

Effect of humble leadership on project success: the mediating role of team engagement and the moderating role of organizational culture

Effect of
humble
leadership

Muhammad Waseem and Shahid Iqbal

Department of Management Sciences, Bahria University, Islamabad, Pakistan, and

Khalid Khan

*Department of Business Administration, Federal Urdu University of Arts,
Science and Technology – Islamabad Campus, Islamabad, Pakistan*

Received 23 January 2023
Revised 15 April 2023
14 May 2023
Accepted 12 June 2023

Abstract

Purpose – This study aims to determine the effect of humble leadership on project success (PS). According to the authors, such an effect is mediated by team engagement and moderated by organizational culture. The direct and indirect effects of team engagement provided helpful insights. Moreover, organizational culture did not moderate the relationship. The authors' objective is to contribute to the literature on project management (PM) and leadership of how team engagement plays a significant role in PS.

Design/methodology/approach – Data were collected from 317 employees working in Pakistan's telecom sector projects. Five project-related telecom companies were the target population of this study, and the reason behind choosing the telecom sector for investigation is their valuable contribution to the revenue and technology introduction in the country. A time-lagged approach was selected for data collection to avoid the common method bias, which served the purpose. SPSS v23 and AMOS v23 were used for constructing structural equation modeling and path analysis to examine direct and indirect effects.

Findings – The results revealed that humble leadership is positively related to PS. Furthermore, team engagement mediated the relationship between humble leadership and PS, while there was no interaction effect.

Originality/value – The impact of team engagement was the primary topic of interest with humble leadership in this study. To the best of the authors' knowledge, no study has investigated team engagement in the project context. The authors tried to contribute to the PM literature.

Keywords Humble leadership, Project success, Team engagement, Organizational culture

Paper type Research paper

Introduction

The primary focus of project management (PM) literature for several decades has been attaining project success (PS; Ika *et al.*, 2012). The extant literature on leadership's effects on PS has focused on a few leadership styles (Fries *et al.*, 2021; Gameda and Lee, 2020; Podgórska and Pichlak, 2019; Specchia *et al.*, 2021). Focusing only on a few elements of leadership has left many types of leadership styles unexamined that could impact PS (Abbas and Ali, 2021; Jalil, 2017). Humble leadership is among the leadership styles that have received little attention in the literature on PS. In comparison with several leadership philosophies, humble leadership is characterized by three key traits:



- (1) willingness to assess oneself objectively;
- (2) respect for others' abilities; and
- (3) broad-mindedness to novel ideas and criticism (Owens *et al.*, 2013).

Academicians have stressed that traits of humility are essential for project managers to flourish (Amoah and Marimon, 2021). Earlier studies have shown that humble leadership fosters team engagement, improving project performance and contributing to PS (Owens and Hekman, 2016).

The present study is based on an empirical examination of the effect of humble leadership on PS in an Asian cultural context. Before this, humble leadership was examined in the IT industry (Ali *et al.*, 2020a), the technology industry of China (Zhou and Wu, 2018) and project-based organizations (PBO) in the IT sector (Ali *et al.*, 2021a). The present study is based on the technology-heavy telecom sector primarily organized around projects (Ali Wali *et al.*, 2022; Kang *et al.*, 2022; Kelemen *et al.*, 2022). The broader social impact of a leader is confirmed by traditional research. Humble leadership is characterized as a relationship-oriented leadership style defined by humility in the leader.

The modern organization arranges its talent around self-managed teams, and the work assigned to these teams is organized into compartmentalized projects. Project team members' cooperation, cohesion and trust in each other make them efficient and significantly influence the teams' performance, thus paving the path to success (Caniels *et al.*, 2019). In this regard, team engagement is paramount in the successful execution of projects (Hsu *et al.*, 2022). Engaged individuals will support other members, enhance knowledge sharing and build mutual trust, ultimately leading toward PS (Enwereuzor *et al.*, 2022).

The other defining feature of successful modern organizations is their corporate culture. Culture is instrumental in creating the context within which leaders try to engage their teams to achieve team objectives (Hsu *et al.*, 2022). In a recent study, Wen *et al.* (2022) explored the linkages between humble leadership and team empowerment. They argued that employee empowerment was essential for enabling positive work-related proactive behaviors. Wen *et al.* (2022) suggested that future researchers incorporate team engagement into their theoretical models and investigate its role as a mediator. Wang *et al.* (2022) and Song *et al.* (2022) explored the influence of organizational identification and suggested that organizational culture could be one of the areas that enhance employee identification. The authors identified organizational culture as a potential moderator in future studies. The present study has identified the future research suggestions from the above studies as the research gap it will fill.

Presently in Pakistan, project rollout is jeopardized due to political and economic instability. Organizations do not have the financial resources to spend on projects. Moreover, organizations have decreased the salaries of all project participants despite their best work efforts. Project managers (leaders) are under severe pressure to mobilize demotivated project teams to accomplish project objectives. Leaders' behaviors give stress and tension to team members, which harms team engagement. Furthermore, leaders are not the source of motivation and inspiration for teams. The literature identifies that humble leadership is such that who could overcome such obstacles (Tan and Photchanachan, 2021). Therefore, this study will address the prevailing problems and empirically analyze the effect of humble leaders on PS through moderated mediation.

The present study empirically examines a theoretical framework that models the effect of humble leadership and PS. The conservation of resources (COR) theory (Hobfoll, 1989) is the theoretical foundation for our present research endeavor. The core theme of the theory is

that individuals work hard to acquire, preserve, protect and retain resources. Resources are those things, conditions, qualities or energy that individuals value (Hobfoll *et al.*, 2018), and losing these resources can be particularly harmful to an individual. Focusing on the premise of “caravan passageways” of the COR theory (Hobfoll, 2011), organizational culture produces conducive conditions that will enable humble leaders to accomplish PS by engaging teams who act as a resource caravan passageway, i.e. a procedure that helps in channelizing and delivery of resources (Hobfoll *et al.*, 2018).

Literature review

Project success

PS is multifaceted (Shenhar *et al.*, 2001). The established measure of PS is based on triple constraint conceptualization, i.e. scope, time and cost (Susilowati *et al.*, 2021). An alternative approach to the above has been to measure PS on the dimensions of quality, cost and time (Frefer *et al.*, 2018; Shokri-Ghasabeh and Kavoussi-Chabok, 2009). Academicians and practitioners are beginning to comprehend that, in addition to the traditional triple constraint criteria, known as the iron triangle, many other factors are essential for PS. Some of them have been identified in this regard include customer acceptability, stakeholder satisfaction, business success and commercialization and prospects and opportunities (Shaukat *et al.*, 2021). Shenhar and Dvir (2007) identified five project parameters for PS, i.e. efficacy, effect on the customer, influence on the teams, success in business ventures and future planning. In addition, Serrador and Turner (2015) stressed the importance of stakeholder and consumer satisfaction for PS, as they are the primary pillars of any project endeavor.

Ika (2009) reviewed research articles published between 1986 and 2004 in two major journals on PM (*Project Management Journal* and the *International Journal of Project Management*). He suggests that researchers have adopted one of three distinctive viewpoints when defining PS – prevailing presumptions, a contingent strategy and a subjective perspective to define PS. The overall perspective is that there are widespread assumptions about an all-encompassing list or collection of essential characteristics for success. Second, the idea behind the contingent policy is that “there is no one best technique” or common set of standards to quantify PS, which contends that standards and critical success elements exist for explicit projects and situations. Third, according to a subjective perspective of PS, “Success and failure are not only subjectively seen and constructed by people, but they are also entwined in meaning and action” (Ika, 2009, p. 16).

Humble leadership

The term “humble leadership” relates to a leader’s approachable nature, defined by a desire to see oneself honestly, a willingness to show respect for others and a teachable nature (Owens *et al.*, 2013). A leader’s humility is viewed as an interactive quality that followers can observe in the way he behaves in social situations (Sheikh, 2022). Humble leaders present a truthful image of themselves and value the merits and contributions of their followers (Schein and Schein, 2018). Another distinguishing factor of humble leaders is that they are not threatened by the competence of their subordinates (Kelemen *et al.*, 2022; Schein and Schein, 2018). Moreover, previous research has also highlighted that humble leaders value lifetime learning and encourage the same in their subordinates (Tangney, 2000).

Previous research on the success of humble leaders has noted their ability to create an enabling culture – a culture of cooperation, loyalty and creativity – as an essential antecedent (Zhou and Wu, 2018). The relationship between a leader and subordinates is such that there is a power gap between the two parties. Humble leaders can derive tremendous

effort from their subordinates by reducing this power gap (Carnevale *et al.*, 2019). Research has shown that humble leaders are more likely to foster a managerial style that allows the followers to express themselves; this is achieved by instilling a culture of openness within their teams (Carnevale *et al.*, 2019; Schein and Schein, 2018). The intention is for these actions to catalyze the adoption of positive work-related behaviors that would induce PS (Podgórska and Pichlak, 2019).

The humble leadership style differs from other “bottom-up leadership” philosophies, including servant leadership (Owens and Hekman, 2012, 2016). Unlike servant leadership, which emphasizes helping others, humble leadership mocks the progression of becoming followers (Owens and Hekman, 2012). Humble leadership involves actions not prioritized by servant leadership, such as encouraging leader–follower role reversal (Schein and Schein, 2018). The “top-down leadership” styles, such as transformational and transactional leadership, differ from humble leadership. A leader’s humility impacts teams through the contagiousness of behaviors (Zhu *et al.*, 2019). Transformational leadership affects team success by encouraging trust among team members and improving team effectiveness. The transactional leadership style includes professional detachment, role-based relationships and focusing on goals rather than people. Humble leaders use an additional humanitarian method that is defined by the expression of openness and friendliness. Humble leaders use an additional humanitarian method defined by openness and friendliness, paying attention to followers’ opinions, soliciting advice and encouraging companions, thus eliminating the need for jurisdiction (Jeung and Yoon, 2018). These traits are thought to favor employee devotion and PS (Alrowwad and Abualoush, 2020; Purwanto *et al.*, 2020).

Humble leaders are also unique in their decision-making style (Chandler *et al.*, 2022). Their effectiveness in decision-making can be attributed to their willingness to listen, learn and involve others (Chandler *et al.*, 2022). They are more likely to admit their mistakes and take responsibility (Posner and Kouzes, 2023). Leaders adopting the humble leadership style focus on serving and supporting their team, empathy and consideration for team members’ emotions and well-being and their commitment to ethical behavior (Heiss, 2023; Vroom, 2000). These attributes contribute to more inclusive, accountable and ethical decision-making processes, which can foster a positive and influential leadership culture within an organization (Chandler *et al.*, 2022).

Humble leadership and project success

Studies indicate that the leadership style of a project manager has a significant impact on the success and productivity of a project (Ali *et al.*, 2020b; Podgórska and Pichlak, 2019). Elaborating on this, Dust *et al.* (2018) highlight an essential aspect of leadership success: they help their teams overcome interpersonal barriers, which come when team members adopt negative behaviors that hinder interpersonal communication. Interpersonal barriers rescind when leaders enable team cohesion by laying the foundation for interpersonal trust. According to Owens and Hekman (2016), team members who are given clear instructions on the project’s goals perform exceptionally well. Previous research has shown that leadership humility contributes to PS (Ali *et al.*, 2020b).

Furthermore, team members reciprocate the leader’s humility with positive work-related behavior and engagement (Carnevale *et al.*, 2019; Ding and Chu, 2020). Studies have reported on the humble leader’s abilities to instill work-related behaviors in their followers, behaviors that facilitate teams collaboration, cohesion, quality of communication and willingness to resolve conflicts in favor of the team (Gonçalves and Brandão, 2017; Ou *et al.*, 2018). Teams with humble leaders are more likely to exhibit ownership of the team’s goals, and this is because of the level of flexibility afforded to them to direct their work (Ali *et al.*, 2020b).

Research grounded in the conservation of resource theory identifies leaders as an essential resource for enabling the team to successfully attain the goals of a given project (Hobfoll, 1989; Hobfoll *et al.*, 2018). The fundamental principle of resource conservation theory is that employees strive to build, protect and retain resources crucial for their task completion. The conservation of resource theory goes beyond identifying resources in the traditional sense. It includes constructs such as organizational culture and the quality of the prevailing social exchange relationships between the various organizational foci (Hobfoll *et al.*, 2018). Research has shown that resource-rich teams are more likely to succeed, and this success will, in turn, be instrumental in acquiring further resources (Hobfoll *et al.*, 2018). In light of the above findings, the following hypothesis is put forward:

H1. Humble leadership has a positive impact on PS.

Team engagement

The intensity of competition globally is driving organizations toward reorganizing themselves around self-empowered teams (Triguero-Sánchez *et al.*, 2021). This has necessitated that organizations undertake interventions to improve team effectiveness (Bakker *et al.*, 2006; Owens, 2015). Previous studies have identified team engagement as a critical antecedent of team success (Goo *et al.*, 2009; Rugulies *et al.*, 2012). Team engagement goes beyond the engagement of individual team members, which requires that the team as a whole is engaged toward attaining its goals (Bakker *et al.*, 2006). The notion of team engagement describes team members' emotional attachment and how they interact with each other and collaborate in performing team assignments and endeavors. Team engagement is "a shared, positive and fulfilling, emergent motivational state of work-related well-being" (Costa *et al.*, 2014).

The literature on work-related engagement defines engagement as a favorable psychological state, akin to contentment, associated with work that results from the fusion of three interconnected dimensions: "vigor, dedication, and absorption" (Schaufeli and Bakker, 2004; Schaufeli *et al.*, 2019). Vigor entails significant levels of energy and fortitude. In contrast, dedication is the employees' commitment to work hard with a strong sense of purpose, pride and the capability to handle challenges. Finally, absorption pertains to employees' physical condition focusing entirely on work-related tasks in which they are happily engaged in their activities, cannot remove themselves from their jobs and hardly notice how quickly time has passed (Schaufeli *et al.*, 2019). A significant observation about absorption is that it is comparable to the idea of flow, which describes a fleeting high experience that suggests a strong focus on the current movement and a warped sense of time (Snyder and Lopez, 2001, pp. 89–105). Thus, absorption may be similar to a stable mood, whereas vigor and dedication are considered the core components of job engagement conceptually and experimentally (Mazzetti *et al.*, 2018).

Mediating role of team engagement

As noted above, team engagement has been shown to have a positive impact on team performance, productivity and customer satisfaction. Additionally, it enhances team and leadership effectiveness (Richardson and West, 2010; Torrente *et al.*, 2012). Besides this, less engaged teams are typically inefficient, which adds to the project costs (Lai *et al.*, 2020). The literature also identifies the quality of the team's leadership structure as essential in fostering team engagement (Hsu *et al.*, 2022). Research has shown that humble leaders, as compared to those that adopt other leadership styles, are emotionally attached to

Li *et al.* (2021a), Yang *et al.* (2019), show a more significant level of empathy toward (Ali *et al.*, 2021a; Li *et al.*, 2021b), and can inspire their followers for the attainment of stretch goals (Ali *et al.*, 2020a).

Through their study, Haffer and Haffer (2016) demonstrated how team engagement builds an optimistic attitude in team members, an essential ingredient for teams to outperform and achieve business excellence and PS. The results from their study indicate that among the 29 critical PS elements, 45% are associated with the project managers' leadership styles (Haffer and Haffer, 2016) and 31% are linked with team engagement. Furthermore, according to COR theory, engaged work teams are efficient in conserving and acquiring resources (Hobfoll *et al.*, 2018). This proves that team engagement makes optimal and efficient resource utilization possible (Farooq, 2022). Therefore, we hypothesize as follows:

- H2. Team engagement has a positive mediating effect between humble leadership and PS.
- H3. Humble leadership has a positive impact on team engagement.
- H4. Team engagement has a positive impact on PS.

Organizational culture

The phenomena of organizational culture are diverse (Li *et al.*, 2021a). It describes how employees interact socially within the organization to generate a shared attitude toward a particular situation. The commonly recognized standards for carrying out tasks relating to the workplace are known as organizational culture (Zheng *et al.*, 2019). Furthermore, Zheng *et al.* (2019) described organizational culture as a collection of shared faith that an organization has developed to address its problems with internal integration and external adaptation. These beliefs have historically worked well and are therefore accepted as realistic within the context of a specific organization. Furthermore, Xenikou (2022) narrated that an organization's culture may be seen as a set of shared mental assumptions that influence interpretation and behavior inside the company by defining what constitutes correct behavior in specific scenarios. An organization's internal dynamics are primarily determined by the culture that permeates the organization as a whole (Besley and Persson, 2022; Schein, 2010).

Ali *et al.* (2017) reported that an organization's culture is depicted by its implementation of flexible and imaginative strategies. An organization's culture may be visualized by the actions and attitudes of its members. Instances of concepts, values and taught abilities for dealing with new situations are examples of an organization's culture. These examples can be viewed in the actions and attitudes of the members of the organization (Ali *et al.*, 2017). The three dimensions of organizational culture identified by Tsui *et al.* (2006) will be used for the conceptualizations: harmony, innovation and social responsibility.

Interaction effect of organizational culture

The organizational culture influences a project's success (Gemünden *et al.*, 2018). Organizational culture may raise the level of comfort project managers feel in their company roles by communicating the project's requirements. Furthermore, the objectives, direction, organizational members' influence on decision-making, a favorable communal environment, collaboration and technological and high-tech resources (Chung *et al.*, 2012; Saptu *et al.*, 2021)

are considered vital elements of organizational culture necessary for attaining PS (Zheng *et al.*, 2019).

Organizational culture impacts projects, and a culture of compassion through resource allocation, strategic planning and stakeholders' concentration leads to successful completion (Xenikou, 2022). It enhances PS by enabling project managers and teams to confront issues and find remedies (Ajmal and Koskinen, 2008). Additionally, organizational culture has significance in prioritizing project objectives and formalizing project goals (Ali *et al.*, 2021a). Project managers are given much power by their organizations, and their decisions are taken seriously at work (Yu *et al.*, 2018). This suggests that humble leaders can only delegate authority to others if an organization gives them significant power. The project manager's impression of a positive organizational culture allows them to act humble by letting employees express their thoughts and use creative methods (Mallén *et al.*, 2019; Yang *et al.*, 2019).

According to COR theory, and especially the idea of "resource caravan passageways" (Hobfoll *et al.*, 2018), people's capacity to create and sustain their "pool" of resources depends primarily on factors beyond their control (Hobfoll *et al.*, 2018). Furthermore, Halbesleben *et al.* (2014) revealed that organizational culture is viewed as an environmental factor that may be used to achieve goals, establish values, improve decision-making by teams, settle disputes and sustain significant organizational resources. Team members and humble leaders believe that their organization's culture is resource-conscious and gives them better access to resources at work (Ali *et al.*, 2020a; Schein and Schein, 2018). In light of these reasons, the authors suggest that organizational culture interacts with humble leadership and PS:

- H5. Organizational culture has a positive moderating effect between humble leadership and PS.
- H6. Organizational culture has a positive moderating effect between humble leadership and team engagement.

Moderated mediation effect of team engagement and organizational culture

The moderated mediation emphasizes an expected treatment influence (Muller *et al.*, 2005). The mediation demonstrates how the treatment influence develops. The mediation study aims to identify the transitional step leading from controlled IV to DV. Besides this, the intensity and direction of the association between the treatment variable and the DV are highlighted by moderation analysis. A further goal of the moderation analysis is to identify the contextual variable that influences how strongly and differently the link between the treatment variable and the dependent variable is related. In this study, team engagement will vary as organizational culture, as moderated attempts to influence humble leadership and PS. Therefore, it is hypothesized as follows:

- H7. Organizational culture moderates the indirect effect of humble leadership on PS through team engagement as a mediator.

Research methods

From a theoretical perspective, the roots of our model lie in the COR theory, which comprises the conservation and acquisition of resources (Hobfoll *et al.*, 2018). Every organization possesses numerous resources, which could be in the form of tangible or intangible

resources. Furthermore, humble leadership is one of the significant resources required for the successful completion of a project (Schein and Schein, 2018). Humble leaders demonstrate humility in their gestures, give respect to their followers and are a part of the project execution. Moreover, team engagement is associated with the team members' performance, dedication and zeal (Schaufeli and Salanova, 2007). For teams to perform at their best, they require resources to complete the endeavor successfully. Timely availability of resources is a significant measure to boost team engagement. The literature demonstrates that resources are persistently acknowledged as the robust predictors of team engagement (Bailey *et al.*, 2017), which enables the teams to handle task complexities that pose hindrances to the project's success.

A humble leader boosts the morale of the team members and establishes a strong bond and cohesion among them (Cho *et al.*, 2021). Besides this, organizational support is also critical, such as having a supportive organizational culture in which team engagement could flourish. Furthermore, this is only possible if humble leaders act efficiently (Cho *et al.*, 2021). These phenomena support the argument that organizational culture is predominantly a significant contributor to team engagement through the humility of humble leaders, which is essential for PS (Hardcopf *et al.*, 2021).

According to COR theory (Hobfoll *et al.*, 2018), the conservation and acquisition of resources are most efficient under a supportive organizational culture and by employing engaged teams. Moreover, salient resources encompass prospects of growth, feedback on performance (at individual and team levels), diversity in skills, humble leadership, work autonomy, justice and support from the social network (Halbesleben *et al.*, 2014; Wright and Hobfoll, 2004). It is concluded that viewed through the lens of COR theory, social resource acquisition and conservation in the form of leadership, team engagement and organizational culture are of paramount importance for PS.

Data and methods

The study's design is quantitative, and a deductive research approach was embraced to empirically investigate the hypothesized relationship between the theorized model and the established predominant method of a cross-sectional survey in the literature on PM (Joslin and Müller, 2016; Ul-Musawir *et al.*, 2017).

The population is the telecom industry of Pakistan, where projects are being undertaken. Eleven telecom companies are working in Pakistan, divided into two categories. The first category comprises those companies that provide telecom services in Pakistan. There are six companies in this category: National Telecommunication Corporation, Pakistan Telecommunication Company Limited, Telenor Pakistan, Jazz Corporation, Zong and Ufone. The second category comprises companies undertaking telecom projects listed in category one. In this category, there are five companies, i.e. Ericsson Pakistan (Pvt.) Ltd., Huawei Technologies, Nokia Siemens Networks Pvt. Ltd., ZTE Corporation and Alcatel-Lucent. So, the target population of the study comprises companies listed in category two. The reason for choosing the telecom industry for investigation is that they are a vital revenue generator and contributor to the economy of Pakistan. Second, technology introductions in the country, such as 5G, 4G, are exclusively based on these companies. With their input in developing technology infrastructure, Pakistan could use innovative technologies. Third, the current era is of fast communication, data sharing, video conferencing, etc., and all of these facilities depend on telecom infrastructure. Therefore, the contribution of the telecom sector is of paramount importance for the development of the economy. Because of its significant influence, the telecom industry is a suitable population for the study.

Sample and procedure

The sample size has a significant impact on the investigation of the study. The adequate sample size determined for the proposed study is based on the most cited literature, which states that in any study, if each variable has 3 or more items, a sample size of 100 participants is sufficient for convergence (Anderson and Gerbing, 1984; Francis *et al.*, 2010; Iacobucci and Churchill, 2010; Jackson, 2003; Raza *et al.*, 2018; Serdar *et al.*, 2021). Specifically, Anderson and Gerbing (1984) suggested that a sample of 150 participants is appropriate for a justifiable solution and convergent. In contrast, researchers Iacobucci and Churchill (2010) claim that PLS-structural equation modeling (SEM) can accurately produce results even if the sample size is 50–100 respondents. Therefore, based on these arguments, it is inferred that any sample size equal to or above 150 is sufficient for the analysis.

In this study, the multistage cluster sampling technique (Allen *et al.*, 2002; Sedgwick, 2015) was used for data collection. Through multistage cluster sampling, sampling is done in stages; a minimum of two to three stages is sufficient (Sedgwick, 2015). In the present study, eliminating service-oriented telecom companies is the first stage of multistage cluster sampling. In the second stage, all non-project participants, i.e. managerial, non-managerial and miscellaneous staff, are discarded during the data collection process. The third multistage cluster sampling stage comprises the participants from whom data is collected. Precautionary measures were taken to ensure that data were collected only from project participants, and a field for confirmation was added to the questionnaire for this purpose. A self-administrated questionnaire was used for the collection of data. All the project-oriented telecom companies' head offices are located in Islamabad. The authors visited these organizations and communicated with the relevant authorities for the said purposes, and after their perusal, the data collection process was started. Moreover, after permission, the authors also visited their regional offices in Pakistan for data collection. It was requested that the head office communicates with the regional office for their cooperation and support.

A time-lagged method was applied to gather data at two different time intervals with a time lag of one month. This procedure reduces the potential common method bias. All participants were informed that their participation was entirely voluntary and that their information would only be used for our research and maintained in the strictest confidence. In the first instance (T1), data was gathered on demographics, humble leadership and team empowerment. In the second instance (T2), data was collected on organizational culture and PS. On T1, 500 paper-based questionnaires were distributed to all five telecom companies across Pakistan, and the next day, the questionnaires were collected. A response of 429 was received from a total of 500. After a one-month interval, follow-up data were collected on the second instance (T2). The instrument related to the rest of the two variables was personally delivered to only those 429 participants who participated in the first instance (T1). The responses collected on T2 were 370 out of 429. During the examination of questionnaires, 53 incomplete questionnaires were found and discarded, constituting 317 respondents as the final sample size, which is a 63.4% response rate, considered high from the Asian perspective, such as Pakistan. The study demographics are presented in Table 1.

Measures

The instruments in this study were adapted from prior studies. All the constructs were measured using a five-point Likert scale ranging from 1 – strongly disagree to 5 – strongly agree. The PS instrument was adapted from Engelbrecht *et al.* (2017) and Latif *et al.* (2020) and consisted of six items. Cronbach's alpha value is 0.919, which indicates that the scale has high reliability. Furthermore, the humble leadership scale was adapted from Al Wali *et al.* (2022) and Owens *et al.* (2013). The scale comprises nine items with a Cronbach's alpha

JFM

	Measures	Items	Frequency	% age
	Gender	Male	194	61.20
		Female	123	38.80
	Age (years)	25–30	198	62.50
		31–40	83	26.20
		41–50	21	6.60
		51 and above	15	4.70
	Education	Engineering degree	181	57.10
		Computer science	91	28.70
		Management sciences degree	18	5.70
		Diploma holders	27	8.50
	Job titles	Project managers	33	10.40
		Assistant project managers	04	1.30
		Telecommunication engineering	240	75.70
		Team leaders	14	4.40
	Work Experience	Telecommunication technicians (equipment installers and repairers)	26	8.20
		Less than five years	184	58.04
		5–10 years	87	27.44
		11–15 years	16	5.05
		16–20 years	16	5.05
		21 years and above	14	4.42

Table 1.
Demographics

Source: Authors’ own work

value of 0.911, which indicates that the scale is highly reliable. Team engagement was measured by adapting the shorter version of the “Utrecht Work Engagement Scale (UWES)” developed by [Schaufeli et al. \(2006\)](#). The scale consists of nine items of three dimensions: “vigor, dedication, and absorption.” All three dimensions have three items each. Cronbach’s alpha is 0.918, which shows that the scale is highly reliable. Finally, organizational culture was measured by adapting the scale of [Tsui et al. \(2006\)](#), which comprises nine items. The scale consists of three dimensions: harmony (3 items), innovation (3 items) and social responsibility (3 items). Cronbach’s alpha value of the scale is 0.929, which verifies that the scale has high reliability.

Data analysis

The data analysis was performed using SPSS v23 and AMOS v23. The analysis was carried out in two steps. In the first step, confirmatory factor analysis (CFA) was performed, and the structural model was tested in the second step. The purpose of the CFA was to determine whether the hypothesized predictor constructs embrace the evaluated items ([Kline, 2015](#)). On the other hand, SEM was used to test hypothesized relationships ([Jöreskog, 1993](#)). Moreover, moderated mediation was analyzed using the Process Macro by [Preacher and Hayes \(2008\)](#).

Results

In SEM, integration is commonly used when researchers aim to identify a latent variable that cannot be directly observed or measured. Instead, they rely on a set of observable factors (indicators) that are believed to be connected to the latent variable. By integrating these indicators, the researcher aims to estimate the latent variable and examine its relationship with other factors in the model ([Hulland, 1999](#)).

The integration of variables can be achieved through two approaches: the reflective measurement model and the formative measurement model. The choice between reflective and formative measurement models depends on the theoretical assumptions and conceptualizations of the evaluated construct (Hulland, 1999). When selecting the most appropriate integration strategy, the researcher carefully examines the characteristics of the latent variable and the correlations between the observable variables and then decides which measurement model to use (Hulland, 1999).

This study used the reflective measurement model because the latent variable influences the observable indicators. This choice is based on the understanding that the indicators are imperfect representations or reflections of the underlying construct (Hulland, 1999).

Confirmatory factor analysis

CFA was performed to determine whether the hypothesized construct model suited the data perfectly. The results of the CFA present an excellent model fitness depicted with the values of $\chi^2 = 726.989$, $df = 477$, $\chi^2/df = 1.524$, $P < 0.001$, CFI = 0.988, TLI = 0.987, SRMR = 0.041, RMSEA = 0.041. Model fitness is shown in the Figure 1 with unstandardized weights.

In the next stage, latent variables were examined for composite reliability (CR), convergent validity and discriminant validity. The CR values of all the latent variables were greater than 0.9, which is a depiction that there is no issue of internal consistency (Bagozzi, 1983; Fornell and Larcker, 1981). Furthermore, convergent validity is accessed through average variance extracted (AVE) values. A threshold value greater than 0.5 is required to achieve convergent validity (Sarstedt et al., 2016). In the present study, all the constructs' AVE values were greater than 0.5, which verifies that convergent validity is not a problem. Whereas, discriminant validity was verified by using the Fornell and Larcker (1981) criteria. The criteria are that the square root of AVE values of all variables should be greater than the correlation between all the variables. Table 2 presents factor loading, CR, AVE, square root of AVE (SQRT of AVE) and discernment validity of the constructs.

Table 3 presents the discriminant validity.

In Table 3, bold and italic values placed diagonally are the values of the square root of AVE. The examination of the Table 3 reveals that all the respective column values are less than the square root of AVE. Thus, discriminant validity is held in the present study.

Structural model testing

First, the measurement model was tested to exhibit the reliability and validity of the constructs. In the second phase, the structural model is evaluated (Hair et al., 2014), which would examine the model's predictive effectiveness and correlation between proposed variables. Figure 2 presents a path diagram.

The structural equation model results revealed a significant positive correlation between humble leadership and PS ($\beta = 0.851$, $P < 0.01$). Therefore, the study's *H1* is accepted. *H3* of the study was related to the relationship between humble leadership and team engagement. The result reveals a significant positive relationship between humble leadership and team engagement ($\beta = 0.723$, $P < 0.01$); thus, study's *H3* is accepted. *H4* was related to team engagement and PS. The result reveals a significant positive relationship between team engagement and PS ($\beta = 0.320$, $P < 0.01$); therefore, *H4* is accepted.

The study's *H2* was related to the indirect effect. The scholar followed Preacher et al.'s (2007) method and performed a bootstrap analysis. According to Wang et al. (2017), the bootstrap procedure delivers a perfect confidence-interval (CI) for the indirect effect evaluation. The scholar calculated 95% bias-corrected bootstrapped CIs by applying a data sample of 5,000. The bootstrap results revealed a significant and positive medication effect

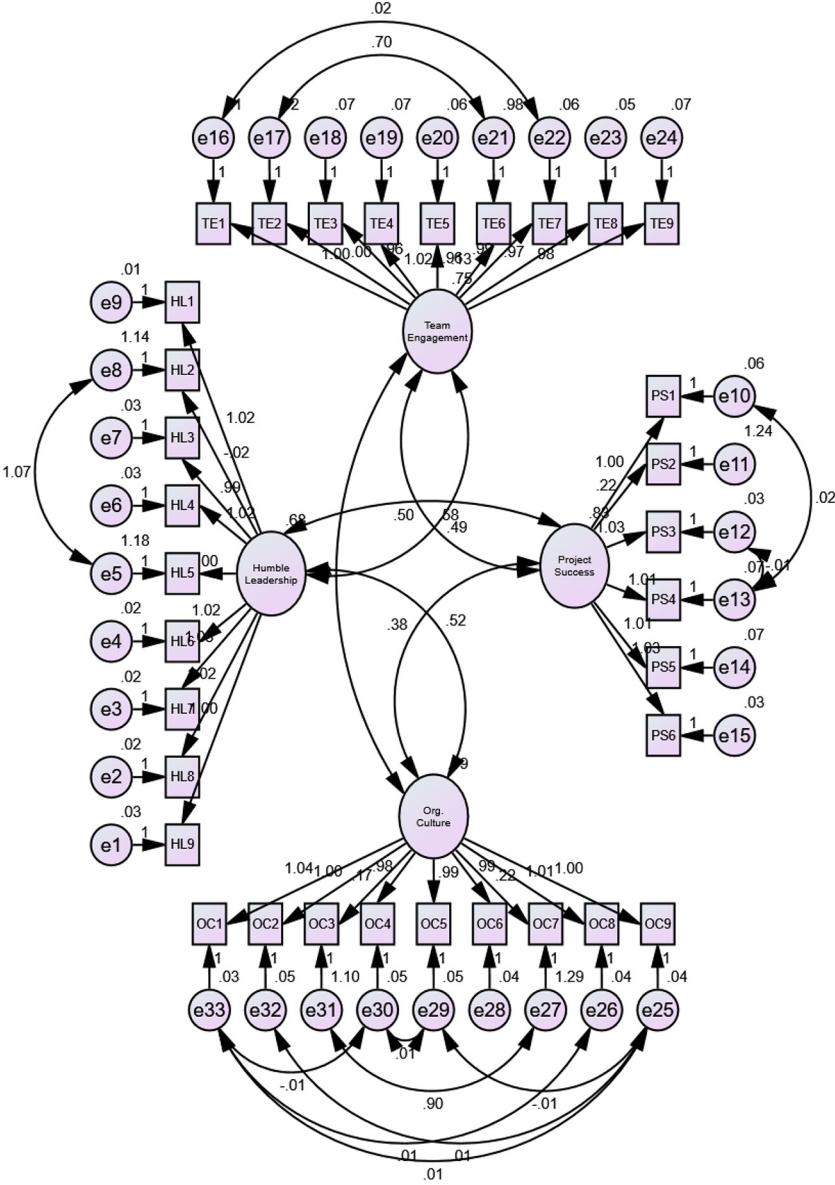


Figure 1.
Model fitness with
unstandardized
weights

Source: Author's own work

of team engagement between humble leadership and PS ($\beta = 0.003$, $SE = 0.043$, $P < 0.01$, 95% CI); therefore, $H2$ is accepted. Furthermore, results revealed that the direct relationship between humble leadership and PS is significant and the indirect relationship through team engagement is also significant, which means there is a partial mediation (Baron and Kenny, 1986; Zhao *et al.*, 2010).

						Effect of humble leadership
Construct	Items	Factor loadings	CR	AVE	SQRT of AVE	
Project success	PS1	0.883	0.93	0.69	0.830	
	PS2	0.526				
	PS3	0.879				
	PS4	0.886				
	PS5	0.870				
	PS6	0.876				
Humble leadership	HL1	0.771	0.94	0.64	0.803	
	HL2	0.896				
	HL3	0.770				
	HL4	0.770				
	HL5	0.911				
	HL6	0.769				
	HL7	0.781				
	HL8	0.773				
	HL9	0.765				
Organizational culture	OC1	0.884	0.97	0.79	0.887	
	OC2	0.893				
	OC3	0.896				
	OC4	0.880				
	OC5	0.877				
	OC6	0.878				
	OC7	0.894				
	OC8	0.887				
	OC9	0.893				
Team engagement	TE1	0.797	0.96	0.71	0.842	
	TE2	0.923				
	TE3	0.810				
	TE4	0.809				
	TE5	0.829				
	TE6	0.921				
	TE7	0.835				
	TE8	0.825				
	TE9	0.823				
Source: Authors' own work						Table 2. Factor loading, CR, AVE and SQRT of AVE

Constructs	HL	PS	TE	OC
HL	0.803			
PS	0.704**	0.830		
TE	0.619**	0.598**	0.842	
OC	0.686**	0.452**	0.633**	0.887

Notes: HL = Humble Leadership, PS = Project Success, TE = Team Engagement, OC = Organizational Culture, ** $p < 0.01$

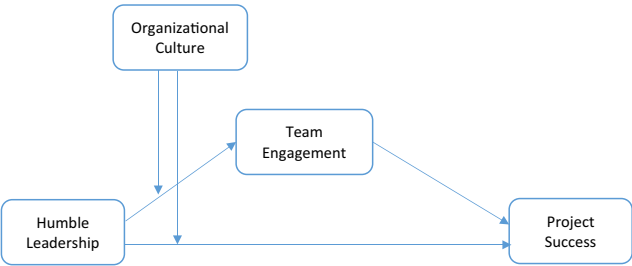
Source: Authors' own work

Table 3.
Correlation matrix
with SQRT of AVE
values

The study's *H5* and *H6* are related to the interaction effect of organizational culture. [Table 4](#) presents the SEM path analysis results of the interaction effect.

H5 and *H6* are related to the interaction effect of organizational culture between humble leadership and PS and between humble leadership and team engagement. [Table 4](#) results

Figure 2.
Path diagram



Source: Author’s own work

Table 4.
SEM path analysis
results of the
interaction effect

Path	Estimate	SE	P-Value
Humble leadership → Project success	0.987	0.060	$P < 0.01$
Organizational Culture → Project success	−0.173	0.053	$P < 0.01$
HL_X_OC → Project success	−0.011	0.020	$P = 0.576$
Humble leadership → Team engagement	0.425	0.059	$P < 0.01$
Organizational culture → Team engagement	0.388	0.055	$P < 0.01$
HL_X_OC → Team engagement	−0.018	0.023	$P = 0.439$

Notes: SE: standard error, HL_X_OC: interaction term of humble leadership and organizational culture
Source: Authors’ own work

reveal that humble leadership with PS is significant, whereas interaction term (humble leadership and organizational culture) with PS is insignificant. Therefore, *H5* is rejected. Moreover, *H6* is rejected, as interaction term (humble leadership and organizational culture) with team engagement is insignificant. Therefore, it is concluded that there is no interaction effect in the proposed model among the latent constructs.

The moderated mediation effect, also known as conditional process analysis, was analyzed by applying Process macro model 8 (Preacher and Hayes, 2008; Preacher *et al.*, 2007). A moderated mediation framework is interpreted as the simultaneous presence of a moderator which influences the robustness of the relationship between two other constructs, humble leadership and PS and between humble leadership and team engagement. In the presence of a moderator, the main effect of humble leadership and PS was insignificant ($\beta = -0.037$, $P = 0.490$). Moreover, organizational culture is also insignificant between humble leadership and team engagement ($\beta = -0.152$, $P = 0.795$). The bias-corrected percentile bootstrap results revealed an insignificant conditional indirect effect through team engagement ($\beta = 0.247$, $SE = 0.051$, 95% CI). The results revealed that organizational culture does not moderate direct and indirect paths in the presence of team engagement. Therefore, *H7* was rejected.

Discussion

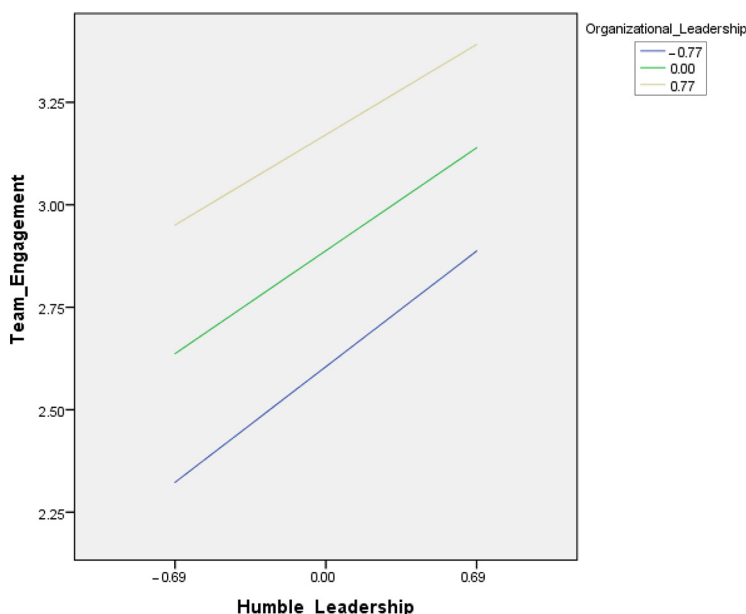
In examining the societal aspects of business ethics and policymaking crises over the past two decades, humble leaders have recognized their individual shortcomings and fully leveraged the knowledge of their colleagues and subordinates to address company issues (Cortes-Mejia *et al.*, 2022). In contrast to alternative leadership philosophies, humble

leadership is a stand-alone “charismatic leadership” style specifically characterized by self-improvement, respect for others’ accomplishments and keeping an open mindset (Cortes-Mejia *et al.*, 2022; Maldonado *et al.*, 2022). This study intended to add to the body of knowledge on humble leadership, team engagement, organizational culture and PS in response to the demand for empirical analysis of the effects of humble leadership (Ali *et al.*, 2021a; Rigolizzo *et al.*, 2022).

The present study was conducted to empirically test the model to examine the role of humble leadership on PS in the presence of a mediator and moderator in Pakistani culture. The data were gathered from the project participants in the telecom industry of Pakistan, and the result revealed a significant positive relationship between humble leadership and PS. The results reveal that humility needs to be a significant trait of the project manager, enabling the leaders to complete the project successfully. The results of this investigation support the previous study’s results (Ali *et al.*, 2021a, 2021 b; Kelemen *et al.*, 2022).

The results verified the assumptions made in all the hypotheses. The result reveals a significant relationship between humble leadership and PS. This result is in-line with the prior studies result (Ali *et al.*, 2021a, 2021b, 2020a, 2020b). Furthermore, the analysis revealed that team engagement partially mediates the relationship between humble leadership and PS, which is an essential component of any PS (Rigolizzo *et al.*, 2022; Tan and Photchanachan, 2021). Moreover, organizational culture as a moderator was analyzed with a combination of humble leadership and PS. According to the results, organizational culture does not interact with the relationship between humble leadership and PS. Besides this, results proved that the moderated mediation effect, i.e. team engagement and organizational culture are also not present, as depicted in Figure 3 and statistically verified by Table 5.

Figure 3 and Table 5 portray that the organizational culture at -1 SD, the effect was 0.154, at the mean level, the effect was 0.137, and at $+1$ SD, the effect was 0.120 between



Source: Author’s own work

Figure 3.
Moderated mediation
effect of
organizational culture
and team
engagement between
humble leadership
and PS

team engagement and PS in the presence of organizational culture. In the index of moderated mediation, there is a minus between lower and upper limits, which signifies that there is no moderated mediation effect present in the model.

Conclusions, implications and future directions

Theoretical implications

The study’s findings can be closely examined to uncover many theoretical contributions. First, the lens of COR theory (Hobfoll, 1989) is used in analyzing the role of organizational culture in providing resources to humble leaders for the successful completion of an endeavor. Humble leaders are sources of inspiration and motivation for team engagement to perform extraordinarily. Second, humble leaders are the authorities for the conservation and acquisition of resources, which are the lifeline of projects. According to “caravan passageways” (Hobfoll, 2011), humble leaders inculcate teams to utilize resources efficiently. Third, the study demonstrated how a humble leader could outperform in the Asian culture, especially if the organizational culture is not supportive. This study broadens the depth and scope of COR theory by applying it in a variety of management and social science domains.

Practical implications

The findings of the present study have significant consequences for professionals. First, the selection of project managers is significant for the organization; they must hire someone who can act as a humble leader and increase PS. During the selection process, it is of paramount importance that organizations should ensure that the desired candidate for project manager should demonstrate the characteristics of humble leaders such as open-mindedness, eagerness to learn, motivating followers to offer their valuable input on different tasks, tolerating mistakes and removing power distance (Owens and Hekman, 2012). Respect followers’ abilities by promoting the business culture, which fosters a genuine feeling of humility (Li et al., 2021c).

Second, by adopting various training methods, a project manager can be transformed into a humble leader (Carnevale et al., 2019). The first point is to educate the project managers on fostering a gratitude culture among workers. Number two, encouraging followers’ input and number three, paying close attention to issues brought up by team members. Furthermore, project managers can impart expertise, involve team members in decision-making and offer quick, constructive criticism so that employees feel psychologically empowered. Thus, the sense of team engagement prevails.

The third finding of our study shows that team engagement partially mediates the relationship between humble leadership and PS. The nurturing nature of a leader will increase team engagement, which is essential for PS. This suggests that projects will likely

Table 5.
Conditional indirect
effect and index of
moderated mediation

Interaction effect	Effect	SE	LL 95% CI	UL 95% CI
Organizational culture (at -1 SD = 0.77)	0.154	0.040	0.084	0.239
Organizational culture (at mean = 0.00)	0.137	0.035	0.076	0.212
Organizational culture (at +1 SD = 0.77)	0.120	0.036	0.057	0.197
Index of Moderated mediation	-0.022	0.018	-0.060	0.013

Notes: N = 317, Bootstrap sample size = 5000, SE = Standard Error, LL = Lower Limit, CI = Confidence Interval, UL = Upper Limit
Source: Authors’ own work

be successful when team engagement is high. Fourth, according to our research findings, the organizational culture role is vital in providing resources, communication and expertise, enhancing the likelihood of team engagement and PS. Our research findings will assist practitioners in leading projects with substantial excitement in environments where organizational culture is harmonized, and the necessary resources are available for successfully completing the projects.

Limitations and future research directions

Despite making some significant contributions, the study has some limitations that open up possibilities for further investigation. First, the cross-sectional design and reliance on a single data collection constrain the conclusions. Data gathered from telecom projects in Pakistan only limits the generalizability of the study, and future research on the effects of humble leadership should take other forms of PBO into account. Second, the data were gathered at two points in time, T1 and T2, with a time difference of one month. This accomplished the goal of reducing common method bias. A longitudinal study, however, might aid researchers in comprehending the mediating mechanism and evolving behavioral patterns. Future research could investigate the impact of servant leadership, leader-member exchange and emotional intelligence on PS. Moreover, knowledge sharing and team empowerment could mediate the association between servant leadership and PS.

Conclusion

Increased understanding and knowledge of the aspects that contribute to PS is critical for organizations. The results have demonstrated that humble leadership significantly affects PS directly and indirectly. Furthermore, the investigation verified that team engagement is a vital PS element, which acted as a mediator in the association between humble leadership and PS. The results of this investigation endorsed the prior empirical studies' results that organizations must encourage a humble leadership style among project managers. Moreover, this can be achieved through leadership development programs (Li *et al.*, 2021c). This would establish a working climate that will encourage team engagement practices and enthusiastic participation of team members toward PS.

References

- Abbas, M. and Ali, R. (2021), "Transformational versus transactional leadership styles and project success: a meta-analytic review", *European Management Journal*.
- Ajmal, M.M. and Koskinen, K.U. (2008), "Knowledge transfer in project-based organizations: an organizational culture perspective", *Project Management Journal*, Vol. 39 No. 1, pp. 7-15.
- Al Wali, J., Muthuveloo, R. and Teoh, A.P. (2022), "Unravelling the nexus between creative self-efficacy, humble leadership, innovative work behaviour and job performance amongst physicians in public hospitals", *Asia-Pacific Journal of Business Administration*, Vol. 14 No. 4.
- Ali, H.S.H., Said, R.M., Abdullah, A. and Daud, Z.M. (2017), "The impact of organizational culture on corporate financial performance: a review", *International Journal of Economics, Commerce and Management*, Vol. 5 No. 8, pp. 585-597.
- Ali, M., Li, Z., Durrani, D.K., Shah, A.M. and Khuram, W. (2021a), "Goal clarity as a link between humble leadership and project success: the interactive effects of organizational culture", *Baltic Journal of Management*, Vol. 16 No. 3.
- Ali, M., Li, Z., Haider, M., Khan, S. and Din, Q.M.U. (2021b), "Does humility of project manager affect project success? Confirmation of moderated mediation mechanism", *Management Research Review*, Vol. 44 No. 9, pp. 1320-1341.

-
- Ali, M., Li, Z., Khan, S., Shah, S.J. and Ullah, R. (2020a), "Linking humble leadership and project success: the moderating role of top management support with mediation of team-building", *International Journal of Managing Projects in Business*, Vol. 14 No. 3.
- Ali, M., Zhang, L., Shah, S.J., Khan, S. and Shah, A.M. (2020b), "Impact of humble leadership on project success: the mediating role of psychological empowerment and innovative work behavior", *Leadership and Organization Development Journal*, Vol. 41 No. 3, pp. 349-367.
- Allen, M., Kilpatrick, D., Armstrong, M., Briggs, R., Course, G. and Pérez, N. (2002), "Multistage cluster sampling design and optimal sample sizes for estimation of fish discards from commercial trawlers", *Fisheries Research*, Vol. 55 Nos 1/3, pp. 11-24.
- Alrowwad, A.A. and Abualoush, S.H. (2020), "Innovation and intellectual capital as intermediary variables among transformational leadership, transactional leadership, and organizational performance", *Journal of Management Development*, Vol. 39 No. 2.
- Amoah, A. and Marimon, F. (2021), "Project managers as knowledge workers: competencies for effective project management in developing countries", *Administrative Sciences*, Vol. 11 No. 4, p. 131.
- Anderson, J.C. and Gerbing, D.W. (1984), "The effect of sampling error on convergence, improper solutions, and goodness-of-fit indices for maximum likelihood confirmatory factor analysis", *Psychometrika*, Vol. 49 No. 2, pp. 155-173.
- Bagozzi, R.P. (1983), "Issues in the application of covariance structure analysis: a further comment".
- Bailey, C., Madden, A., Alfes, K. and Fletcher, L. (2017), "The meaning, antecedents and outcomes of employee engagement: a narrative synthesis", *International Journal of Management Reviews*, Vol. 19 No. 1, pp. 31-53.
- Bakker, A.B., Emmerik, H.V. and Euwema, M.C. (2006), "Crossover of burnout and engagement in work teams", *Work and Occupations*, Vol. 33 No. 4, pp. 464-489.
- Baron, R.M. and Kenny, D.A. (1986), "The moderator–mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations", *Journal of Personality and Social Psychology*, Vol. 51 No. 6, p. 1173.
- Besley, T.J. and Persson, T. (2022), "Organizational dynamics: culture, design, and performance. Design, and performance (June 2022)", CEPR Discussion Paper No. DP17382.
- Caniëls, M.C., Chiocchio, F. and van Loon, N.P. (2019), "Collaboration in project teams: the role of mastery and performance climates", *International Journal of Project Management*, Vol. 37 No. 1, pp. 1-13.
- Carnevale, J.B., Huang, L. and Paterson, T. (2019), "LMX-differentiation strengthens the prosocial consequences of leader humility: an identification and social exchange perspective", *Journal of Business Research*, Vol. 96, pp. 287-296.
- Chandler, J.A., Johnson, N.E., Jordan, S.L. and Short, J.C. (2022), "A meta-analysis of humble leadership: reviewing individual, team, and organizational outcomes of leader humility", *The Leadership Quarterly*, Vol. 34 No. 1.
- Cho, J., Schilpzand, P., Huang, L. and Paterson, T. (2021), "How and when humble leadership facilitates employee job performance: the roles of feeling trusted and job autonomy", *Journal of Leadership and Organizational Studies*, Vol. 28 No. 2, pp. 169-184.
- Chung, Y., Hsu, Y., Tsai, S., Huang, H. and Tsai, C. (2012), "The correlation between business strategy, information technology, organisational culture, implementation of CRM, and business performance in a high-tech industry", *South African Journal of Industrial Engineering*, Vol. 23 No. 2, pp. 1-15.
- Cortes-Mejia, S., Cortes, A.F. and Herrmann, P. (2022), "Sharing strategic decisions: CEO humility, TMT decentralization, and ethical culture", *Journal of Business Ethics*, Vol. 178 No. 1, pp. 241-260.

-
- Costa, P.L., Passos, A.M. and Bakker, A.B. (2014), "Team work engagement: a model of emergence", *Journal of Occupational and Organizational Psychology*, Vol. 87 No. 2, pp. 414-436.
- Ding, H. and Chu, X. (2020), "Employee strengths use and thriving at work: the roles of self-efficacy and perceived humble leadership", *Journal of Personnel Psychology*, Vol. 19 No. 4, p. 197.
- Dust, S.B., Resick, C.J., Margolis, J.A., Mawritz, M.B. and Greenbaum, R.L. (2018), "Ethical leadership and employee success: examining the roles of psychological empowerment and emotional exhaustion", *The Leadership Quarterly*, Vol. 29 No. 5, pp. 570-583.
- Engelbrecht, J., Johnston, K.A. and Hooper, V. (2017), "The influence of business managers' IT competence on IT project success", *International Journal of Project Management*, Vol. 35 No. 6, pp. 994-1005.
- Enwereuzor, I.K., Ugwu, L.E. and Ugwu, L.I. (2022), "Unlocking the mask: how respectful engagement enhances tacit knowledge sharing among organizational members", *International Journal of Manpower*, Vol. 44 No. 1.
- Farooq, R. (2022), "Project employee engagement through the lens of conservation of resource (COR) theory CAPITAL UNIVERSITY".
- Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- Francis, J.J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M.P. and Grimshaw, J.M. (2010), "What is an adequate sample size? Operationalising data saturation for theory-based interview studies", *Psychology and Health*, Vol. 25 No. 10, pp. 1229-1245.
- Frefer, A., Mahmoud, M., Haleema, H. and Almamlook, R. (2018), "Overview success criteria and critical success factors in project management", *Industrial Engineering and Management*, Vol. 7 No. 1, pp. 1-6.
- Fries, A., Kammerlander, N. and Leitterstorf, M. (2021), "Leadership styles and leadership behaviors in family firms: a systematic literature review", *Journal of Family Business Strategy*, Vol. 12 No. 1, p. 100374.
- Gemeda, H.K. and Lee, J. (2020), "Leadership styles, work engagement and outcomes among information and communications technology professionals: a cross-national study", *Heliyon*, Vol. 6 No. 4, p. e03699.
- Gemünden, H.G., Lehner, P. and Kock, A. (2018), "The project-oriented organization and its contribution to innovation", *International Journal of Project Management*, Vol. 36 No. 1, pp. 147-160.
- Gonçalves, L. and Brandão, F. (2017), "The relation between leader's humility and team creativity: the mediating effect of psychological safety and psychological capital", *International Journal of Organizational Analysis*, Vol. 25 No. 4.
- Goo, J., Kishore, R., Rao, H.R. and Nam, K. (2009), "The role of service level agreements in relational management of information technology outsourcing: an empirical study", *MIS Quarterly*, Vol. 33 No. 1, pp. 119-145.
- Haffer, J. and Haffer, R. (2016), "Positive employee attitudes as a determinant of project success and business excellence: the case of Poland".
- Hair, J.F., Jr, Sarstedt, M., Hopkins, L. and Kuppelwieser, V.G. (2014), "Partial least squares structural equation modeling (PLS-SEM): an emerging tool in business research", *European Business Review*.
- Halbesleben, J.R., Neveu, J.-P., Paustian-Underdahl, S.C. and Westman, M. (2014), "Getting to the "COR" understanding the role of resources in conservation of resources theory", *Journal of Management*, Vol. 40 No. 5, pp. 1334-1364.
- Hardcopf, R., Liu, G.J. and Shah, R. (2021), "Lean production and operational performance: the influence of organizational culture", *International Journal of Production Economics*, Vol. 235, p. 108060.
- Heiss, K. (2023), *Introduction to Leadership*, Kenneth Heiss.

-
- Hobfoll, S.E. (1989), "Conservation of resources: a new attempt at conceptualizing stress", *American Psychologist*, Vol. 44 No. 3, p. 513.
- Hobfoll, S.E. (2011), "Conservation of resource caravans and engaged settings", *Journal of Occupational and Organizational Psychology*, Vol. 84 No. 1, pp. 116-122.
- Hobfoll, S.E., Halbesleben, J., Neveu, J.-P. and Westman, M. (2018), "Conservation of resources in the organizational context: the reality of resources and their consequences", *Annual Review of Organizational Psychology and Organizational Behavior*, Vol. 5 No. 1, pp. 103-128.
- Hsu, H.-M., Chang, H.-T., Liou, J.-W., Cheng, Y.-C. and Miao, M.-C. (2022), "Empowering leadership and team innovation: the mediating effects of team processes and team engagement", *German Journal of Human Resource Management: Zeitschrift Für Personalforschung*, Vol. 37 No. 1, p. 23970022221108487.
- Hulland, J. (1999), "Use of partial least squares (PLS) in strategic management research: a review of four recent studies", *Strategic Management Journal*, Vol. 20 No. 2, pp. 195-204.
- Iacobucci, D. and Churchill, G. (2010), *Marketing Research: Methodological Foundations*, South-Western Cengage Learning, Mason, OH, p. 257.
- Ika, L.A. (2009), "Project success as a topic in project management journals", *Project Management Journal*, Vol. 40 No. 4, pp. 6-19.
- Ika, L.A., Diallo, A. and Thuillier, D. (2012), "Critical success factors for world bank projects: an empirical investigation", *International Journal of Project Management*, Vol. 30 No. 1, pp. 105-116.
- Jackson, D.L. (2003), "Revisiting sample size and number of parameter estimates: some support for the N: q hypothesis", *Structural Equation Modeling: A Multidisciplinary Journal*, Vol. 10 No. 1, pp. 128-141.
- Jalil, T. (2017), "Impact of inclusive leadership on project success with mediating role of work engagement and person job fit", Unpublished Master Thesis, University of Science and Technology, 1-45.
- Jeung, C.-W. and Yoon, H.J. (2018), "When leadership elicits voice: evidence for a mediated moderation model", *Journal of Management and Organization*, Vol. 24 No. 1, pp. 40-61.
- Jöreskog, K.G. (1993), "Testing structural equation models", *Sage Focus Editions*, Vol. 154, pp. 294-294.
- Joslin, R. and Müller, R. (2016), "The impact of project methodologies on project success in different project environments", *International Journal of Managing Projects in Business*, Vol. 9 No. 2.
- Kang, F., Li, J. and Hua, Y. (2022), "How and when does humble leadership enhance newcomer well-being", *Personnel Review*, Vol. 52 No. 1.
- Kelemen, T.K., Matthews, S.H., Matthews, M.J. and Henry, S.E. (2022), "Humble leadership: a review and synthesis of leader expressed humility", *Journal of Organizational Behavior*, Vol. 44 No. 2.
- Kline, R.B. (2015), *Principles and Practice of Structural Equation Modeling*, Guilford publications.
- Lai, F.-Y., Tang, H.-C., Lu, S.-C., Lee, Y.-C. and Lin, C.-C. (2020), "Transformational leadership and job performance: the mediating role of work engagement", *SAGE Open*, Vol. 10 No. 1, p. 2158244019899085.
- Latif, K.F., Afzal, O., Saqib, A., Sahibzada, U.F. and Alam, W. (2020), "Direct and configurational paths of knowledge-oriented leadership, entrepreneurial orientation, and knowledge management processes to project success", *Journal of Intellectual Capital*, Vol. 22 No. 1.
- Li, J., Wu, N. and Xiong, S. (2021a), "Sustainable innovation in the context of organizational cultural diversity: the role of cultural intelligence and knowledge sharing", *Plos One*, Vol. 16 No. 5, p. e0250878.
- Li, X., Xue, J. and Liu, J. (2021b), "Linking leader humility to employee creative performance: work engagement as a mediator", *Social Behavior and Personality: An International Journal*, Vol. 49 No. 6, pp. 1-7.

-
- Li, R., Zhang, H., Zhu, X. and Li, N. (2021c), "Does employee humility foster performance and promotability? Exploring the mechanisms of LMX and peer network centrality in China", *Human Resource Management*, Vol. 60 No. 3, pp. 399-413.
- Maldonado, T., Vera, D. and Spangler, W.D. (2022), "Unpacking humility: leader humility, leader personality, and why they matter", *Business Horizons*, Vol. 65 No. 2, pp. 125-137.
- Mallén, F., Domínguez-Escrig, E., Lapiedra, R. and Chiva, R. (2019), "Does leader humility matter? Effects on altruism and innovation", *Management Decision*, Vol. 58 No. 5.
- Mazzetti, G., Schaufeli, W.B. and Guglielmi, D. (2018), "Are workaholism and work engagement in the eye of the beholder? A multitrait perspective on different forms of working hard", *European Journal of Psychological Assessment*, Vol. 34 No. 1, p. 30.
- Muller, D., Judd, C.M. and Yzerbyt, V.Y. (2005), "When moderation is mediated and mediation is moderated", *Journal of Personality and Social Psychology*, Vol. 89 No. 6, p. 852.
- Ou, A.Y., Waldman, D.A. and Peterson, S.J. (2018), "Do humble CEOs matter? An examination of CEO humility and firm outcomes", *Journal of Management*, Vol. 44 No. 3, pp. 1147-1173.
- Owens, R. (2015), "Working together: using group relations theory to understand and rethink the interplay between administrators and social work practitioners", *Journal of Social Work Practice*, Vol. 29 No. 2, pp. 231-238.
- Owens, B.P. and Hekman, D.R. (2012), "Modeling how to grow: an inductive examination of humble leader behaviors, contingencies, and outcomes", *Academy of Management Journal*, Vol. 55 No. 4, pp. 787-818.
- Owens, B.P. and Hekman, D.R. (2016), "How does leader humility influence team performance? Exploring the mechanisms of contagion and collective promotion focus", *Academy of Management Journal*, Vol. 59 No. 3, pp. 1088-1111.
- Owens, B.P., Johnson, M.D. and Mitchell, T.R. (2013), "Expressed humility in organizations: implications for performance, teams, and leadership", *Organization Science*, Vol. 24 No. 5, pp. 1517-1538.
- Podgórska, M. and Pichlak, M. (2019), "Analysis of project managers' leadership competencies: project success relation: what are the competencies of polish project leaders?", *International Journal of Managing Projects in Business*, Vol. 12 No. 4.
- Posner, B.Z. and Kouzes, J.M. (2023), *The Leadership Challenge Workbook*, John Wiley and Sons.
- Preacher, K.J. and Hayes, A.F. (2008), "Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models", *Behavior Research Methods*, Vol. 40 No. 3, pp. 879-891.
- Preacher, K.J., Rucker, D.D. and Hayes, A.F. (2007), "Addressing moderated mediation hypotheses: theory, methods, and prescriptions", *Multivariate Behavioral Research*, Vol. 42 No. 1, pp. 185-227.
- Purwanto, A., Bernarto, I., Asbari, M., Wijayanti, L.M. and Hyun, C.C. (2020), "Effect of transformational and transactional leadership style on public health Centre performance", *Journal of Research in Business, Economics, and Education*, Vol. 2 No. 1.
- Raza, S.A., Shah, N. and Ali, M. (2018), "Acceptance of mobile banking in Islamic banks: evidence from modified UTAUT model", *Journal of Islamic Marketing*, Vol. 10 No. 1.
- Richardson, J. and West, M.A. (2010), "Engaged work teams", *Handbook of Employee Engagement*, Edward Elgar Publishing.
- Rigolizzo, M., Zhu, Z. and Harvey, J.-F. (2022), "Leader humility, leader authenticity and informal learning: how humble team leaders model everyday workplace learning", *Journal of Workplace Learning*, Vol. 34 No. 8.
- Rugulies, R., Martin, M.H., Garde, A.H., Persson, R. and Albertsen, K. (2012), "Deadlines at work and sleep quality. Cross-sectional and longitudinal findings among Danish knowledge workers", *American Journal of Industrial Medicine*, Vol. 55 No. 3, pp. 260-269.

-
-
- Sapta, I., Muafi, M. and Setini, N.M. (2021), "The role of technology, organizational culture, and job satisfaction in improving employee performance during the covid-19 pandemic", *The Journal of Asian Finance, Economics and Business*, Vol. 8 No. 1, pp. 495-505.
- Sarstedt, M., Hair, J.F., Ringle, C.M., Thiele, K.O. and Gudergan, S.P. (2016), "Estimation issues with PLS and CBSEM: where the bias lies!", *Journal of Business Research*, Vol. 69 No. 10, pp. 3998-4010.
- Schaufeli, W.B. and Bakker, A.B. (2004), "Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study", *Journal of Organizational Behavior*, Vol. 25 No. 3, pp. 293-315.
- Schaufeli, W. and Salanova, M. (2007), "Work engagement", *Managing Social and Ethical Issues in Organizations*, Vol. 135, p. 177.
- Schaufeli, W.B., Bakker, A.B. and Salanova, M. (2006), "The measurement of work engagement with a short questionnaire: a cross-national study", *Educational and Psychological Measurement*, Vol. 66 No. 4, pp. 701-716.
- Schaufeli, W.B., Shimazu, A., Hakonen, J., Salanova, M. and De Witte, H. (2019), "An ultra-short measure for work engagement: the UWES-3 validation across five countries", *European Journal of Psychological Assessment*, Vol. 35 No. 4, p. 577.
- Schein, E.H. (2010), *Organizational Culture and Leadership*, John Wiley and Sons, Vol. 2.
- Schein, E.H. and Schein, P.A. (2018), *Humble Leadership: The Power of Relationships, Openness, and Trust*, Berrett-Koehler Publishers.
- Sedgwick, P. (2015), "Multistage sampling", *Bmj*, p. 351.
- Serdar, C.C., Cihan, M., Yücel, D. and Serdar, M.A. (2021), "Sample size, power and effect size revisited: simplified and practical approaches in pre-clinical, clinical and laboratory studies", *Biochemia Medica*, Vol. 31 No. 1, pp. 27-53.
- Serrador, P. and Turner, R. (2015), "The relationship between project success and project efficiency", *Project Management Journal*, Vol. 46 No. 1, pp. 30-39.
- Shaukat, M.B., Latif, K.F., Sajjad, A. and Eweje, G. (2021), "Revisiting the relationship between sustainable project management and project success: the moderating role of stakeholder engagement and team building", *Sustainable Development*, Vol. 30 No. 1.
- Sheikh, A.M. (2022), "Leader humility and team effectiveness: a moderated mediation model of leader-member exchange and employee satisfaction", *Evidence-Based HRM: a Global Forum for Empirical Scholarship*, Vol. 10 No. 4.
- Shenhar, A.J. and Dvir, D. (2007), *Reinventing Project Management: The Diamond Approach to Successful Growth and Innovation*, Harvard Business Review Press.
- Shenhar, A.J., Dvir, D., Levy, O. and Maltz, A.C. (2001), "Project success: a multidimensional strategic concept", *Long Range Planning*, Vol. 34 No. 6, pp. 699-725.
- Shokri-Ghasabeh, M. and Kavoussi-Chabok, K. (2009), Generic project success and project management success criteria and factors: Literature review and survey.
- Snyder, C.R. and Lopez, S.J. (2001), *Handbook of Positive Psychology*, Oxford university press.
- Song, J., Wang, K. and He, C. (2022), "The influence of organizational identification on the curvilinear relationship between leader humility and follower unethical pro-organizational behavior", *Journal of Management and Organization*, pp. 1-17.
- Specchia, M.L., Cozzolino, M.R., Carini, E., Di Pilla, A., Galletti, C., Ricciardi, W. and Damiani, G. (2021), "Leadership styles and nurses' job satisfaction. Results of a systematic review", *International Journal of Environmental Research and Public Health*, Vol. 18 No. 4, p. 1552.
- Susilowati, M., Kurniawan, Y., Prasetya, H., Beatrix, R., Dewa, W. and Ahsan, M. (2021), "How to manage scope, time and cost of project management plan to develop manufacture information system", *IOP Conference Series: Materials Science and Engineering*, Vol. 1098 No. 6.

-
- Tan, L. and Photchanachan, S. (2021), "Research on the impact of humble leadership on employee engagement in the construction industry of Liaoning province", *China. Nimitmai Review Journal*, Vol. 4 No. 2, pp. 69-87.
- Tangney, J.P. (2000), "Humility: theoretical perspectives, empirical findings and directions for future research", *Journal of Social and Clinical Psychology*, Vol. 19 No. 1, p. 70.
- Torrente, P., Salanova, M., Llorens, S. and Schaufeli, W.B. (2012), "Teams make it work: how team work engagement mediates between social resources and performance in teams", *Psicothema*, Vol. 24 No. 1, pp. 106-112.
- Triguero-Sánchez, R., Peña-Vinces, J. and Guillen, J. (2021), "Hierarchical distance and employees' commitment as conditioning of team-based work in the Spanish public sector", *Scandinavian Journal of Psychology*, Vol. 62 No. 4, pp. 537-551.
- Tsui, A.S., Wang, H. and Xin, K.R. (2006), "Organizational culture in China: an analysis of culture dimensions and culture types", *Management and Organization Review*, Vol. 2 No. 3, pp. 345-376.
- Ul-Musawir, A., Serra, C.E.M., Zwikael, O. and Ali, I. (2017), "Project governance, benefit management, and project success: towards a framework for supporting organizational strategy implementation", *International Journal of Project Management*, Vol. 35 No. 8, pp. 1658-1672.
- Vroom, V.H. (2000), "Leadership and the decision-making process", *Organizational Dynamics*, Vol. 28 No. 4, pp. 82-94.
- Wang, H.-J., Demerouti, E. and Le Blanc, P. (2017), "Transformational leadership, adaptability, and job crafting: the moderating role of organizational identification", *Journal of Vocational Behavior*, Vol. 100, pp. 185-195.
- Wang, X., Liu, Z., Wen, X. and Xiao, Q. (2022), "An implicit leadership theory lens on leader humility and employee outcomes: examining individual and organizational contingencies", *Tourism Management*, Vol. 89, p. 104448.
- Wen, B., Guo, S., Hu, Q. and Wan, J. (2022), "Ruling with a velvet glove: the catalyzing role of humble leadership in transforming employees' empowerment role identity into proactivity", *Chinese Public Administration Review*, Vol. 13 No. 3, p. 15396754221108441.
- Wright, T.A. and Hobfoll, S.E. (2004), "Commitment, psychological well-being and job performance: an examination of conservation of resources (COR) theory and job burnout", *Journal of Business and Management*, Vol. 9 No. 4.
- Xenikou, A. (2022), "Leadership and organizational culture", *Handbook of Research Methods for Organisational Culture*, Edward Elgar Publishing, pp. 23-38.
- Yang, K., Zhou, L., Wang, Z., Lin, C. and Luo, Z. (2019), "Humble leadership and innovative behaviour among Chinese nurses: the mediating role of work engagement", *Journal of Nursing Management*, Vol. 27 No. 8, pp. 1801-1808.
- Yu, M., Vaagaasar, A.L., Müller, R., Wang, L. and Zhu, F. (2018), "Empowerment: the key to horizontal leadership in projects", *International Journal of Project Management*, Vol. 36 No. 7, pp. 992-1006.
- Zhao, X., Lynch, J.G., Jr. and Chen, Q. (2010), "Reconsidering Baron and Kenny: myths and truths about mediation analysis", *Journal of Consumer Research*, Vol. 37 No. 2, pp. 197-206.
- Zheng, J., Wu, G., Xie, H. and Li, H. (2019), "Leadership, organizational culture, and innovative behavior in construction projects: the perspective of behavior-value congruence", *International Journal of Managing Projects in Business*, Vol. 12 No. 4.
- Zhou, F. and Wu, Y.J. (2018), "How humble leadership fosters employee innovation behavior: a two-way perspective on the leader-employee interaction", *Leadership and Organization Development Journal*, Vol. 39 No. 3.
- Zhu, F., Wang, L., Yu, M., Müller, R. and Sun, X. (2019), "Transformational leadership and project team members' silence: the mediating role of feeling trusted", *International Journal of Managing Projects in Business*, Vol. 12 No. 4.

About the authors

Muhammad Waseem is a PhD candidate in the management sciences discipline at Bahria University, Islamabad, Pakistan. He has possessed a Project Management Professional certification since 2007 and is a member of the Project Management Institute. He also has more than 15 years of industry experience. By profession, he is now a lecturer in a university. Muhammad Waseem's areas of interest include project management, human resource management, management information system, leadership, motivation and strategic management. He has published seven case studies at "the case center" UK. Muhammad Waseem is the corresponding author and can be contacted at:

showgran@yahoo.com

Shahid Iqbal has received PhD from the University of Engineering and Technology, Taxila, Pakistan. He is currently working as an Associate professor at Bahria University, Islamabad, Pakistan. His area of interest includes Engineering Management, Project Management and Technology Management.

Khalid Khan has received PhD from the University of Waikato, Hamilton, New Zealand. He is currently working as an Assistant professor at the Federal Urdu University of Arts, Sciences and Technology, Islamabad, Pakistan. His area of interest includes human resource management, training and development, agile organizations, entrepreneurship. Dr Khalid khan is a professional trainer and has conducted many training sessions in national and multinational organizations.