563
PM	0.870	0.906	0.659
PS	0.949	0.954	0.525
TL	0.945	0.950	0.479
TS	0.844	0.889	0.618

**Measurement Model**

The measurement model is the first stage in PLS-SEM. In the measurement model, the model is assessed for their quality criteria using factor loadings, internal consistency reliability, convergent, and discriminant validity. Figure 2 shows the measurement model indicating factor loadings and internal consistency reliability.

**Figure 2**  
*Measurement Model*



**Discriminant Validity**

Discriminant validity helps in finding out the differentiation between all variables. Fornell-Larcker criterion is used in order to investigate discriminant validity. In Fornell and Lacker criterion, correlation values and average extracted variance are compared with each other. Table 2 indicates the discriminant validity meaning that all square roots of average extracted variance are higher than the correlations between other latent variables.

**Table 2**  
*Discriminant Validity*

	AOE1	AOE2	C	IC	IIA	IIB	IM	IS	MOE1	MOE2	MS	PM	TS
<b>AOE1</b>	<b>0.805</b>												
<b>AOE2</b>	0.771	<b>0.805</b>											
<b>C</b>	0.757	0.756	<b>0.828</b>										
<b>IC</b>	0.707	0.735	0.672	<b>0.792</b>									
<b>IIA</b>	0.706	0.728	0.683	0.770	<b>0.786</b>								
<b>IIB</b>	0.781	0.804	0.751	0.721	0.771	<b>0.819</b>							
<b>IM</b>	0.707	0.696	0.667	0.763	0.716	0.668	<b>0.763</b>						
<b>IS</b>	0.698	0.684	0.641	0.704	0.734	0.735	0.671	<b>0.741</b>					
<b>MOE1</b>	0.738	0.796	0.755	0.689	0.689	0.695	0.667	0.615	<b>0.828</b>				
<b>MOE2</b>	0.800	0.730	0.809	0.772	0.747	0.740	0.688	0.695	0.817	<b>0.804</b>			
<b>MS</b>	0.798	0.765	0.794	0.728	0.728	0.689	0.732	0.691	0.730	0.795	<b>0.750</b>		
<b>PM</b>	0.785	0.800	0.775	0.702	0.732	0.718	0.660	0.693	0.754	0.747	0.715	<b>0.812</b>	
<b>TS</b>	0.773	0.719	0.791	0.717	0.724	0.802	0.707	0.704	0.729	0.724	0.721	0.764	<b>0.786</b>

**Assessment of R Square**

According to Woodridge (2009), R square shows how much variation in the dependent variable is explained by the independent variable. Table 3 shows that emotional intelligence (EI) is responsible for the values of R squares for project success, trust, and emotional intelligence—0.904, 0.594, and 0.777, respectively.

**Table 3**  
*Assessment of R Square*

Variable	R Square	Adjusted R Square
PS	0.904	0.903
T	0.594	0.592
TL	0.777	0.776

**Path Coefficient of Structural Model**

**Table 4**  
*Hypothesis Testing*

	Path	Coefficient	Standard Deviation	T Statistics	P Values
H1	EI -> PS	0.668**	0.056	11.813	0.001
H2	EI -> TL	0.874**	0.040	21.779	0.001
H3	TL -> PS	0.195**	0.070	2.887	0.004

Note: \*\*indicating significant at 1 percent and \* significant at 5 percent

The following hypotheses were evaluated with the assistance of the structural model. In order to verify the proposed hypothesis, the structural model's path coefficient between the two latent variables is examined. According to previous research, a path coefficient of at least 0.1 is required to demonstrate impact in a particular model (Hair et al., 2011; Wetzels and other, 2009). The path coefficient evaluation is shown in Table 4, indicating that all of the proposed hypotheses are true. Because the p-value was less than 0.05, it was also determined that all of the hypotheses were significant at the level of 0.05. This also indicated that there were positive directions and that the path coefficient value ranged from 0.668 to 2.887. Emotional intelligence has an impact on project success, according to the analysis ( $\beta=0.661$ ,  $t=11.813$ ,  $p<0.001$ ) Thus, the results demonstrate that H1 is supported in this manner. The analysis also revealed that transformational leadership (TL) is influenced by Emotional intelligence ( $\beta=0.874$ ,  $t=21.779$ ,  $p<0.001$ ) meaning that both TL and EI have strong and significant relations with each other, therefore, H2 is supported. From the analysis, PS is influenced by TL ( $\beta=0.195$ ,  $t=2.887$ ,  $p<0.05$ ) meaning that there is a significant relationship and it is also positive between PS and TL which suggests that H3 is supported.

**Mediating Analysis**

In order to investigate and test the mediating effect of a project manager's transformational leadership, the results expressed in table 5 that EI directly affects PS with 0.668 significantly at 1%. In addition to this, the indirect effects of transformational leadership on the relationship between EI and PS are noted as 0.170 and are also significant because the p-value is less than 0.05. Therefore, the results declared that there is weak partial mediating effects of the transformational leadership between the EI and PS connection because the direct effect is less than the indirect effect that is (EI → PS = 0.668 > EI → TL → PS = 0.170).

**Table 5**  
*Mediation Analysis*

Path	Coefficient	Standard Deviation	T Statistics	P Values
EI → T → PS	0.098**	0.034	2.846	0.005
EI → TL → PS	0.170**	0.061	2.905	0.004

Note: \*\* indicating significant at 1 percent and \* significant at 5 percent

**Discussion**

The primary motivation in this study was to investigate emotional intelligence as the underlying mechanisms of a critical aspect of project manager skills were associated with the success factors of project ratings in complex project settings. The findings of this study indicate that emotional intelligence is positively correlated with project success (Müller and Turner, 2010), this relationship is considered to be complex, and it cannot be determined completely in terms of straightforward direct connection which met the second research question that emotional intelligence affect project success.

The author of this study developed a model and tested it which was driven by emotional theory-related factors in order to analyze the mechanisms underlying the emotional intelligence of project managers and project success (Ashkanasy, 2002; Weiss and Cropanzano, 1996). The association between EI and project success was also tested with two mediating variables using the existing theoretical framework to check the second research question that trust and transformational leadership mediate the relationship between emotional intelligence and project success. First, it was suggested that trust is an attitudinal construct that creates an emotional

linkage between the success of the project and EI. For example, in creating an emotional connection with team members, project managers who are emotionally intelligent would obviously develop trust with their followers in the project, and in return, this association is reflected among the factors of project success that are communication, mission clarity, troubleshooting, and top management support which support the mediator construct that it mediates the relationship between emotional intelligence and project success. Secondly, the transformational leadership style as mediating construct specifies the impact of EI on project success. The results showed that only part of the story is stated from the traditional perspective of emotional intelligence as a direct impact on the project's success. In this context, this research is actually a response to the call for papers by Muller and Jugdev (2012) in order to analyze the mediating variables of project success. Furthermore, the abilities of those project managers who are emotionally intelligent in connection to their work attitudes are created with the help of the positive association founded among EI, and transformational leadership which support the mediator construct that it mediate the relationship between emotional intelligence and project success and fulfilled the criteria of the research question. this positive connection in the results of this study are also found in consistent with previous research findings (Sy et al., 2006, Wong and Law, 2002) between EI and work attitudes. In stressful circumstances, the project managers who are emotionally intelligent, can easily recover themselves with this potential from the negative feelings and tension (Wong and Law, 2002). Project managers in a dynamic project environment face different complex situations where they need to be able to control their emotions in order to achieve positive outcomes. Literature has been observed that the theoretical and empirical focus on the important mechanisms of an organization was ignored in previous studies but this research helped in putting light on this specified area. It has been indicated that project success has improved with the help of the difference shown between emotional intelligence and work attitudes, the findings of this research directed new study which would be aimed to get the potential effects of business-enhancing integrating EI and positive attitudes to perform in complex project settings. From methodological perspective, this research contributes that it simultaneously investigated and trusted transformational leadership, so bias problem can be minimized by estimating parameter (Preacher and Hayes, 2008) which would have emerged if only one mediator was examined at a time.

Maqbool et al.'s findings are supported by the findings of this study. (2017). According to Maqbool et al.'s research, EI has a positive impact on the project's success. (2017). Additionally, these outcomes are in line with those of Mount (2006), Trejo (2016), and Geoghean and Dulewicz (2008). An effective project team that is focused on cooperation, openness, and communication requires project managers with high emotional intelligence. In today's increasingly globalized business environment, project managers with high emotional intelligence are better equipped to deal with the complex challenges and issues that arise with each project. According to Mazur, Pisarski, Chang, & Ashkanasy (2014), results show that emotionally intelligent managers are able to inspire their team members to work and solve new problems and challenges of all kinds. Similarly, a number of other studies demonstrate the positive connection between project success and emotional intelligence. For instance, Muller and Turner (2007) find that this mechanism indicates that positive project manager emotions have a positive influence on project success when analyzing the relationship between emotional intelligence and project success. Emotional intelligence is required to successfully resolve the project's complexities and complete the project. Rezvani, Chang, Wiewiora, Ashkanasy, Jordan, and Zolin (2016) found in their research that emotionally intelligent project managers are the only ones who can deal with the complexity and ensure the project's success.

The findings of research conducted on the relationship between managers' transformational leadership style and EI indicated that there was positive relationship found within Golestan State Physical Education, which was in consistent with previous studies (Martell & Desmet, 2001; Niroshaan, Sivanathan, 2002). Managers use different insights, ideas, and techniques when effectiveness of managers is considered. Goleman, (1998) suggested that transformational managers were found with high emotional intelligence from 20 to 80 percent. It has been observed from the literature that transformational leadership managers are able to share their feelings in a good way to their followers both internally and at organizational level which ultimately generates positive spirit among them with accomplishment of organizational goals (Sivanathan, & Fekken, 2002).

It was also considered important to analyze the connection between EI and Trust among

the managers in the construction projects in this study. This relationship was supported by the findings of this study as the association was found positive between EI and trust. Leaders are considered as role models for their followers if they have the ability to control their emotions and feelings, which ultimately enhances the trust of followers in leaders (Gardner & Stough, 2002). The association between emotional intelligence and trust was also found positive with each other in the environment of South Africa in which the total number of 178 immediate bosses were contacted through questionnaires to collect data (Schlechter and Strauss, 2008).

### ***Mediation Analysis of Transformational Leadership***

The findings of this research showed that the mediating effects of transformational leadership partially mediated the connection between EI and PS. This implies that project managers should follow a style of transformational leadership in order to enable their team members to achieve their goals and achieve project success. In this research study, the role played by transformational leadership was show as a part in achieving the success of the project. The level of effect enhances on the relationship between EI and Project success due to the implementation of transformational leadership as mediator.

The ability to influence workers through the integrity of the leader is one of the aspects of becoming a successful leader. Avolio, Walumbwa, and Weber, (2009); De-Gilder, Ellemers, and Haslam, (2004); Brown and Lord (2001) findings of these research found that using transformational leadership might encourage team members by project leaders in order to make the project successful which is found as an outcome in this research as well.

### ***Theoretical Implications***

We looked into the relationship between project success and emotional intelligence, transformational leadership, and project managers' trust in others. According to the findings, in order to hire emotionally intelligent managers, Pakistani construction companies must look for candidates with experience in hardcore management and cognitive intelligence. In addition, professional courses must be taken by the current workforce to improve their emotional intelligence. As a result, the emotionally intelligent workplace will win out and help the group and the organization advance more efficiently. The research also shows that construction firms need to look for managers who are more transformational leaders and who are willing to lead their teams well. In addition, organizations must enlist both the style of transformational leadership and the trust of project managers in others for the project's success. The results also indicate that in order to ensure organizational success, companies should aim to train their current employees in emotional intelligence and preferred leadership style and trust of project managers in others.

To get knowledge about emotional intelligence and its linkages with the success of project by managers of projects is very vital to be executed in recruitment and selection and development of management particularly. The findings of current research showed that senior managers should pay attention to emotionally intelligent project managers to be selected because these managers have the abilities to express positive emotions and behaviors during working hours like being satisfied with their own jobs and having confidence to do their tasks. Clarke, (2010) urged that project managers with EI's progress and growth should be focused in an organization just like the development of human resources in it. Emotional intelligence should be considered as one of the vital factor for fostering emotions, confidence, and coordination within the team members of the projects in order to reduce the stress with in the working conditions.

### ***Limitation and Future Directions***

Though, the current study due to the time and resource constraints was conducted in only one country, even then, it is worth noted that the results can be generalized to all those areas where the conditions of socio-economic are close to the Pakistan.

- In other countries and in foreign contexts, the same model can also be used to calculate the precise relationships between soft skills and project success or performance of project managers.
- In future research, the incorporation of cultural norms into the model (for example, as introducing new variables as moderators and their impacts on linkage between project managers' soft skills and success of projects) could be beneficial.
- It is understood that the outcomes gained from projects in manufacturing sectors and

outputs from construction projects cannot be considered as same. One might argue that in the working conditions like to be more supportive and competitive, project managers might be more successful. The outcomes of various manufacturing projects cannot be assumed to be the same as those of building projects. One might argue that project managers in more competitive and supportive work environments might be more successful.

However, getting genuine and better findings, it is suggested that for future researchers to conduct in industrial sector. Via longitudinal research, future studies may also continue to explore the deeper mechanisms and enrich their implications.

## References

- Abraham, R. (2000). The role of job control as a moderator of emotional dissonance and emotional intelligence–outcome relationships, *The Journal of Psychology*, 134, 169–84.
- Agarwal, U. A., Dixit, V., Nikolova, N., Jain, K., & Sankaran, S. (2021). A psychological contract perspective of vertical and distributed leadership in project-based organizations. *International Journal of Project Management*, 39(3), 249-258.
- Ahmad, T., Rasheed, S., & Khan, N. (2021). Emotional Intelligence and Project Success in Construction Projects. *Indian Journal of Economics and Business*, 20(2).
- Anantatmula, V.S., 2010. Project manager leadership role in improving project performance. *Eng. Manag. J.* 22 (1), 13–22
- Arnold, M. J., & Reynolds, K. E. (2003). Hedonic shopping motivations. *Journal of retailing*, 79(2), 77-95.
- Ashkanasy, N., (2002). Studies of cognition and emotion in organisations: attribution, affective events, emotional intelligence and perception of emotion. *Aust. J. Manag.* 27, 11–20.
- Avolio, B. J., & Yammarino, F. J. (Eds.). (2013). *Transformational and charismatic leadership: The road ahead*. Emerald Group Publishing.
- Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. *Annual review of psychology*, 60, 421-449.
- Barczak, G., Lassk, F., Mulki, J., (2010). Antecedents of team creativity: an examination of team emotional intelligence, team trust and collaborative culture. *Creat. Innov. Manag.* 19 (4), 332–345.
- Barling, J., T. Weber and E.K. Kelloway (1996), Effects of transformational leadership training on attitudinal and fiscal outcomes: a field experiment', *Journal of Applied Psychology*, 81, 827–32.
- Bhatti, S. H., Kiyani, S. K., Dust, S. B., & Zakariya, R. (2021). The impact of ethical leadership on project success: the mediating role of trust and knowledge sharing. *International Journal of Managing Projects in Business*.
- Bond-Barnard, T. J., Steyn, H., & Fletcher, L. (2014). The specification of a structural equation (SEM) model for project communication, trust, collaboration and success. In 28th IPMA World Congress, Elsevier International of Rotterdam (pp. 1-15).
- Braun, S., Peus, C., Weisweiler, S., & Frey, D. (2013). Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust. *The leadership quarterly*, 24(1), 270-283.
- Burke, C.S., Stagl, K.C., Klein, C., Goodwin, G.F., Salas, E., Halpin, S.M., 2006. What type of leadership behaviors are functional in teams? A metaanalysis. *Leadersh. Q.* 17 (3), 288–307
- Buvik, M. P., & Rolfsen, M. (2015). Prior ties and trust development in project teams—A case study from the construction industry. *International journal of project management*, 33(7), 1484-1494.
- Carmeli, A. (2003). The relationship between emotional intelligence and work attitudes, behavior and outcomes: An examination among senior managers. *Journal of managerial Psychology*.
- Christie, A. M., Jordan, P. J., & Troth, A. C. (2015). Trust antecedents: emotional intelligence and perceptions of others. *International Journal of Organizational Analysis*.
- Clarke, N. (2010). Emotional intelligence and its relationship to transformational leadership and key project manager competences. *Project management journal*, 41(2), 5-20.
- Cooper, R.K (1997), Applying emotional intelligence in the workplace *Training and Development*, 51, 31–8.
- Davis, S. A. (2011). Investigating the impact of project managers' emotional intelligence on their

- interpersonal competence. *Project Management Journal*, 42(4), 37-57.
- Druskat, V. U., & Wolff, S. B. (2001). Building the emotional intelligence of groups. *Harvard business review*, 79(3), 80-91.
- Druskat, V. U., Mount, G., & Sala, F. (2013). Linking emotional intelligence and performance at work: Current research evidence with individuals and groups. Psychology Press.
- Dunn, J.R., Schweitzer, M.E., (2005). Feeling and believing: the influence of emotion on trust. *J. Pers. Soc. Psychol.* 88 (5), 736.
- El Khatib, M., Almeiri, M., & Al Qasemi, S. A. (2021). The Correlation between Emotional Intelligence and Project Management Success. *iBusiness*, 13, 18-29.
- Ellemer, N., De Gilder, D., & Haslam, S. A. (2004). Motivating individuals and groups at work: A social identity perspective on leadership and group performance. *Academy of Management review*, 29(3), 459-478.
- Farooqui, R. U., Ahmed, S., & Lodi, S. H. (2008). Assessment of Pakistani construction industry—current performance and the way forward. *J. Adv. Perform. Inf. Value*, 1(1), 51-72.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics.
- Freudenthaler, H. H., & Neubauer, A. C. (2005). Emotional intelligence: The convergent and discriminant validities of intra-and interpersonal emotional abilities. *Personality and Individual Differences*, 39(3), 569-579.
- Gardner, S. (2009). Student development theory: A primer. *ASHE Higher Education Report*, 34(6).
- Geoghegan, L., & Dulewicz, V. (2008). Do project managers' leadership competencies contribute to project success?. *Project management journal*, 39(4), 58-67.
- George, J.M. (2000), 'Emotions and leadership: the role of emotional intelligence', *Human Relations*, 53, 1027-41
- Geyer, A.L.J. and J.M. Steyrer (1998), 'Transformational leadership and objective performance in banks', *Applied Psychology: An International Review*, 47, 397-420.
- Glinow, M. A. V., Shapiro, D. L., & Brett, J. M. (2004). Can we talk, and should we? Managing emotional conflict in multicultural teams. *Academy of Management review*, 29(4), 578-592.
- Goleman, D. (1998b), 'The emotional intelligence of leaders', *Leader to Leader*, 20-26
- Goleman, D., Boyatzis, R. E., & McKee, A. (2013). *Primal leadership: Unleashing the power of emotional intelligence*. Harvard Business Press.
- Goleman, D., Boyatzis, R. E., & McKee, A. (2013). *Primal leadership: Unleashing the power of emotional intelligence*. Harvard Business Press.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139-152.
- Harrison, R. (1997), 'Why your firm needs emotional intelligence', *People Management*, 3, 1-41
- Hauser, C., Perkmann, U., Puntischer, S., Walde, J., & Tappeiner, G. (2016). Trust works! Sources and effects of social capital in the workplace. *Social Indicators Research*, 128(2), 589-608.
- Hsu, Ning, Daniel A. Newman, and Katie L. Badura. 2022. Emotional Intelligence and Transformational Leadership: Meta-Analysis and Explanatory Model of Female Leadership Advantage. *Journal of Intelligence* 10:104. <https://doi.org/10.3390/jintelligence10040104>
- Hesselbein, F., M. Goldsmith and R. Beckhard (1996), *The Leader of the Future*, San Francisco: Jossey-Bass.
- Jones G.R., & George J.M. (1998). The experience and evolution of trust: Implications for cooperation and teamwork. *Academy of Management Review*, 23(3), 531-546.
- Jordan, P.J., Lawrence, S.A., (2009). "Emotional intelligence in teams: development and initial validation of the workgroup emotional intelligence profile — short version (WEIP-S)" . *J. Manag. Organ.* 15, 452-469.
- Jordan, P.J., Lawrence, S.A., Troth, A.C., (2006). "The impact of negative mood on team performance". *J. Manag. Organ.* 12 (2), 131-145.
- Kafetsios, K., Zampetakis, L.A., (2008). "Emotional intelligence and job satisfaction: testing the mediatory role of positive and negative affect at work. *Personal*". *Individ. Differ.* 44 (3), 712-722.
- Kailola, (2020), *Transformational Leadership and Emotional Intelligence*. *Advances in Social Science, Education and Humanities Research*, volume 401
- Kark, R., & Shamir, B. (2013). The dual effect of transformational leadership: Priming relational and collective selves and further effects on followers. In *Transformational and charismatic leadership: The road Ahead 10th anniversary edition*. Emerald Group Publishing Limited.

- Keegan, A.E., Den Hartog, D.N., 2004. Transformational leadership in a project-based environment: a comparative study of the leadership styles of project managers and line managers. *Int. J. Proj. Manag.* 22 (8), 609–617
- Khan, S., Ahmad, T., Rasheed, T., & Ullah, N. (2022). Recent applications of vinyl ethylene carbonates in Pd-catalyzed allylic substitution and annulation reactions: Synthesis of multifunctional allylic and cyclic structural motifs. *Coordination Chemistry Reviews*, 462, 214526.
- Lam, L. W. (2012). Impact of competitiveness on salespeople's commitment and performance. *Journal of Business Research*, 65(9), 1328-1334.
- Lord, R. G., & Brown, D. J. (2001). Leadership, values, and subordinate self-concepts. *The Leadership Quarterly*, 12(2), 133-152.
- Maqbool, R., Sudong, Y., Manzoor, N., & Rashid, Y. (2017). The impact of emotional intelligence, project managers' competencies, and transformational leadership on project success: An empirical perspective. *Project Management Journal*, 48(3), 58-75.
- Maqbool, R., Sudong, Y., Manzoor, N., & Rashid, Y. (2017). The impact of emotional intelligence, project managers' competencies, and transformational leadership on project success: An empirical perspective. *Project Management Journal*, 48(3), 58-75.
- Martell, R. F., & DeSmet, A. L. (2001). A diagnostic-ratio approach to measuring beliefs about the leadership abilities of male and female managers. *Journal of Applied Psychology*, 86(6), 1223.
- Maurer, I., (2010). "How to build trust in inter-organizational projects: the impact of project staffing and project rewards on the formation of trust, knowledge acquisition and product innovation". *Int. J. Proj. Manag.* 28 (7), 629–637
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2008). Emotional intelligence: New ability or eclectic traits?. *American psychologist*, 63(6), 503.
- Mayer, J.D., Salovey, P., (1997). "What is Emotional Intelligence? In: Salovey, P., Sluyter, D. (Eds.), *Emotional Development and Emotional Intelligence: Educational Implications*". Basic Books, New York
- McCleskey, J. A. (2014). Situational, transformational, and transactional leadership and leadership development. *Journal of business studies quarterly*, 5(4), 117.
- McColl-Kennedy, J. R., & Anderson, R. D. (2002). Impact of leadership style and emotions on subordinate performance. *The leadership quarterly*, 13(5), 545-559.
- Montenegro, A.; Dobrota, M.; Todorovic, M.; Slavinski, T.; Obradovic, V. Impact of Construction Project Managers' Emotional Intelligence on Project Success. *Sustainability* 2021, 13, 10804. <https://doi.org/10.3390/su131910804>
- Mount, G. (2006). The role of emotional intelligence in developing international business capability: EI provides traction. *Linking emotional intelligence and performance at work: Current research evidence with individuals and groups*, 97, 124.
- Müller, R., Gerald, J., Turner, J., (2012). "Relationships between leadership and success in different types of project complexities". *IEEE Trans. Eng. Manag.* 59 (1), 77–90.
- Müller, R., Jugdev, K., (2012). "Critical success factors in projects: Pinto, Slevin, and Prescott—the elucidation of project success". *Int. J. Manag. Projects Bus.* 5 (4), 757–775.
- Müller, R., Jugdev, K., (2012). "Critical success factors in projects: Pinto, Slevin, and Prescott—the elucidation of project success". *Int. J. Manag. Projects Bus.* 5 (4), 757–775.
- Müller, R., Turner, J.R., (2007). "Matching the project manager's leadership style to project type". *Int. J. Proj. Manag.* 25 (1), 21–32.
- Müller, R., Turner, R., (2010). "Leadership competency profiles of successful project managers". *Int. J. Proj. Manag.* 28 (5), 437–448.
- Patterson, C., J.B. Fuller, K. Kester and D.Y. Stringer (1995), 'A meta-analytic examination of leadership style and selected compliance outcomes', paper presented at the Society for Industrial and Organizational Psychology, Orlando, Florida
- R. (2016). "Manager emotional intelligence and project success: The mediating role of job satisfaction and trust". *International Journal of Project Management*, 34(7), 1112-1122.
- Rezvani, A., Chang, A., Wiewiora, A., Ashkanasy, N. M., Jordan, P. J., & Zolin, Schlechter, A. F., & Strauss, J. J. (2008). Leader emotional intelligence, transformational leadership, trust and team commitment: Testing a model within a team context. *SA Journal of Industrial psychology*, 34(1), 42-53.
- Scott-Young, C., & Samson, D. (2008). Project success and project team management: Evidence from capital projects in the process industries. *Journal of Operations Management*, 26(6), 749-

- Sivanathan, N., & Fekken, G. C. (2002). Emotional intelligence, moral reasoning and transformational leadership. *Leadership & Organization Development Journal*.
- Sivanathan, N., & Fekken, G. C. (2002). Emotional intelligence, moral reasoning and transformational leadership. *Leadership & Organization Development Journal*.
- Sohmen, V. S. (2013). Leadership and teamwork: Two sides of the same coin. *Journal of IT and Economic Development*, 4(2), 1-18.
- Sy, T., Tram, S., O'Hara, L.A., (2006). "Relation of employee and manager emotional intelligence to job satisfaction and performance". *J. Vocat. Behav.* 68 (3), 461–473.
- Tan, L., Song, H., & Fu, P. (2011, August). The impact of leaders' passion at work on leader effectiveness: The mediating role of transformational leadership. In 2011 2nd International Conference on Artificial Intelligence, Management Science and Electronic Commerce (AIMSEC) (pp. 1681-1684). IEEE.
- Thomas, J., Mengel, T., (2008). "Preparing project managers to deal with complexity—advanced project management education". *Int. J. Proj. Manag.* 26 (3), 304–315.
- Trejo, A. (2016). Project outcomes improved by emotional intelligence. *Business Perspectives and Research*, 4(1), 67-76.
- Tyssen, A. K., Wald, A., & Spieth, P. (2014). The challenge of transactional and transformational leadership in projects. *International Journal of Project Management*, 32(3), 365-375.
- Du Plessis, M., Waglay, M., & Becker, J. R. (2020). The role of emotional intelligence and autonomy in transformational leadership: A leader member exchange perspective. *SA Journal of Industrial Psychology*, 46(1), 1-12.
- Watkin, C. (2000), 'Developing emotional intelligence', *International Journal of Selection and Assessment*, 8, 89–92.
- Weiss, H. M., & Cropanzano, R. (1996). Affective events theory. *Research in organizational behavior*, 18(1), 1-74.
- Weiss, H.M., Cropanzano, R., (1996). "Affective events theory: a theoretical discussion of the structure, causes and consequences of affective experiences at work". *Res. Organ. Behav.* 18, 1–74.
- Wetzels, M., Odekerken-Schröder, G., & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS quarterly*, 177-195.
- Wong, C. S., & Law, K. S. (2002). Wong and law emotional intelligence scale. *The Leadership Quarterly*.
- Wong, C.S., Law, K.S., (2002). "The effects of leader and follower emotional intelligence on performance and attitude: an exploratory study". *Leadersh. Q.* 13 (3), 243–274.
- Wong, K. K. (2016). Mediation analysis, categorical moderation analysis, and higher-order constructs modeling in Partial Least Squares Structural Equation Modeling (PLS-SEM): A B2B Example using SmartPLS. *Marketing Bulletin*, 26(1), 1-22.
- Wooldridge, J. M. (2009). *Introductory Econometrics: A Modern Approach*, Mason, South-Western.
- Yang, L. R., Huang, C. F., & Wu, K. S. (2011). The association among project manager's leadership style, teamwork and project success. *International journal of project management*, 29(3), 258-267.
- Zwikael, O., & Smyrk, J. (2015). "Project governance: Balancing control and trust in dealing with risk". *International Journal of Project Management*, 33(4), 852-862.