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## Article

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## Article

# Do the Project Manager's Soft Skills Matter? Impacts of the Project Manager's Emotional Intelligence, Trustworthiness, and Job Satisfaction on Project Success

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**Abstract:** Recent warnings have been raised about the project success rate in organizations. Among many reasons of disappointing results, research on project management reveals a gap in examining project success. Traditionally, project success has been widely studied from the rational view but rarely from the behavioral view. Today's businesses are facing multiple challenges and opportunities in a volatile market environment that require constant changes within organizations and leaders' behavior. The role of project managers is no longer the same. This study attempts to update the discussion of project managers soft skills by examining two major behavioral factors: project manager's emotional intelligence and trustworthiness and their impact on job satisfaction and project success. This research compiles a quantitative survey. Data were collected from 101 project team professionals. The results reveal that project managers' emotional intelligence and their team members' trust in them impact project success significantly. The findings provide organizations with a necessary complementary behavioral view of project management. Organizations can take project manager trustworthiness and emotional intelligence into account when recruiting and training project managers and throughout the project planning and execution life span.

**Keywords:** project management; trust; project success; job satisfaction; emotional intelligence; empirical study



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## 1. Introduction

Today's businesses are facing multiple challenges and opportunities in a volatile market environment that require constant changes within organizations. Projects are one important way to implement and respond to these changes (Joslin and Müller 2015), hence the importance of managing projects successfully. Project success creates value and provides organizations with competitive advantages. Projects may imply cost reduction, new product releases, procedural improvements, and other organizational needs (Rezvani et al. 2016).

The initial focus of the project management literature was project-management-oriented. Methods and techniques prioritize efficiency aspects (iron triangle) rather than effectiveness aspects (project benefits to stakeholders and organizations) (Berssaneti and Carvalho 2015). The emphasis was on time, cost, risk planning, and project control, and the project manager had to assume a control behavior position. Organizations were focused on how to effectively manage projects rather than on their outcomes and benefits to organizations and stakeholders.

In the evolution of the literature and business dynamics, projects are more than just management efficiency; rather, they contribute to the strategy of the organization and stakeholders' benefits as well (Castro et al. 2021). Therefore, the project manager's role has also changed (Wiewiora et al. 2014).

Methods and techniques are still significant; nevertheless, interpersonal abilities and project managers' soft skills and traits have also become essential in the profession (Podgórska and Pichlak 2019). In addition, soft skills support materializes and enhances the project team's existing technical skills (Low et al. 2021). The project manager's role and leadership importance are reinforced by their influence on the organization's climate (Serrador et al. 2018). Soft skills can enhance project outcomes and team behavior (Rehman et al. 2020). For Doan et al. (2020, p. 224), "a successful project is a combination of many actors, the most critical actor is the leader of the project".

Nowadays, project teams are usually multi-cultural and sometimes virtually dispersed, where members with different backgrounds, skills, and knowledge are brought together, and the project manager must extract the best performance out of them (Mach and Baruch 2015). The project manager's challenge is to integrate the knowledge and skills of team members in a short period of time to achieve project goals and deliver expected results. The project manager's attitude and behavior are clearly connected to team behavior and, consequently, job outcomes (Rehman et al. 2020).

After all, market volatility and uncertainty have increased the pressure for successful projects to be realized. In the last decade, the focus of the project manager's work has changed. Issues such as generating value for the organization and benefits for society and the team need to be considered during project execution. Interpersonal skills of the project manager are becoming more valued and need to be discussed. Project managers need to be prepared for dynamic organizational environments and complex projects (Thomas and Mengel 2008).

The present study attempts to update this discussion by testing how a project manager's emotional intelligence (EI) is related to project success and the mediation role of job satisfaction and team members' trust in a project manager.

In addition, some authors have suggested that a team's trust in peers is necessary to getting the work done (Bhatti et al. 2021; Bond-Barnard et al. 2018; Verburg et al. 2013). However, how team members' trust in a project manager or how the project manager's personal traits influence project results remain equivocal.

This study aims to raise and update the discussion on the project manager's soft skills by examining two major behavioral factors: the project manager's emotional intelligence and trustworthiness and their impact on job satisfaction and project success. We also aim to address the team's trust in the project manager, instead of team trust themselves. The study aims to contribute to the understanding of the new role of the project manager in a modern business environment.

This paper is organized as follows. The next section describes the theoretical background. Section 3 provides the hypotheses development. Section 4 presents the research methodology used. Section 5 presents the study's results, followed by a discussion, in Section 6, and a conclusion, in Section 7.

## 2. Literature Review

The project manager's role has been changed over the last decade (Wiewiora et al. 2014). The most critical actor to a successful project is the project manager (Doan et al. 2020). Project leaders must be able to motivate their team, stimulate cooperation between team members and their willingness to transfer knowledge, and also stimulate their team to openly discuss problems and solve conflicts (Capaldo et al. 2021).

In the project management literature, studies on the influence of a project manager's leadership on project outcomes need to be revised under this new dynamic organization's environment. In the distant past, a few discussions have been raised on the topic, for example: Kerzner (1987) and Stuckenbruck (1976). However, the discussion became more

relevant in the 2020s when the project manager's influence was first tested by (Jiang et al. 2001), and then by Baccarini and Collins (2003) where their authority was considered as a critical success factor; however, the focus was still on project efficiency. The project manager's leadership and competence were soon after considered as a project success factor (Belassi et al. 2007; Turner and Müller 2005; Nicholas and Steyn 2008). Subsequently, interest in the project manager's soft skills has increased. We can highlight the contribution of (Brandel 2006; DiVincenzo 2006; Nicholas and Steyn 2008) on the discussion. Afterward, the project manager's soft skills appeared in the top three aspects in terms of relevance to project success (Alvarenga et al. 2019). More recently, soft skills are being recognized as mandatory to project success (Ahmad et al. 2022). Subsequently, many studies have been conducted in the area. Bhatti et al. (2021) and Princes and Said (2022) discussed and confirmed the importance of leadership and trust on project success. Doan et al. (2020) confirmed that emotional intelligence and transformational leadership lead to a successful project.

The current working scenario demands more decision-making authority (Ahmad et al. 2022). Project efficiency, that is, cost, schedule, and scope control, is still significant. Nevertheless, interpersonal abilities and project managers' soft skills have also become essential in the profession (Podgórska and Pichlak 2019; Ahmad et al. 2022). In addition, soft skills support, materialize, and enhance the project team's existing technical skills (Low et al. 2021). Hence, project leaders' soft skills have been shown to increase project results (Capaldo et al. 2021).

In this line of thought, it was stated that "The influence of emotional intelligence in the success at project management is completely mediated by the project manager's interpersonal skills" (Lima and Quevedo-Silva 2020, p. 54). Emotional intelligence (EI) can enhance project performance by enabling coordination and cooperation between team members, consequently contributing to job satisfaction (Acheampong et al. 2021). Furthermore, EI is crucial for developing empathy and trust (Cherniss and Caplan 2001) and knowledge sharing (Verma and Sinha 2016). Therefore, this study's focus is on how a project manager's EI is related to project success and the mediation role of job satisfaction and team members' trust in a project manager.

The present study's contributions are threefold: First, we raise and update the discussion on the importance of project managers' soft skills by examining two major behavioral factors: project managers' emotional intelligence and trustworthiness and their impact on job satisfaction and project success. Second, we intend to address the team's trust in the project manager, instead of team trust among themselves. Finally, we aim to provide organizations with a necessary and complementary behavioral view of project management to be taken into account when recruiting and training project managers. Consequently, we propose and intend to answer the following research questions:

**Q1:** What is the impact of a project manager's emotional intelligence (EI) on project success?

**Q2:** What is the impact of project team members' trust in a project manager on project success?

### 3. Hypotheses Development

#### 3.1. Project Success

Historically, the project management literature has examined project success from cost, schedule, and scope perspectives. Between the 1960s and 1980s, project success metrics were based just on project efficiency (Ika 2009). By the 1990s and 2000s, project success was not just a technical performance, but also the organization's strategic achievement (Martens and Carvalho 2016). Stakeholders and the organization's benefits surfaced for the first time by Shenhar et al. (2001) and, later, reinforced by Baccarini and Collins (2003). Project success creates value and provides organizations with competitive advantages. Therefore, this study considers five dimensions of project success: project efficiency, organization benefits, project impact, future potential, and stakeholder satisfaction (Castro et al. 2021).

### 3.2. Emotional Intelligence and Project Success

Currently, organizations that are more stakeholder-participative, cohesive, and have shared values and commitments are most likely to achieve project success. Mazur et al. (2014) indicated that project managers' EI mediates the development of solid stakeholders' relationships and, consequently, successful projects. "As a leader, a project manager should use EI to guide the team to action, solve problems, and enhance project results" (Mazur et al. 2014).

Project managers with higher EI have more proactive behavior, are more open to communication, and promise higher project success than those with lower EI (Müller and Turner 2010; Zhang and Fan 2013; Mazur et al. 2014). Project managers' emotional intelligence provides a positive and significant contribution to project performance in the context of large-scale infrastructure projects (Khosravi et al. 2020), in the construction projects context (Acheampong et al. 2021), and also in general-context projects (Lima and Quevedo-Silva 2020). EI can enhance project performance by enabling coordination and cooperation between the team, consequently contributing to job satisfaction (Acheampong et al. 2021). Hence,

**Hypotheses H1.** *Project manager's EI is positively related to project success.*

### 3.3. Emotional Intelligence and Job Satisfaction

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). EI can enhance job satisfaction as these managers tend to control their emotions through stress tolerance and efficient problem solving (Langhorn 2004; Yang et al. 2012; Rehman et al. 2020). Consequently, they can boost collaboration satisfaction in a project team (Zhang et al. 2017), and also increase job engagement (Qureshi et al. 2020). In addition, higher project managers' EI is a significant component to prevent team stress and burnout (Partido and Owen 2020), and can also minimize team turnover (Langhorn 2004; Yang et al. 2012; Rehman et al. 2020) during the project execution.

A project manager can influence an organization's climate and, consequently, enhance project success (Serrador et al. 2018). A project manager's EI can help create project team satisfaction because they tend to create a more open atmosphere for communication, choose positive behaviors, and emotionally encourage team members (Zhang et al. 2017). Therefore:

**Hypotheses H2.** *Project manager's EI is positively related to team members' job satisfaction.*

### 3.4. Emotional Intelligence and Trust

The ability to perceive others' emotions positively influences the ability to read emotions in others and determines the level of trust acknowledged in co-workers (Christie et al. 2015). EI is crucial for developing empathy and trust with clients when selling financial services (Cherniss and Caplan 2001) and knowledge sharing (Verma and Sinha 2016). Emotionally intelligent project managers understand their own and others' emotions, which creates an atmosphere of friendliness and trust (Maqbool et al. 2017). Project managers' EI is found to be positively related to their trust in team members (Rezvani et al. 2016). Managers develop their EI, as they are more able to enhance task performance by developing feelings of trust toward their team (Rodrigues and Rebelo 2021). Conversely, we hypothesize that one of the key individual attributes to help develop team members' trust in their project manager is their degree of emotional intelligence (EI). Therefore:

**Hypotheses H3.** *Project manager's EI is positively related to team trust in the project manager.*

### 3.5. Job Satisfaction and Project Success

Job satisfaction is related to team commitment (Bishop and Scott 2000), to team integration (Yang et al. 2012), and to knowledge sharing (Sang et al. 2019), which is subsequently related to job performance. In a temporary organization such as projects, a better working



climate creates more opportunities to improve project performance and achieve project success (Meng and Boyd 2017). The sense of team job satisfaction and gratitude to managers leads to higher levels of commitment and performance (Bradley et al. 2010).

Job satisfaction is an important catalyst for work and a fundamental aspect of employees' behavior in an organization (Ćulibrk et al. 2018). Prior research has shown a positive relationship between job satisfaction and team performance (Sy et al. 2006; Rezvani et al. 2016; Yang et al. 2012) and a negative relationship to turnover intentions (Harris et al. 2009; Chen et al. 2011; Lianying et al. 2020). Therefore:

**Hypotheses H4.** *Job satisfaction is positively related to project success.*

### 3.6. Trust and Project Success

In the general management literature, the importance of team members' trust in peers is well documented. Research has shown that trust in peers positively influences team performance (Chiocchio et al. 2011; Sarker et al. 2011; Imam and Zaheer 2021), virtual team effectiveness (Pangil and Chan 2014), job satisfaction and job stress reduction (Guinot et al. 2014), and collaboration improvement (Bond-Barnard et al. 2018). Furthermore, team leaders that create trust among members boost knowledge sharing and enhance team effectiveness (Lee et al. 2010). Similarly, to the general management literature, we believe that a team's trust in the project manager is relevant to project success.

The influence of trust in peers and its impact on project execution and outcomes are confirmed (Pavez et al. 2021; Guo et al. 2021). Team efficacy is based on trust and cooperation between team members, because it can increase the willingness to transfer knowledge, and willingness to openly discuss problems and resolve conflicts (Capaldo et al. 2021). Consequently, trust in team members increases knowledge sharing, which also affects project success (Imam and Zaheer 2021).

However, in the project management literature, the relationship of team members' trust in their project manager and its effect on project success is quite scarce. The heterogeneity of a project team can lead to low levels of trust and consequently to poor project performance (Mach and Baruch 2015). A project manager is in charge of creating and maintaining a good atmosphere among team members as teamwork involves the interdependence of its members. They should also develop a positive climate that leads to cooperative behavior patterns (Costa and Anderson 2011) and knowledge sharing (Buvik and Tvedt 2017).

Therefore, and in light of the aforementioned arguments, we hypothesize that:

**Hypotheses H5.** *Project team members' trust in a project manager is positively related to project success.*

## 4. Methods

### 4.1. Data Collection and Sample Characteristics

Data were gathered through a survey of 500 project members. A questionnaire was distributed to project members associated with the PMI Institute in Brazil. The Brazilian sample is considered representative as the country ranks as number five in Project Management Institute members and Project Management Professionals, preceded only by the USA, Canada, India, and China, respectively (PMTech 2017). Out of 500 randomly distributed questionnaires to the PMI community mail list, a total of 101 project members returned a completed and viable questionnaire, representing a 20.20% response rate.

The questionnaire consisted of 59 questions related to 4 constructs (Trust, Job Satisfaction, EI, and Project Success). Appendix A provides the items or the measures of these constructs. Emotional Intelligence, Trust, and Project Success constructs are of second order, that is, they are not formed directly by the items (questions), but by other latent variables. Trust has three dimensions: "Ability", "Benevolence", and "Integrity"; EI has four dimensions "Awareness of Own Emotions", "Management of Own Emotions", "Awareness of Others' Emotions", and "Management of Others' Emotions"; Project Success has five dimensions: "Future Potential", "Project Efficiency", "Stakeholder Satisfaction", "Organi-

zational Benefits”, and “Project Impact”. The constructs and survey questions sources are discussed ahead in item b. Data analysis was performed on 101 observations. There was one missing data point (0.02%).

The bootstrap interval was used with 95% confidence on descriptive analysis of the items of the constructs. All constructs in the survey were measured using multi-item scales with a five-point Likert rating system. It should be noted that the items were re-coded for the Likert scale of agreement ranging from  $-1$  (Totally Disagree) to  $+1$  (Totally Agree). The Partial Least Squares (PLS) method was used on both the measurement and regression models.

To validate the measurement model, dimensionality was verified by parallel analysis (Horn 1965). Convergent validity was tested where extracted variance values should be higher than 0.50 in all constructs, thus proving the convergent validation. For discriminant validity, we used the criterion of Fornell and Larcker (1981), which guarantees the discriminant validity when the extracted variance of a construct is greater than the shared variance of this construct with the others. The required levels of reliability, Cronbach Alpha (C.A.) and Composite Reliability (C.R), of all constructs should reach higher than 0.60. Second-order constructs, EI, Trust, and Project Success, were treated with the two-step approach. Accordingly, the scores of the first-order latent variables were initially computed from the Factor Analysis with the method of extraction of the main components and varimax rotation. The bootstrap method was again used to calculate the confidence intervals for the weights of the measurement model and the coefficients of the structural model, providing information on the variability of the estimated parameters, thus indicating an important validation of the results. To verify the quality of the adjustments,  $R^2$  and GoF were used. The software used in the analysis was R (version 3.3.4).

The research sample was 101 observations with 0.02% missing data. No outlier related to data tabulation errors was found. Six univariate outliers were diagnosed based on the measurement of Mahalanobis  $D^2$ . The dataset did not present a univariate or even multivariate normal distribution, as it was limited to a discrete and finite scale. A significant correlation coefficient at the 5% level is indicative of the existence of linearity. Using Spearman’s correlation matrix, 802 out of 861 significant relationships were observed at a 5% level, which indicates 93.15% of the possible correlations. According to the Bartlett test,  $p$ -values below 0.05 reveal linearity within.

#### 4.2. Measurement

Before answering the questionnaire, respondents are invited to choose one unique project and answer all questions regarding this chosen project. The confirmatory analysis was performed based on pre-existing questionnaires, mentioned above. The full questionnaire is presented in the Appendix A section.

##### 4.2.1. Project Success

Castro et al. (2021) was selected for this study because it is a superset of the success criteria adopted from leading researchers on project success. It is not only based on the past 40 years of literature, but it contemplates the recent literature as well. The model contains the typical iron triangle (Project Efficiency), in addition to four actual project success criteria dimensions aligned to professional project issues: organizational benefits, project impact, stakeholder satisfaction, and future potential.

##### 4.2.2. Trust

The most replicated operation of the trust construct was developed by Mayer et al. (1995). Even though it is old, it continues to be used as a reference in current studies. Furthermore, their operationalization is considered to be the most appropriate as it was designed to test a team’s trust in the leader. Mayer et al. (1995) proposed that trust is comprised of three dimensions: ability, benevolence, and integrity.

#### 4.2.3. Job Satisfaction

We collected a single measure of overall job satisfaction (“How satisfied are you with your job/role in general?” with 1 being “very dissatisfied” and 5 being “very satisfied”). Despite criticism, there is evidence that a single-question job satisfaction measure can yield adequate validity. Regarding the trust construct on project management research, we can highlight the strong divergence on measurement choices. (Princes and Said 2022) used a two-item trust measure; (Yang et al. 2020; Yu et al. 2021) used a five-item trust measure; (Bhatti et al. 2021) used a seven-item trust measure; (de Oliveira and Rabechini 2019) used a twenty-item trust measure. A single-question job satisfaction measure showed to be more robust than scale measures of overall satisfaction in previous studies (Highhouse and Becker 1993; Scarpello and Campbell 1983; Wanous et al. 1997). There are also practical limitations favoring a single-item measure in this research. A lengthy questionnaire can discourage respondents from answering questions. Therefore, job satisfaction is comprised of only one dimension.

#### 4.2.4. Emotional Intelligence

The seminal article by Goleman in Harvard Business Review identified 4 aspects of EI: (a) Identifying emotions, (b) Using emotions, (c) Understanding emotions, and (d) Managing emotions (Mayer et al. 2002). Although the Multifactor Emotional Intelligence Scale (MEIS) is rigorously conceptualized, reliable, and widely acknowledged, it could take a few hours to complete, which renders it unsuitable for research in the workplace. This research adopted Jordan and Lawrence (2009)’s measurement that was based on Salovey and Mayer (1990). This measurement is still used in current studies.

### 5. Results

#### 5.1. Measurement Model

To assess the measurement model, we proceeded as follows: Weights, factor loads, and commonalities of first-order constructs were analyzed. Concerning the Integrity construct, item IN4\_inv presented a factorial load of 0.36; thus, it was excluded from the Integrity construct. All other Integrity items and constructs had factorial loads above 0.50 and were retained.

The convergent validity, reliability, and dimensionality of the first-order constructs were verified by factor analysis. Factorial solution adequacy was verified by the Kaiser–Meyer–Olkin (KMO) sample adequacy and parallel analysis verified the dimensionality. Table 1 illustrates these analyses, which indicate that all construct KMOs were equal to or greater than 0.50. Hence, factor analysis adjustment was appropriate. All constructs reached reliability indexes, C.A. and C.R., higher than 0.60. All the constructs were shown to be unidimensional by the parallel analysis criterion. Convergent validity was confirmed as the extracted variance (EV) for all constructs was greater than 0.50. It is important to note that the job satisfaction construct was not included in Table 1, as it is a second-order construct to be evaluated ahead.

Similarly, weights, factor loads, and commonalities of the second-order constructs were analyzed. The convergent validity criterion was used to test for the constructs’ convergent validity. Cronbach’s Alpha and Composite Reliability tested the constructs’ reliability. Parallel analysis tested the dimensionality of the constructs. The bootstrap-validated results provide information about the variability of the estimated parameters by calculating the confidence intervals for the weights of the measurement model and the coefficients of the structural model. According to data analysis, there was no need to exclude any constructs, as all items had factorial loads above 0.50. The importance of all items for the formation of the indicators that represent the constructs was confirmed by the intervals of confidence (I.C. –95%). Hence, all weights were significant.



**Table 1.** Convergent validity, reliability, and dimensionality of 1st-order constructs.

Construct	Items	EV <sup>1</sup>	C.A. <sup>2</sup>	C.R. <sup>3</sup>	K.M.O. <sup>4</sup>	Dim <sup>5</sup>
Ability	6	0.75	0.93	0.91	0.92	1
Benevolence	5	0.66	0.86	0.86	0.79	1
Integrity	5	0.73	0.90	0.89	0.84	1
Awareness of Own Emotions	4	0.72	0.87	0.86	0.81	1
Mgt of Own Emotions	4	0.74	0.88	0.87	0.82	1
A of Others' Emotions	4	0.69	0.85	0.84	0.76	1
Mgt of Others' Emotions	4	0.88	0.95	0.94	0.81	1
Future Potential	4	0.70	0.86	0.85	0.80	1
Project Efficiency	8	0.60	0.90	0.88	0.87	1
Stakeholders Satisfaction	4	0.74	0.87	0.87	0.81	1
Organizational Benefits	5	0.60	0.83	0.83	0.74	1
Project Impact	4	0.70	0.86	0.85	0.76	1

<sup>1</sup> Extracted Variance; <sup>2</sup> Cronbach's Alpha; <sup>3</sup> Composite Reliability; <sup>4</sup> Kaiser-Meyer-Olkin sample adequacy; <sup>5</sup> Dimensionality.

Convergent validity, reliability, dimensionality, and discriminant validation of the constructs are shown in Table 2. It is observed that the C.A. and C.R. reliability indexes were greater than 0.60; therefore, all constructs reached the required levels of reliability. Parallel analysis confirms that all constructs were unidimensional. Convergent validity confirmed that all construct EV values were greater than 0.50. The maximum shared variances (MSV) were smaller than each construct EV.

**Table 2.** Validation of measurement model for 2nd-Order Constructs.

Constructs	Items	C.A. <sup>1</sup>	C.R. <sup>2</sup>	Dim <sup>3</sup>	E.V. <sup>4</sup>	MSV <sup>5</sup>
Job Satisfaction	1	1.00	1.00	1	1.00	0.37
Trust	3	0.88	0.93	1	0.80	0.65
Emotional Intelligence	4	0.87	0.91	1	0.72	0.65
Project Success	5	0.95	0.97	1	0.85	0.60

<sup>1</sup> Cronbach's Alpha, <sup>2</sup> Composite Reliability, <sup>3</sup> Dimensionality, <sup>4</sup> Extracted Variance; <sup>5</sup> Maximum Shared Variance.

### 5.2. Structural Model

Smart PLS 3.0 was used to assess the structural model. R2 and goodness of fit (GoF) were used to verify the quality of the adjustments. Regarding Job Satisfaction, there was a significant ( $p$ -value < 0.001) and positive ( $\beta = 0.540$  [0.38, 0.69]) influence of Emotional Intelligence with respect to Job Satisfaction. Emotional Intelligence was able to explain 29.2% of the Variability of Work Satisfaction; therefore, there was a substantial explanatory capacity. Regarding Trust, there was a significant ( $p$ -value < 0.001) and positive ( $\beta = 0.808$  [0.71; 0.88]) influence of Emotional Intelligence on Trust; thus, the greater the Emotional Intelligence, the greater the Trust. Emotional Intelligence was able to explain 65.2% of the confidence variability; therefore, there was a substantial explanatory capacity. The positive relationship between Trust and Job satisfaction was confirmed as the  $p$ -value < 0.001 and  $\beta = 0.611$  [0.47, 0.73]. Therefore, the more a team trusts the project management, the greater will be the Job Satisfaction. There was a moderate explanatory capacity concerning Trust to Job Satisfaction as Trust was able to explain only 37.3% of the variability of Job Satisfaction.

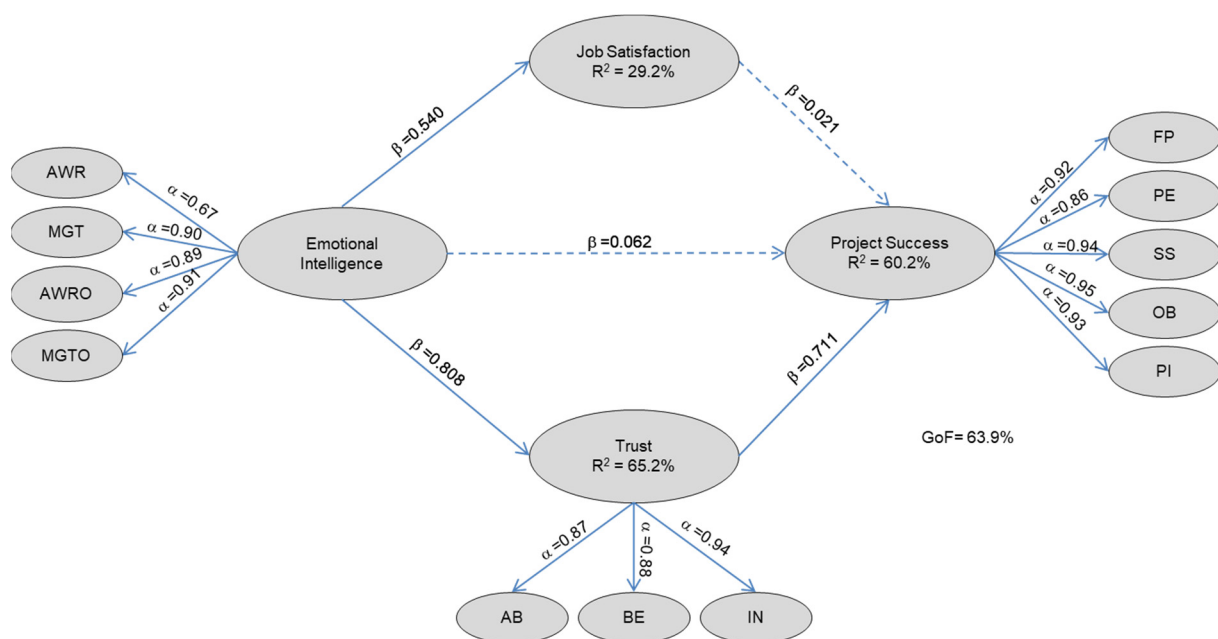
Regarding Project Success, there was a significant ( $p$ -value < 0.001) and positive ( $\beta = 0.711$  [0.47, 0.90]) influence of Trust in relation to Project Success; hence, higher Trust will relate positively to Project Success. There was no significant influence of Emotional Intelligence and Work Satisfaction on Project Success. Emotional Intelligence, Job Satisfaction, and Trust were able to explain 60.2% of the Project Success variability; therefore, there was a substantial explanatory capacity. It should be noted that the model presented

a goodness of fit (GoF) of 63.9%; furthermore, the bootstrap confidence intervals were in agreement with the results found via the  $p$ -value, thus demonstrating greater validity of the presented results (Table 3). Figure 1 illustrates the model and PLS analysis results presented in Table 3.

**Table 3.** Structural model Results.

Endogenous	Exogenous	$\beta$	S.E.( $\beta$ ) <sup>1</sup>	C.I.—95% <sup>2</sup>	Valor-p	R <sup>2</sup>
Job Satisfaction	Emotional Intelligence	0.540	0.085	(0.38; 0.69)	<0.001	29.2%
Job Satisfaction	Trust	0.611	0.080	(0.47; 0.73)	<0.001	37.3%
Trust	Emotional Intelligence	0.808	0.059	(0.71; 0.88)	<0.001	65.2%
Project Success	Emotional Intelligence	0.062	0.109	(−0.18; 0.27)	0.570	60.2%
	Job Satisfaction	0.021	0.081	(−0.15; 0.23)	0.796	
	Trust	0.711	0.116	(0.47; 0.90)	<0.001	

<sup>1</sup> Standard Error; <sup>2</sup> Confidence Interval; GoF = 63.9%.



**Figure 1.** Path Model with PLS analysis results.

## 6. Discussion

### 6.1. Relationship between Project Managers' EI and Project Success

Project managers' emotional intelligence was not significantly directly related to project performance. However, in comparison to prior research, EI can leverage many other aspects, which, indeed, can increase the chances of success of the project, for example, a more open communication between team members (Mazur et al. 2014) or coordination and cooperation between team satisfaction (Acheampong et al. 2021). As project managers' EI was proven to provide a positive and significant contribution to project performance in the context of large-scale infrastructure projects (Khosravi et al. 2020), we believe that, perhaps, a different project context can influence this relation. Nevertheless, EI is still considered to make project managers more efficient.

### 6.2. Relationship between Project Managers' EI and Team's Job Satisfaction

On job satisfaction, our findings are in line with prior research (Serrador et al. 2018) in which a project manager can influence an organization's climate when their EI can increase job satisfaction among project teams. Consequently, they can boost collaboration satisfaction in a project team (Zhang et al. 2017), and also increase job engagement (Qureshi et al. 2020). On the other hand, higher project managers' EI is a significant component to prevent team stress and burnout (Partido and Owen 2020), and can also minimize team turnover (Langhorn 2004; Yang et al. 2012; Rehman et al. 2020).

### 6.3. Relationship between Project Managers' EI and Team's Trust in Project Manager

The study presents a strong relationship between EI and trust. Managers that develop their EI are more able to develop feelings of trust toward their team and vice versa (Rodrigues and Rebelo 2021). Our results confirm a growing trend toward project managers' soft skills previously pointed out by Alvarenga et al. (2019).

### 6.4. Relationship between Job Satisfaction and Project Success

Although, in the general business literature, it is clear that job satisfaction leads to job performance (Bishop and Scott 2000; Yang et al. 2012; Sang et al. 2019), in the present study, projects are considered temporary organizations. The relationship between job satisfaction and project success was not confirmed in this study. For example, regarding team turnover, in the general business environment, satisfaction decreases the turnover of employees. However, in practice, we know that in the context of projects, the turnover is usually high due to the nature temporality of the projects. Organizational temporariness can influence employee behavior (Goetz and Wald 2022). "The findings show that job satisfaction negatively influence employee performance in a work environment shaped by the coexistence of a permanent organization and a temporary organization, in opposition to their known effects in permanent organizations" (Goetz and Wald 2022).

Job satisfaction depends not only on the leader's efforts, but also on an organization's structure. Taking on temporary projects by an organization and having to face all aforementioned challenges of a project environment, these findings suggest that a strong figure of a leader is more important than the pleasurable emotional state of job satisfaction, hence reinforcing the leadership of a project manager. In a temporary project, the project manager context can present some peculiarities in comparison to the general manager context. A project manager must represent a reliable figure to engage team members and achieve better project results.

### 6.5. Relationship between Team's Trust in Project Manager and Project Success

The importance of trust to project performance is recognized not only with trust in the team, but also with trust in project managers. The idea is to extrapolate the concept that trust in team members results in better projects (Koohang et al. 2017; Mayer and Gavin 2005; Bond-Barnard et al. 2018; Chiocchio et al. 2011; Guinot et al. 2014; Sarker et al. 2011) to team members' trust in the project manager achieves better results, which have proved plausible. Project managers' relationships with team members provide a positive and significant contribution to project performance (Meng and Boyd 2017).

### 6.6. Theoretical and Practical Implications

Nowadays, organizations are immersed in a challenging world that demands constant changes. It is important for a project manager to get the best out of a project team through engagement and motivation of team members and stakeholders. There is a massive amount of general management research on the behavioral attributes of a manager with respect to leadership and team performance. On the other hand, the project management literature is rare on the influence of a project manager's behavioral attributes such as trust and emotional intelligence on project outcomes. This research complements the rational perspective of

project success by integrating key behavioral attributes of project managers and their effect on project success.

Although EI does not have a significant direct influence on project success, it is proven that EI increases job satisfaction and trust. In any case, project managers with high EI seem to be more effective in promoting a better work environment and better relationship with the team.

Trust in a leader has been shown, in the general management literature, to play an important role in team performance. Our results confirmed this mediation in the project management context. Consequently, team members' trust in a project manager is confirmed to be significant and highlights the importance of a project manager's role in integrating, engaging, and enhancing team collaboration. It is important to mention that a positive relation between a project manager's EI and the team's trust in them is reinforced by this research. This is consistent with what [Yang et al. \(2012\)](#), in which leadership competences, including emotional capacities, affect project performance. Furthermore, project managers and members of their teams need to establish an emotional bond with the team ([Podgórska and Pichlak 2019](#)).

A project team is formed at the beginning of a project and most team members, including the project manager, are not previously acquainted. When a new project team is formed, members bring along their varied personal experiences. This heterogeneity can lead to low levels of trust and consequently poor project performance ([Mach and Baruch 2015](#)). Thus, a project manager needs to build positive ties among team members in a short period of time. Project teamwork involves interdependence, and the project manager needs to create and maintain an appropriate atmosphere to influence the behavior of team members in ongoing projects.

These results have important implications for both research and practice. For managers, although competencies can be learned, personality characteristics are more enduring, and leaders need to exercise soft skills ([Geoghegan and Dulewicz 2008](#)). Organizations should take this fact into account when recruiting project managers ([Moe and Khang 2008](#)). A project manager's leadership is a combination of both skills and knowledge. Recruitment should understand soft skills and their alignment to a stewardship role within the project management context. This should also be included in training programs for project managers at both business and academic levels ([Clarke 2010](#)). Project managers should also be aware of the importance of trust in creating ties. Team members' perception of a project manager's ability and integrity is significant when establishing a project team.

## 7. Conclusions

Emotional intelligence and reinforced trust ties can be used in practice by project-oriented organizations to employ and promote project managers with the appropriate competencies for managerial positions. The results confirm also a growing trend toward soft skills and reinforce the need to fill the gap between 'hardcore' measures of project success and its antecedents. Therefore, our findings contribute to the project management literature in terms of the integration of soft skills as impacting factors on project success.

Nevertheless, this study presents some limitations. The use of a survey method is a limitation by itself, and further research needs to replicate this study using both the survey and the case study methods. Moreover, the sample was comprised solely of Brazilian project team members. Despite the significance of the findings of this research, the demographic characteristics of the sample may affect the results, especially on trust measures where cultural bias can influence results. Therefore, in order to assure theoretical generalization, the research should be conducted in different settings.

Furthermore, it is important to highlight that the sample was comprised solely of project team members. Different stakeholders (top management, project sponsors, and others) usually demonstrate different perceptions of project success as they have different perceptions of values, success criteria, and performance measures. Further research should

take into account the perception of other stakeholders involved directly or indirectly in the project in question.

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## Appendix A

**Table A1.** Research questionnaire.

Constructs/Dimensions	Item	Questions
<b>Trust</b>		
Ability	AB1	Project manager is very capable of performing its job.
	AB2	Project manager is known to be successful at the things he/she tries to do.
	AB3	Project manager has much knowledge about the work that needs done.
	AB4	I feel very confident about project manager's skills.
	AB5	Project manager has specialized capabilities that can increase our performance.
	AB6	Project manager is well qualified.
Benevolence	BE1	Project manager is very concerned about my welfare.
	BE2	My needs and desires are very important to project manager.
	BE3	Project manager would not knowingly do anything to hurt me.
	BE4	Project manager really looks out for what is important to me.
	BE5	Project manager will go out of his/her way to help me.
Integrity	IN1	Project manager has a strong sense of justice.
	IN2	I never have to wonder whether project manager will stick to its word.
	IN3	Project manager tries hard to be fair in dealings with others.
	IN4	Project manager's actions and behaviors are not very consistent. *
	IN5	I like project manager's values.
	IN6	Sound principles seem to guide project manager's behavior.
<b>Emotional Intelligence</b>		
Awareness of Own Emotions	AWR1	Project Manager can explain the emotions he feels to team members.
	AWR2	Project Manager can discuss the emotions he feels with team members.
	AWR3	If Project Manager feels down, he can tell team members what will make him feel better.
	AWR4	Project Manager can talk to other members of the team about the emotions he experience.
Management of Own Emotions	MGT1	Project Manager respects the opinion of team members, even if he thinks they are wrong.
	MGT2	When Project Manager is frustrated with fellow team members, he can overcome his frustration.
	MGT3	When deciding on a dispute, Project Manager tries to see all sides of a disagreement before he comes to a conclusion.
	MGT4	Project Manager gives a fair hearing to fellow team members' idea.



Table A1. Cont.

Constructs/Dimensions	Item	Questions
Awareness of Others' Emotions	AWRO1	Project Manager can read fellow team members 'true' feelings, even if they try to hide them.
	AWRO2	Project Manager is able to describe accurately the way others in the team are feeling.
	AWRO3	When Project Manager talks to a team member he can gauge their true feelings from their body language.
	AWRO4	Project Manager can tell when team members don't mean what they say.
Management of Others' Emotions	MGTO1	Project Managers' enthusiasm can be contagious for members of a team.
	MGTO2	Project Manager is able to cheer team members up when they are feeling down.
	MGTO3	Project Manager can get fellow team members to share his keenness for a project.
	MGTO4	Project Manager can provide the 'spark' to get fellow team members enthusiastic.
<b>Project Success</b>		
Future Potential	FP1	Enabling of other project work in future
	FP2	Resources mobilized and used as planned
	FP3	Improvement in organizational capability
	FP4	Motivated for future projects
Organizational Benefits	OB1	Adhered to defined procedures
	OB2	Learned from project
	OB3	New understanding/knowledge gained
	OB4	End product used as planned
	OB5	The project satisfies the needs of users
Project Efficiency	PE1	Cost effectiveness of work
	PE2	Met planned quality standard
	PE3	Met safety standards
	PE4	Minimum number of agreed scope changes
	PE5	Finished on time
	PE6	Complied with environmental regulations
	PE7	Activities carried out as scheduled
	PE8	Finished within budget
Project Impact	PI1	Project's impacts on beneficiaries are visible
	PI2	Project achieved its purpose
	PI3	Project has good reputation
	PI4	End-user satisfaction
Stakeholder Satisfaction	SS1	Met client's requirement
	SS2	Steering group satisfaction
	SS3	Sponsor satisfaction
	SS4	Met organizational objectives
<b>Job satisfaction</b>		
	JS1	In general, I'm satisfied with my job/role.

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