



Project Success and Transformational Leadership: Evaluating the Mediating Impact of Subordinates' Innovative Work Behaviour and Knowledge Sharing Behaviour

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ABSTRACT

For the past twenty years, researchers have concentrated on project success. Concern over the elements that affect project success is on the rise. The study's specific goal was to ascertain how innovative work behaviours and knowledge-sharing behaviours of subordinates played a mediating role in the relationship between transformational leadership and project success. A post-positivist strategy is used in this cross-sectional analysis of theoretical models. Between January and June 2022, information was gathered through purposeful sampling from 60 small and medium-sized firms. The firms that were contacted range widely in size, industry, and speciality. This study distributed 550 questionnaires comprised of 4 scales to 120 organizations; 375 were returned, out of which 350 were valid. The findings demonstrate that transformative leadership is significantly associated with project success. In addition, knowledge sharing and innovative subordinate work behaviour considerably mediate this relationship. This study stressed that transformational leaders may encourage their people by maintaining team communication and cohesion regardless of the circumstances. In addition, education and training in soft skills enhance subordinates' knowledge sharing and innovative work behaviour, and their combination with transformational leadership is a more effective predictor of project success. Future research can use longitudinal analysis by examining other potential variables in different economies and communities. Through the lens of social exchange theory, the findings of this study make a novel addition by elucidating the limited understanding of the effect of transformational leadership on project success as mediated by knowledge sharing and innovative work behaviour.

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1. INTRODUCTION

Over the years, field researchers have focused primarily on project success (PS) (Urbański, Haque, & Oino, 2019; Saad, Zahid, & Muhammad, 2022). Researchers have been examining elements and characteristics that can aid in achieving the appropriate levels of project success. It is thought that project success is a crucial aspect of project management (PM) (Gemino, Horner Reich, & Serrador, 2021;

Shamim M. I., 2022). Despite the fact that standard execution criteria for many project types have been developed after years of research, only a small percentage of projects are successfully finished, leading many researchers to look into the factors influencing project success (Pacagnella, da Silva, Pacifico, de Arruda Ignacio, & da Silva, 2019; Ayat, Evans, & Behrangi, 2021). In 2020, KPMG's PM Survey reported that the PS rate was approximately 25% (Fareed, Su, & Awan, 2021). The Asian Development Bank conducted a survey that

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revealed Pakistan's project success rate is only 8%. (Yu, 2017). Project failure has been shown to be a tenacious battle for project-oriented organizations, and the success or failure of projects heavily depends on their leaders. Numerous project success criteria have been explored and researched. (Drouin, Müller, Sankaran, & Vaagaasar, 2018; Fareed et al., 2021; K. Khan & Gul, 2021).

According to project management literature, 80% of initiatives fail owing to ineffective leadership, but on the other hand, many organizations do not prioritize leadership as a key component (Musungwini & Mondo, 2019; Errida & Lotfi, 2021; Oh, Lee, & Zo, 2021). The majority of the project outcome variables do not specifically include the project manager's management style or level of professional competence as essential components of project success, despite the fact that these elements are crucial to the project's real success. The talents and traits of leadership are also important success determinants (Zuo, Zhao, Nguyen, Ma, & Gao, 2018; Alvarenga, Branco, Guedes, Soares, & Silva, 2020). The Standish Group surveyed the functions of project managers in various project management organizations of varying sizes. According to their research, just 25% of all projects had positive outcomes, while the remaining 75% encountered significant obstacles and problems, resulting in project failures, and all subsequent cases were the product of ineffective leadership (Varajão, Marques, & Trigo, 2022).

Over the past couple of decades, researchers have investigated a variety of leadership styles and their relative importance to the effectiveness of organizations and people. These leadership styles include transformational leadership (TL), transactional leadership, distributed leadership, and informal leadership within teams (Li, Castaño, & Li, 2018; Cho, Shin, Billing, & Bhagat, 2019a; Abbas & Ali, 2021). In functional organizational settings, transformational leadership has received the greatest attention of these leadership styles (Steinmann, Klug, & Maier, 2018; Passakonjaras & Hartijasti, 2020). It is considered a person-centered or people-oriented leadership style that transcends self-interest and demonstrates intellectual stimulation, idealized influence (charisma), inspirational motivation, and individualized consideration. These leaders develop and express their vision, put the team's needs ahead of their own, and challenge their followers' thinking (Aboramadan & Kundi, 2020; Jaroliya & Gyanchandani, 2022).

Additionally, transformational leadership can influence project success through knowledge sharing and innovation because it can empower subordinates to act in a goal-directed manner, which improves organizational performance (Al-Husseini, El Beltagi, & Moizer, 2021; Gui, Lei, & Le, 2021). Moreover, multiple meta-analyses demonstrate that these leadership styles are successful in boosting subordinates' satisfaction with the leader, commitment, job motivation, job performance, and inventiveness (Arasli, Arici, & Kole, 2020; Mulligan, Ramos, Martín, & Zornoza, 2021). This is based on social exchange theory, which is constructed on the premise that everyone has something to offer and that in order to acquire the devotion of subordinates, a leader must demonstrate respect, appreciation, and trust (Kellerl & Dansereaul, 1995; Cropanzano & Mitchell, 2005; Ohemeng, Obuobisa Darko, & Amoako-Asiedu, 2019). Moreover, it highlights team member leadership growth, ethical conduct,

intrinsic motivation of followers, and a unified sense of vision (X. Zhang et al., 2018). As a result, it is recognized as having a significant impact on knowledge management and innovation systems in a diverse range of industries (Tan, Zawawi, & Aziz, 2016). However, there is a dearth of evidence demonstrating the relationship between innovative project management, knowledge sharing, transformational leadership and project success, particularly in developing nations like Pakistan where ineffective leadership is one of the primary causes of project failure (Ahmed, 2015; Afsar, Masood, & Umrani, 2019; Rafique et al., 2022).

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Transformational Leadership and Project Success

Bass (1985) proposed the theory of transformational leadership in which the leader is able to motivate subordinates to exceed expectations in their performance (Bass, 1985; Barbuti, 1997; Tesfaw, 2014). Transformational leaders are those who prioritize the higher-order intrinsic needs of their followers and provide an overarching purpose (Lange, Bormann, & Rowold, 2018; Hannah, Perez, Lester, & Quick, 2020). Scholars have already investigated the applicability and efficacy of transformational leadership in a variety of circumstances (Afsar et al., 2019; Khan, Ismail, Hussain, & Alghazali, 2020). In addition, a range of meta-analyses also examined the effects of transformational leadership on employee outcomes in functional organizations, including work performance, organizational commitment, and job satisfaction (Chen, Ning, Yang, Feng, & Yang, 2018). According to Kissi et al. (2013), the success of a project can be significantly impacted by the transformational leadership of the project managers, who also effectively reflect the context of the project (Zaman, Nadeem, & Nawaz, 2020), enhancing team collaboration, improving employee performance, and persuading team members to execute desired tasks all depend heavily on transformational leadership and its numerous elements. Consequently, project managers who use TL have higher chances of project success (Fareed et al., 2021). Recent studies have also revealed a strong and preferable relationship between TL and PS (Zuo et al., 2018; Cho, Shin, Billing, & Bhagat, 2019b; Jaroliya & Gyanchandani, 2022).

In this regard, self-determination theory (SDT) posits that intrinsic or autonomous motivation is founded on three human needs: autonomy, competence, and relatedness. The development of these requirements is facilitated by transformational leadership, which has been connected to autonomous motivation (Autin, Herdt, Garcia, & Ezema, 2022). They also motivate followers through group identification, and they alter the extent to which followers perceive their work as more aligned with their personal beliefs (Iorinkova & Perry, 2019). Therefore, we anticipate that transformational project leaders will be able to define a future vision and motivate their subordinates to attain project objectives. These leaders are capable of fostering team collaboration and communication and ensuring the success of a project. Consequently, we suggest the following:

H1. In Pakistan, transformational leadership has a positive impact on project success.

2.2 Transformational leadership, Subordinates Knowledge sharing Behaviour and Project Success

One of the most important sets of guidelines and practices for businesses to adhere to in order to succeed in the global economy is knowledge management. Sharing knowledge is supposedly essential for organizations to be competitive (Ganguly, Talukdar, & Chatterjee, 2019). Bollinger and Smith (2001) claim that the organizational culture encourages cooperation and knowledge sharing (Febita & Desiana, 2021). Research has identified a number of factors that influence team knowledge sharing, including perceived team identity and goal commitment, employee inventiveness, personality attributes, team communication style, information sharing attitude, and diversification in the team members' areas of expertise (Jo & Joo, 2011; Tsai, Chen, & Chien, 2012; Muzafary et al., 2021). In addition to other factors, leadership has been shown to have a very beneficial impact on a team's knowledge-sharing (Le & Lei, 2019). Therefore, leaders must enthusiastically encourage information sharing in order to foster it among team members (Wang, Liu, & Zhu, 2018).

A key responsibility of transformational leaders is to produce meaningfulness-related results, such as stimulating followers' brains to go beyond their personal self-interests for a higher group goal. This is in addition to developing a strong leader-follower relationship (Dwivedi, Chaturvedi, & Vashist, 2020). In other words, they help readers understand a work's significance by imparting knowledge (Dwivedi et al., 2020). Employees' sense of responsibility and knowledge sharing rise when they are encouraged to pursue new opportunities and develop a shared vision, which eventually results in project success (Al-Husseini et al., 2021). The right conditions can be set by the leaders to assist their followers in learning, developing, and obtaining the necessary skills for their jobs, allowing them to contribute their knowledge as capital to the business and accelerate the process of learning and success (Coun, Peters, & Blomme, 2019).

Additionally, the organization can absorb, share, and use this knowledge thanks to strong leadership's irresistible charisma as well as the knowledge pool's inherent sufficiency (Dwivedi et al., 2020). Using knowledge that is derived from fundamental and system-based knowledge (explicit and tacit), knowledge obtained from the outside (absorptive capacity), or knowledge that is lacking in the organization (within the team) that led to project success, a transformational leader should lead both an individual and the entire organization in accordance with this perspective. The following hypotheses are thus proposed by this research:

H2: A subordinate's knowledge sharing behaviour mediates the influence between transformational leadership and project success.

2.3 Transformational leadership, Subordinates Innovative Work Behaviour and Project Success

Eisenbeiß and Boerner (2013) contend that innovation is pushed forward by transformative leadership (Al-Husseini et al., 2021). Organizations must be committed to fostering innovation and must promote member communication. In order to implement change to enhance an individual's or an organization's performance, innovation work behaviour (IWB)

entails the discovery of new opportunities and the generation of new ideas (related to creativity), as well as the application of recently acquired knowledge or enhancement of the process (implementation-oriented) (Ioannis K. Kratsiotis, 2019). Therefore, transformational leaders can motivate their followers to adhere to the organization's mission in order to foster innovation (Pradhan & Jena, 2019; Alrowwad, Abualoush, & Masa'deh, 2020).

The ability to develop employee trust and respect, demonstrate belief in the organization's vision, and emphasize the importance of a common understanding of the organization's objective are all characteristics of transformational leaders with idealized influence (Ivana Bojović & Sandra Stojadinović Jovanović, 2020; K. Khan & Gul, 2021). These traits motivate subordinates to exert extra effort and exercise original thought. Leaders may motivate their employees to collaborate successfully and achieve the required goals by using inspiring motivation. They create the vision, win enthusiastic backing for it, and nurture an atmosphere that encourages innovation (Bakker, Hetland, Kjellefold Olsen, & Espevik, 2022). Transformational leaders stimulate their followers' imagination and creativity by challenging their minds, which causes them to re-evaluate previous assumptions and antiquated methods (Chauhan, Howe, & Soderberg, 2021). When people are encouraged to rethink and feel that their ideas are valued, they are more likely to come up with innovative ideas (Kwon & Kim, 2020).

The innovation theory emphasizes repeatedly that this is a notion that goes far beyond originality and creativity and entails putting new ideas into practice (Rampa & Agogué, 2021). As a nutshell, IWB encompasses not only the development of ideas but also the behaviours required to implement and enhance those ideas, enhancing both individual and organizational performance (Islam, Zahra, Rehman, & Jamil, 2022). It is viewed as a multi-step process requiring varied endeavours and distinct individual behaviours at each stage. Organizations must be able to innovate and sustainably enhance their outcomes, products, and work utilities in order to remain competitive (Abualoush, Obeidat, Abusweilema, & Khasawneh, 2022). If a continual stream of inventions is to continue, it is necessary for independent artisans to be prepared and ready to effect change (Tsegaye, Su, & Malik, 2020). Certainly, they have not been studied within the context of developing nations such as Pakistan. Consequently, this study proposes the following hypotheses:

H3: A subordinate's innovative work behaviour mediates the influence between transformational leadership and project success.

3. RESEARCH MODEL

Following a review of the pertinent literature, three hypotheses regarding variables were formed. Our research model is illustrated in Figure 1.

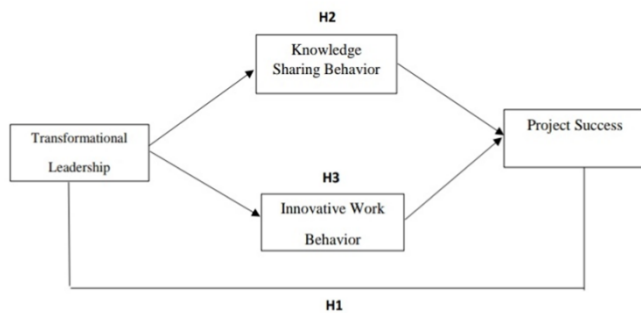


Figure 1. The conceptual framework of the study.

4. METHODOLOGY

4.1 Objective

1. To examine the association between transformational leadership and project success.
2. To examine the mediating role of subordinates' knowledge sharing behaviour in the association between transformational leadership and project success.
3. To examine the mediating role of subordinates' innovative work behaviour in the association between transformational leadership and project success.

4.2 Research Design

This investigation of theoretical models employs a post-positivist philosophical objective. A post-positivist adopts a deterministic worldview and seeks to identify and evaluate the causes that influence outcomes (Rogelberg, 2013). According to Teddlie and Tashakkori (2009, p. 87), "Post-positivists advocate conducting experimental or survey research that is quantitatively focused to evaluate and statistically explain correlations between variables" (Shan, 2022). In order to acquire quantitative data, a cross-sectional survey methodology was adopted.

4.3 Sample & Procedure

This study used a technique of purposive sampling to collect data from 60 small and medium-sized businesses between January and June of 2022. The organizations contacted are diverse in terms of industry and size, and they operate in distinct fields. The participants in this study play important roles therefore, we approach those who frequently participate in the process of exchanging knowledge and strategic information inside the business, which helps to assure the quality of the data acquired. This indicates that they are well aware of the company's current status and primary plan, as well as being fully conversant with the many components of the research model, such as innovation. We contacted the HR department representatives in person or via e-mail to explain the research objectives and solicit their assistance in distributing questionnaires and collecting data. 550 questionnaires were sent to the final sample of 120 organizations. Of these, 375 were returned for formal data collection, and 350 of them were valid (a validity rate of 61.6%).

4.4 Inclusion Criteria

Participants in our study have to be heads of departments or important personnel from the main departments or divisions of administration, accounting, operation, marketing, and research and development to ensure that they have multiple and comprehensive understandings of their organization's operation. The questionnaire has three filter questions that must be answered before moving on to the whole survey. A respondent was required to have participated in at least one team project over the previous six months. Second, we inquired about their most recent team endeavour. Thirdly, we requested the last three digits of their national insurance number and their phone number in order to match them.

4.5 Exclusion Criteria

Exclusion criteria for valid questionnaires were established in order to process survey data cleaning by locating and removing responses from respondents who either failed to match our target criteria or did not attentively complete the survey form, such as: respondents who only complete a portion of our questionnaire; subjects who give conflicting responses or/and select the same answer choice repeatedly; and respondents who provide nonsensical feedback on demographics.

4.6 Demographics

In terms of various organizations and respondent characteristics, the sample's demographics are highly diverse. Respondents were asked about their genders, ages, levels of education, and organizational experience. Even though sample demographic data had no bearing on the conduct of this study, reporting it could provide a complete picture of how men and women participate in organization activities in developing countries compared to developed nations. 81.1% of the sample consisted of male respondents. Table 1 provides a breakdown of the research sample's characteristics.

4.7 Instruments

Transformational leadership (Independent variable).

In leadership research, the Multi-Factor Leadership Questionnaire (MLQ) has become recognized as a reliable tool for assessing leadership styles. The 36-item MLQ measures transactional, transformational, and laissez-faire leadership styles (Elizabeth, 2013; Tapp, 2021; Hashim, Che Omar, Hamzah, & Umar, 2018). Multiple studies advocate for a redesigned version of the MLQ to improve the internal consistency and validity of MLQ measurements (Yasin, 2019; Negri, Bassi, & Delle Fave, 2020; Al-Bashayreh, Almajali, Altamimi, Masa'deh, & Al-Okaily, 2022). As a result, we adapted the Arif and Mehmood (2011) transformational leadership measure, which consists of 13 items with higher Cronbach's alphas than the original scale (Bass & Riggio, 2005; Mehmood & Arif, 2011). The extremes of the five-point Likert-type scales were 1 ("not at all") and 5 ("extremely") ("frequently, if not always").

Project Success (Dependent Variable)

The definition of project success is up for controversy, and there is no well-established method for quantifying it in the project management literature (F. Zhang, Zuo, & Zillante, 2013; Qureshi & Kang, 2015; Ekrot, Kock, & Gemünden, 2016). For instance, some researchers (Seyis, 2019; Fareed et al., 2021;

Kabore, Sane, & Abo, 2021; Zaman, Damij, Khaliq, Nawaz, & Pradana, 2022) use a combination of project success criterion metrics, while others (Diallo & Thuillier, 2004; Ika, Diallo, & Thuillier, 2010; Nanthagopan, Williams, & Thompson, 2019) utilize disaggregated measures. This study uses a composite measure of a multidimensional project success construct based on the impression of particular criteria. The Turner and Muller 10-item project success scale was used to evaluate the project's performance. "Clients are satisfied with project results," is an example item. Cronbach's alpha for the scale was 0.94. The responses were rated on a Likert scale of 1 to 5, ranging from strongly disagree (1) to strongly agree (5).

Innovative work behaviour (Mediating Variable). Using a nine-item scale developed by Janssen in 2000, innovative work behaviour is measured. The three elements of this scale are concept realization, idea promotion, and idea generation. The items were evaluated on a five-point Likert scale, ranging from always (1) to never (5), and each dimension has three distinct items, one of which is "Creating fresh ideas for challenging problems. Overall, Janssen (2000) has stated a 0.93 alpha reliability for the innovative work behaviour scale (5).

Subordinate's knowledge sharing behaviour (Mediating Variable). Lee (2001) developed a seven-item knowledge sharing scale to measure the conduct of subordinates in terms of knowledge sharing. Examples are "we and our service provider communicate business plans and reports" and "we and our service provider share expertise obtained through job experience." Respondents assess these items on a Likert-type scale ranging from 1 (not at all) to 5 (very often) (strongly agree).

4.8 Data Analysis

Participants in our study have to be heads of departments or important personnel from the main departments or divisions of administration, accounting, operation, marketing, and research and development to ensure that they have multiple and comprehensive understandings of their organization's operation. The questionnaire has three filter questions that must be answered before moving on to the whole survey. A respondent was required to have participated in at least one team project over the previous six months. Second, we inquired about their most recent team endeavour. Thirdly, we requested the last three digits of their national insurance number and their phone number in order to match them.

5. RESULTS

In the current study, we looked at the relationships between transformational leadership, project success, subordinate knowledge sharing, and innovative work behaviour. The findings of the study were generated from the data gathered after a survey was conducted across Pakistan's public and private sectors. The tables below show empirical evidence from this study that TL is strongly and positively correlated with PS and *that knowledge sharing and innovative work practices influence this correlation.*

Table 1 Profiling of legitimate respondents

Characteristic	Frequency	Percentage
Gender		
Male	302	81.1
Female	48	18.9
Age		
18-25	249	60.8
26-33	89	34.3
34-41	11	3.9
42-49	1	1
Education		
Diploma	6	2.6
Bachelor's degree	188	57.4
Master's degree	97	37
Doctoral degree	1	0.4
Other	6	2.6
Experience		
Less than 5 years	291	77.4
5-10 years	42	16.2
11-15 years	12	4.4
Above 15 years	5	2

Table 2 Descriptive statistics and reliability values of Transformational leadership, Knowledge sharing behaviour, Innovative work behaviour and Project success (N=350)

Serial No	Variable	M	SD	Cronbach's Alpha
1	Transformational leadership	4.01	0.73	0.944
2	Subordinate's KSB	4.13	0.64	0.888
3	Subordinate's IWB	3.99	0.71	0.822
4	Project Success	4.13	0.69	0.877

Note: KSB= Knowledge sharing behavior; IWB= Innovative work behavior; M=Mean; SD= Standard deviation

The descriptive analysis will be obtained by calculating the mean, standard deviation, and variance. This will assist in determining the central tendencies of variable values and the measurement of dispersion via standard error values. According to descriptive data analysis, the standard deviation of all variables is less than 1. The study's overall mean falls between 3.99 and 4.13, while the standard deviation ranges between 0.64 and 0.73. The reliability of instruments was measured by Cronbach's alpha and calculated individually for all variables. Our independent variable, transformational leadership, has an Alpha value of 0.944 and consists of 12 items. Subordinate's KSB is a mediating variable with an alpha value of 0.888, which includes seven ^{numbers} of items. IWB is also a mediating variable and has an Alpha value of 0.822, which includes five numbers of variables. Our dependent variable, project performance, has an alpha value of 0.877 and consists of five items. As presented in Table 2, the reliabilities of all variables are good and consistent with studies on the subject. Churchill (1979) endorses the use of Cronbach's alpha to evaluate the scale's reliability. Many researchers preferred a reliability range of 0.5 to 0.6. (Gliem & Gliem, 2003; Helms, Henze, Sass, & Mifsud, 2006; Hallgren, 2012). However,

Anderson & Gerbing (1998) advised that the ratio should be at least 0.7. (Gefen, Rigdon, & Straub, 2011; Teng, Ma, Pahlevansharif, & Turner, 2019; Fareed et al., 2021). This study's reliability evaluation falls within the range of 0.7 and above. Therefore, all variables fall within the acceptable range.

Table 3 Correlation among Transformational leadership, Knowledge sharing behaviour, Innovative work behaviour and Project success (N=350).

Variable	TL	KSB	IWB	PS
TL	-			
KSB	0.663**	-		
IWB	0.646**	0.730**	-	
PS	0.482**	0.738**	0.619**	-

Note: TL: Transformational leadership; KSB: Knowledge sharing behaviour; IWB: Innovative work behaviour; PS: Project success

As listed in Table 3, the relationship between TL and KSB is significant with $r = 0.663$; TL also has a significant positive relationship with IWB and PS. TL's correlation value with IWB is $r = 0.646$, whereas its correlation value with PP is $r = 0.482$. The table also demonstrates that KSB and IWB have a positive association with a value of $r = 0.730$, while KSB also showed a strong correlation ($r = 0.738$) with PP. The results also indicated a positive significant IWB correlation value with a PS of $r = 0.619$. All correlation values were statistically significant at the 0.01 level. PP has a substantial link with all others variables in the research framework. Based on our correlation research, we can now conclude that the anticipated relationship between the variables in our conceptual framework is statistically significant.

Table 4 Bivariate regression models were run to explore the mediating role of Transformational leadership, Knowledge sharing behaviour, Innovative work behaviour and Project success in working employees (N=350)

Model	Relationship	ΔR^2	β	ΔF	t-value	p-value
1	TL \longrightarrow PS	0.233	0.482	77.86	8.82	0.000
2	TL \longrightarrow KSB	0.439	0.663	201.17	14.18	0.000
3	KSB \longrightarrow PS	0.545	0.738	307.74	17.54	0.000
4	TL, KSB \longrightarrow PS	0.541	0.530	153.32	5.07	0.001
5	TL \longrightarrow IWB	0.418	0.646	184.29	13.57	0.000
6	IWB \longrightarrow PS	0.383	0.619	159.29	12.62	0.000
7	TL, IWB \longrightarrow PS	0.394	0.690	83.33	8.47	0.000

PS

Note: TL=Transformational leadership; KSB=Knowledge sharing behaviour; IWB=Innovative work behaviour; PS=Project success

Table 4 demonstrates that the results for all models are statistically significant and provide substantial evidence to support our hypotheses. Transformational leadership was also found to be positively significant in predicting project success ($\beta = .48$, $p=.000$), knowledge sharing behaviour ($\beta = .66$, $p=.000$), and innovative work behaviour ($\beta = .41$, $p=.000$). Knowledge sharing behaviour also positively predicted project success ($\beta = .73$, $p=.000$), confirming the mediating role of transformational leadership and knowledge sharing behaviour on project success ($\beta = .53$, $p=.000$). Similarly, innovative work behaviour was positively significant in predicting project success ($\beta = .61$, $p=.000$) and positively significant in mediating the influence of transformational leadership on project success ($\beta = .69$, $p=.000$).

6. DISCUSSIONS

The goal of the study was to evaluate empirically the relationship between transformational leadership and project performance via the moderating effect of subordinate information sharing and innovative work behaviour. As expected, we discovered a correlation between transformative leadership and the effectiveness of projects led by project managers. The outcome illustrates that the leadership style of the project manager is vital to the project's success. A transformational project manager inspires and motivates the team to achieve a comprehensive definition of project success that stresses efficiency, effectiveness, and stakeholder satisfaction. These results are in line with the body of research showing that project managers' actions are crucial to enhancing project success (Mehmood et al., 2011; Fareed et al., 2021; Kabore, Sane, & Abo, 2021). As a result, transformational leaders inspire people to go above and beyond. They also encourage positive working connections (Sohmen, 2013), such as project managers, emphasize the development of self-leadership skills or self-management among followers and promote team cohesion and mutual understanding. They also make it easier for ideas and analytical viewpoints to flow freely throughout project teams (Cho et al., 2019b; Majdalani, 2022). As a result, team members become more motivated to work hard and consistently to complete projects (Canils, Chiocchio, & Van Loon, 2019). Consequently, the literature supports our initial hypothesis.

Additionally, we found that the relationship between transformational leadership and project success is mediated by subordinate knowledge sharing and innovative work behaviour (Hypotheses 2 and 3). Furthermore, our research shows that a highly empowered and devoted project team is produced when interventions like project goal-setting, interpersonal connections, role clarity, and problem-solving are combined. Through these traditional knowledge-sharing and innovative work behaviour practices, organizations and

project managers are more likely to improve team members' understanding of the project goals, interpersonal communication, roles and responsibilities, and problem-solving skills, which would in turn influence project success, which was also backed by earlier research (Liu & Li, 2018; X. Zhang et al., 2018; Abbas & Ali, 2021; Alrowwad, Abualoush, & Masa'deh, 2020b). Likewise, leadership is essential for boosting the creation and dissemination of knowledge in the pursuit of economic competitiveness and success (Chege & Wang, 2020). Transformational leaders inspire people by encouraging them to try new things and examine challenges from several perspectives, thus supporting the development of exploratory thinking and creative ideas (Ioannis K. Kratsiotis, 2019; Islam et al., 2022).

Knowledge in this regard is also one of the most essential resources for initiating projects, learning and developing new approaches and situations, resolving issues, and defining the organization's core competences (Grant & Baden-Fuller, 2018; Islam et al., 2022). According to Radaelli, Lettieri, Mura, and Spiller (2014), employees who are passionate about sharing their knowledge are more engaged in generating, promoting, and implementing innovations, fostering their innovative work behaviour (Radaelli, Lettieri, Mura, & Spiller, 2014). This study demonstrates that knowledge sharing is associated with quickly advancing technologies to improve employee absorption and workplace performance. The greater the degree of knowledge sharing, the simpler and quicker it is to learn relevant knowledge, generate new ideas, maximize resource usage, and develop innovative work behaviours which is consistent with previous studies, like how the enthusiasm of employees to share their expertise enabled the firm to encourage creative and new work methods (Shahab, Sobari, & Udin, 2018; Zubaidah, Haryono, & Udin, 2021).

6.1 Theoretical Implications

The study's main goals were to examine how TL and PS were moderated by KSB and IWB in Pakistan's public and private sectors. The findings indicated that the dependent variable (PS), mediator factors (KSB, IWB), and independent variables (TL) all had a favourable relationship. Transformational leaders may inspire their employees and effectively complete any assignment (Fareed et al., 2021). And can maintain the group's unity in any situation and enhance team cohesiveness and communication, which will increase the project's success (Kabore et al., 2021). The literature on public administration has also accepted that transformational leaders are more successful and effective (Van Wart, 2015; Van der Voet, 2016; Jensen, Moynihan, & Salomonsen, 2018; Nam & Park, 2019). Our study confirmed the importance of innovation and knowledge sharing in the workplace, but a combination of transformational leadership is a better predictor of project success than either factor by itself. Several research studies from the West provide evidence for our conclusions (Hammond, Neff, Farr, Schwall, & Zhao, 2011; Muhammed & Zaim, 2020; Lim, Lee, Foo, Ooi, & Wei-Han Tan, 2022). Furthermore, social exchange theory makes reference to how any social form of exchange, such as tangible, intangible, as well as material or non-material goods shared between employer and employee, tends to affect project performance (Cropanzano & Mitchell, 2005; X. Zhang

et al., 2018; Nam & Park, 2019; Jaroliya & Gyanchandani, 2022).

6.2 Practical Implications

We anticipate that this research will attract the attention of the public sector's higher management, which should prioritize training and implementation in order to improve the performance of project managers and the outcomes of projects. According to our research, project managers that use a transformational leadership style are more successful in both the public and private sectors. Project managers that are transformational are able to inspire their team as a whole and build credibility among peers. They are able to assemble a team that is eager and motivated to take on any assignment, no matter how challenging. Training in transformational leadership should be made available in order to increase the efficiency and effectiveness of the current public and private employees working on various initiatives. The study's findings emphasized the value of soft skills education and training for project managers and showed that these skills can be improved through professional training or workshops. This will enable project managers to share knowledge more effectively and engage in innovative work practices, which will ultimately help projects succeed. This study increases the cultural generalizability of the TL, PS, KSB, and IWB connections.

6.3 Limitations and future research

The study does have certain restrictions. First of all, the self-reported survey used to examine the variables in this study could skew the results. Second, a cross-sectional research design was used in this study. In order to give new insights to researchers and practitioners, this study recommends that future research studies use longitudinal analysis by examining potential mediator variables like intellectual capital, intrinsic motivation, organizational climate, organizational culture, and work engagement. Solely facilitating knowledge sharing with a view to boosting product and process innovation was the only aspect of transformational leadership that was the subject of the study. Typically, transactional leadership is studied in conjunction with this approach (Bass, 1985). Thus, to ascertain which type of leadership has a greater impact on the development of new products and processes, a future study might examine the effects of both transformational and transactional leadership and could study other factors. Additionally, because this study only applied to one developing nation, its conclusions might not generalize to other emerging nations with diverse economies and communities. In the future, the question could be expanded to include other countries with institutions, cultures, and situations that are similar to Pakistan.

7. CONCLUSION

Through the perspective of social exchange theory, the study's findings shed new light on the incomplete understanding of the impact of transformational leadership on project success as it is mediated through knowledge sharing and creative work practices. According to this study, a transformational leader encourages employee connection and a willingness to share information in order to encourage

creative and collaborative work behaviour. By putting emphasis on the endeavours of emerging countries like Pakistan, this research will add to the corpus of knowledge. In addition, project managers may use a transformational leadership style to boost their effectiveness and performance. These skills are necessary for project managers to function well in a complicated project environment. Finally, our study supports the idea that TL, KSB, and IWB skill training should be included in project managers' training programs.

REFERENCES

- Aboramadan, M., & Kundi, Y. M. (2020). Does Transformational Leadership Better Predict Work-Related Outcomes Than Transactional Leadership in the NPO Context? Evidence from Italy. *Voluntas*, 31(6), 1254–1267. <https://doi.org/10.1007/s11266-020-00278-7>
- Abualoush, S., Obeidat, A. M., Abusweilema, M. A., & Khasawneh, M. M. (2022). How does entrepreneurial leadership promote innovative work behaviour? through mediating role of knowledge sharing and moderating role of person-job fit. *International Journal of Innovation Management*, 26(1). <https://doi.org/10.1142/S1363919622500116>
- Afsar, B., Masood, M., & Umrani, W. A. (2019). The role of job crafting and knowledge sharing on the effect of transformational leadership on innovative work behavior. *Personnel Review*, 48(5), 1186–1208. <https://doi.org/10.1108/PR-04-2018-0133>
- Ahmed, R. (2015). the Moderating Role of Top Management Support on the Relationship Between Project Manager'S Leadership Competencies and Project Success. *Econstor.Eu*, 9(2), 1–216. Retrieved from <https://www.econstor.eu/handle/10419/188211>
- Al-Bashayreh, M., Almajali, D., Altamimi, A., Masa'deh, R., & Al-Okaily, M. (2022). An Empirical Investigation of Reasons Influencing Student Acceptance and Rejection of Mobile Learning Apps Usage. *Sustainability (Switzerland)*, 14(7). <https://doi.org/10.3390/su14074325>
- Al-Husseini, S., El Beltagi, I., & Moizer, J. (2021). Transformational leadership and innovation: the mediating role of knowledge sharing amongst higher education faculty. *International Journal of Leadership in Education*, 24(5), 670–693. <https://doi.org/10.1080/13603124.2019.1588381>
- Alrowwad, A., Abualoush, S. H., & Masa'deh, R. (2020). Innovation and intellectual capital as intermediary variables among transformational leadership, transactional leadership, and organizational performance. *Journal of Management Development*, 39(2), 196–222. <https://doi.org/10.1108/JMD-02-2019-0062>
- Alvarenga, J. C., Branco, R. R., Guedes, A. L. A., Soares, C. A. P., & Silva, W. da S. (2020). The project manager core competencies to project success. *International Journal of Managing Projects in Business*, 13(2), 277–292. <https://doi.org/10.1108/IJMPB-12-2018-0274>
- Arasli, H., Arici, H. E., & Kole, E. (2020). Constructive leadership and employee innovative behaviors: A serial mediation model. *Sustainability (Switzerland)*, 12(7). <https://doi.org/10.3390/su12072592>
- Autin, K. L., Herdt, M. E., Garcia, R. G., & Ezema, G. N. (2022). Basic Psychological Need Satisfaction, Autonomous Motivation, and Meaningful Work: A Self-Determination Theory Perspective. *Journal of Career Assessment*, 30(1), 78–93. <https://doi.org/10.1177/10690727211018647>
- Bakker, A. B., Hetland, J., Kjelleveid Olsen, O., & Espevik, R. (2022). Daily transformational leadership: A source of inspiration for follower performance? *European Management Journal*. <https://doi.org/10.1016/j.emj.2022.04.004>
- Barbuto, J. E. (1997). Taking the charisma out of transformational leadership. *Journal of Social Behavior and Personality*, 12(3), 689–697. Retrieved from https://www.academia.edu/download/78923736/MOL_501_Barbuto_on_Charmismatic.pdf
- Bass, B. M. (1985). Leadership: Good, better, best. *Organizational Dynamics*, 13(3), 26–40. [https://doi.org/10.1016/0090-2616\(85\)90028-2](https://doi.org/10.1016/0090-2616(85)90028-2)
- Bass, B. M., & Riggio, R. E. (2005). Transformational leadership: Second edition. *Transformational Leadership: Second Edition*, 1–282. <https://doi.org/10.4324/9781410617095/Transformational-Leadership-Bernard-Bass-Ronald-Riggio>
- Caniëls, M. C. J., Chiocchio, F., & van Loon, N. P. A. A. (2019). Collaboration in project teams: The role of mastery and performance climates. *International Journal of Project Management*, 37(1), 1–13. <https://doi.org/10.1016/j.ijproman.2018.09.006>
- Chauhan, R. S., Howe, D. C., & Soderberg, A. (2021). Reviewing and rebalancing the positive skew of emotions in transformational leadership. *Management Research Review*, Vol. 44, pp. 1085–1107. <https://doi.org/10.1108/MRR-08-2020-0496>
- Chege, S. M., & Wang, D. (2020). Information technology innovation and its impact on job creation by SMEs in developing countries: an analysis of the literature review. *Technology Analysis and Strategic Management*, 32(3), 256–271. <https://doi.org/10.1080/09537325.2019.1651263>
- Chen, Y., Ning, R., Yang, T., Feng, S., & Yang, C. (2018). Is transformational leadership always good for employee task performance? Examining curvilinear and moderated relationships. *Frontiers of Business Research in China*, 12(1). <https://doi.org/10.1186/s11782-018-0044-8>
- Cho, Y., Shin, M., Billing, T. K., & Bhagat, R. S. (2019a). Transformational leadership, transactional leadership, and affective organizational commitment: a closer look at their relationships in two distinct national contexts. *Asian Business and Management*, 18(3), 187–210. <https://doi.org/10.1057/s41291-019-00059-1>
- Cho, Y., Shin, M., Billing, T. K., & Bhagat, R. S. (2019b). Transformational leadership, transactional leadership, and affective organizational commitment: a closer look at their relationships in two distinct national contexts. *Asian Business and Management*, 18(3), 187–210. <https://doi.org/10.1057/s41291-019-00059-1>
- Coun, M. (M. J. H.), Peters, P. (C. P.), & Blomme, R. (R. J.). (2019). 'Let's share!' The mediating role of employees' self-determination in the relationship between transformational and shared leadership and perceived knowledge sharing among peers. *European Management Journal*, 37(4), 481–491. <https://doi.org/10.1016/j.emj.2018.12.001>
- Cropanzano, R., & Mitchell, M. S. (2005, December). Social exchange theory: An Interdisciplinary review. *Journal of Management*, Vol. 31, pp. 874–900. <https://doi.org/10.1177/0149206305279602>
- Diallo, A., & Thuillier, D. (2004). The success dimensions of international development projects: The perceptions of African project coordinators. *International Journal of Project Management*, 22(1), 19–31. [https://doi.org/10.1016/S0263-7863\(03\)00008-5](https://doi.org/10.1016/S0263-7863(03)00008-5)
- Drouin, N., Müller, R., Sankaran, S., & Vaagaasar, A. L. (2018). Balancing vertical and horizontal leadership in projects: Empirical studies from Australia, Canada, Norway and Sweden. *International Journal of Managing Projects in Business*, 11(4), 986–1006. <https://doi.org/10.1108/IJMPB-01-2018-0002>
- Dwivedi, P., Chaturvedi, V., & Vashist, J. K. (2020). Transformational leadership and employee efficiency: knowledge sharing as mediator. *Benchmarking*, 27(4), 1571–1590. <https://doi.org/10.1108/BIJ-08-2019-0356>
- Ekrot, B., Kock, A., & Gemünden, H. G. (2016). Retaining project management competence - Antecedents and consequences. *International Journal of Project Management*, 34(2), 145–157. <https://doi.org/10.1016/j.ijproman.2015.10.010>
- Elizabeth, B. H. (2013). The Relationship Between Emotional Intelligence and Transformational Leadership and Effectiveness in School Principals. 40–41. Retrieved from <https://search.proquest.com/openview/c403bd856180bc52fe8b53e80a3af864/1?pq-origsite=gscholar&cbl=18750>
- Fareed, M. Z., Su, Q., & Awan, A. A. (2021). The effect of emotional intelligence, intellectual intelligence and transformational leadership on project success; an empirical study of public projects of Pakistan. *Project Leadership and Society*, 2, 100036. <https://doi.org/10.1016/j.plas.2021.100036>
- Febita, R., & Desiana, P. M. (2021). The effect of transformational leadership on innovative work behavior with psychological capital as the mediating variable. In *Contemporary Research on Business and Management* (pp. 202–206). <https://doi.org/10.1201/9781003196013-50>
- Ganguly, A., Talukdar, A., & Chatterjee, D. (2019). Evaluating the role of social capital, tacit knowledge sharing, knowledge quality and reciprocity in determining innovation capability of an organization. *Journal of Knowledge Management*, 23(6), 1105–1135. <https://doi.org/10.1108/JKM-03-2018-0190>
- Gefen, D., Rigdon, E. E., & Straub, D. (2011). An update and extension to SEM guidelines for administrative and social science research. *MIS*

- Quarterly: Management Information Systems, Vol. 35. <https://doi.org/10.2307/23044042>
- Gemino, A., Horner Reich, B., & Serrador, P. M. (2021). Agile, Traditional, and Hybrid Approaches to Project Success: Is Hybrid a Poor Second Choice? *Project Management Journal*, 52(2), 161–175. <https://doi.org/10.1177/8756972820973082>
- Gliem, J. a, & Gliem, R. R. (2003). Calculating, Interpreting, and Reporting Cronbach's Alpha Reliability Coefficient for Likert-Type Scales. 2003 Midwest Research to Practice Conference in Adult, Continuing, and Community Education, (1992), 82–88. <https://doi.org/10.1109/PROC.1975.9792>
- Grant, R. M., & Baden-Fuller, C. (2018). How to Develop Strategic Management Competency: Reconsidering the Learning Goals and Knowledge Requirements of the Core Strategy Course. *Academy of Management Learning & Education*, 17(3), 322–338. <https://doi.org/10.5465/amle.2017.0126>
- Gui, L., Lei, H., & Le, P. B. (2021). Determinants of radical and incremental innovation: the influence of transformational leadership, knowledge sharing and knowledge-centered culture. *European Journal of Innovation Management*. <https://doi.org/10.1108/EJIM-12-2020-0478>
- Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R., & Zhao, X. (2011). Predictors of Individual-Level Innovation at Work: A Meta-Analysis. *Psychology of Aesthetics, Creativity, and the Arts*, 5(1), 90–105. <https://doi.org/10.1037/a0018556>
- Hannah, S. T., Perez, A. L. U., Lester, P. B., & Quick, J. C. (2020). Bolstering Workplace Psychological Well-Being Through Transactional and Transformational Leadership. *Journal of Leadership and Organizational Studies*, 27(3), 222–240. <https://doi.org/10.1177/1548051820933623>
- Hashim, A., Che Omar, C. M. Z., Hamzah, M. S. G., & Umar, A. (2018). Leadership Behaviour, Entrepreneurial Orientation and Organisational Performance in Malaysian Small and Medium Enterprises. *International Business Research*, 11(9), 37. <https://doi.org/10.5539/ibr.v11n9p37>
- Helms, J. E., Henze, K. T., Sass, T. L., & Mifsud, V. A. (2006). Treating Cronbach's Alpha Reliability Coefficients as Data in Counseling Research. *The Counseling Psychologist*, 34(5), 630–660. <https://doi.org/10.1177/0011000006288308>
- Ika, L. A., Diallo, A., & Thuillier, D. (2010). Project management in the international development industry: The project coordinator's perspective. *International Journal of Managing Projects in Business*, 3(1), 61–93. <https://doi.org/10.1108/17538371011014035>
- Ioannis K. Kratsiotis. (2019). The Behavioural Innovation Process Model : A Critical , Constructive Evaluation of the Innovative Work Behaviour Literature and a Way Forward . A thesis submitted to the University of Manchester for the degree of Doctor of Philosophy in the faculty of Hum. Retrieved from <https://search.proquest.com/openview/e326ba999df8065e50ed95b683322b8c/1?pq-origsite=gscholar&cbl=2026366&diss=y>
- Islam, T., Zahra, I., Rehman, S. U., & Jamil, S. (2022). How knowledge sharing encourages innovative work behavior through occupational self-efficacy? The moderating role of entrepreneurial leadership. *Global Knowledge, Memory and Communication*. <https://doi.org/10.1108/GKMC-02-2022-0041>
- Ivana Bojović, & Sandra Stojadinović Jovanović. (2020). Transformational Leadership and Psychological Needs of Employees. *Technium Social Sciences Journal*, 7, 226–235. <https://doi.org/10.47577/tssj.v7i1.512>
- Jaroliya, D., & Gyanchandani, R. (2022). Transformational leadership style: a boost or hindrance to team performance in IT sector. *Vilakshan - XIMB Journal of Management*, 19(1), 87–105. <https://doi.org/10.1108/xjm-10-2020-0167>
- Jensen, U. T., Moynihan, D. P., & Salomonsen, H. H. (2018). Communicating the Vision: How Face-to-Face Dialogue Facilitates Transformational Leadership. *Public Administration Review*, 78(3), 350–361. <https://doi.org/10.1111/puar.12922>
- Jo, S. J., & Joo, B. K. (Brian). (2011). Knowledge sharing: The influences of learning organization culture, organizational commitment, and organizational citizenship behaviors. *Journal of Leadership and Organizational Studies*, 18(3), 353–364. <https://doi.org/10.1177/1548051811405208>
- Kabore, S. E., Sane, S., & Abo, P. (2021). Transformational leadership and success of international development projects (ID projects): moderating role of the project team size. *Leadership and Organization Development Journal*, 42(4), 517–530. <https://doi.org/10.1108/LODJ-06-2020-0236>
- Kellerl, T., & Dansereaul, F. (1995). Leadership and Empowerment: A Social Exchange Perspective. *Human Relations*, 48(2), 127–146. <https://doi.org/10.1177/001872679504800202>
- Khan, K., & Gul, M. (2021). The Relationship between Psychological Ownership and Subjective Happiness of the Employees: Mediating Role of Work Engagement. *Journal of Professional & Applied Psychology*, 2(1), 10–20. <https://doi.org/10.52053/jpap.v2i1.30>
- Khan, M. A., Ismail, F. B., Hussain, A., & Alghazali, B. (2020). The Interplay of Leadership Styles, Innovative Work Behavior, Organizational Culture, and Organizational Citizenship Behavior. *SAGE Open*, 10(1). <https://doi.org/10.1177/2158244019898264>
- Kwon, K., & Kim, T. (2020). An integrative literature review of employee engagement and innovative behavior: Revisiting the JD-R model. *Human Resource Management Review*, 30(2). <https://doi.org/10.1016/j.hrmr.2019.100704>
- Lange, S., Bormann, K. C., & Rowold, J. (2018). Mindful leadership: mindfulness as a new antecedent of destructive and transformational leadership behavior. *Gruppe. Interaktion. Organisation. Zeitschrift Fur Angewandte Organisationspsychologie*, 49(2), 139–147. <https://doi.org/10.1007/s11612-018-0413-y>
- Le, P. B., & Lei, H. (2019). Determinants of innovation capability: the roles of transformational leadership, knowledge sharing and perceived organizational support. *Journal of Knowledge Management*, 23(3), 527–547. <https://doi.org/10.1108/JKM-09-2018-0568>
- Li, Y., Castaño, G., & Li, Y. (2018). Linking leadership styles to work engagement: The role of psychological capital among Chinese knowledge workers. *Chinese Management Studies*, 12(2), 433–452. <https://doi.org/10.1108/CMS-04-2017-0108>
- Lim, A. F., Lee, V. H., Foo, P. Y., Ooi, K. B., & Wei-Han Tan, G. (2022). Unfolding the impact of supply chain quality management practices on sustainability performance: an artificial neural network approach. *Supply Chain Management*, 27(5), 611–624. <https://doi.org/10.1108/SCM-03-2021-0129>
- Liu, H., & Li, G. (2018). Linking Transformational Leadership and Knowledge Sharing: The Mediating Roles of Perceived Team Goal Commitment and Perceived Team Identification. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.01331/FULL>
- Lorinkova, N. M., & Perry, S. J. (2019). The importance of group-focused transformational leadership and felt obligation for helping and group performance. *Journal of Organizational Behavior*, 40(3), 231–247. <https://doi.org/10.1002/job.2322>
- Majdalani, G. (2022). Impact analysis of leadership on construction project management in the Lebanese contracting firms. Retrieved from <http://ir.ndu.edu.lb:8080/xmlui/handle/123456789/1539>
- Mehmood, I., Educationzafaryahoocom, E., & Arif, M. I. (2011). Leadership and HRM: Evaluating New Leadership Styles for effective Human Resource Management. *International Journal of Business and Social Science*, 2(15), 236–244. Retrieved from https://www.academia.edu/download/30029960/Article_Published_2.pdf
- Muhammed, S., & Zaim, H. (2020). Peer knowledge sharing and organizational performance: the role of leadership support and knowledge management success. *Journal of Knowledge Management*, 24(10), 2455–2489. <https://doi.org/10.1108/JKM-03-2020-0227>
- Musungwini, S., & Mondo, L. (2019). Developing a Change Management Model for Managing Information Systems Initiated Organisational Change: A Case of the Banking Sector in Zimbabwe. *Journal of Systems Integration*, 10(1), 49–61. <https://doi.org/10.20470/jsi.v10i1.362>
- Muzafary, S. S., Wahdat, M. N., Hussain, M., Mdletshe, B., Tilwani, S. A., & Khattak, R. (2021). Intrinsic Rewards for Creativity and Employee Creativity to the Mediation Role of Knowledge Sharing and Intrinsic Motivation. *Education Research International*, 2021. <https://doi.org/10.1155/2021/6464124>
- Nam, K. A., & Park, S. (2019). Factors Influencing Job Performance: Organizational Learning Culture, Cultural Intelligence, and Transformational Leadership. *Performance Improvement Quarterly*, 32(2), 137–158. <https://doi.org/10.1002/piq.21292>
- Nanthagopan, Y., Williams, N., & Thompson, K. (2019). Levels and interconnections of project success in development projects by Non-Governmental Organisations (NGOs). *International Journal of Managing Projects in Business*, 12(2), 487–511. <https://doi.org/10.1108/IJMPB-04-2018-0085>

- Negri, L., Bassi, M., & Delle Fave, A. (2020). Italian Validation of the Meaning in Life Questionnaire: Factor Structure, Reliability, Convergent, and Discriminant Validity. *Psychological Reports*, 123(2), 578–600. <https://doi.org/10.1177/0033294118821302>
- Ohemeng, F. L. K., Obuobisa Darko, T., & Amoako-Asiedu, E. (2019). Bureaucratic leadership, trust building, and employee engagement in the public sector in Ghana. *International Journal of Public Leadership*, 16(1), 17–40. <https://doi.org/10.1108/ijpl-05-2019-0018>
- Pacagnella, A. C., da Silva, S. L., Pacifico, O., de Arruda Ignacio, P. S., & da Silva, A. L. (2019). Critical Success Factors for Project Manufacturing Environments. *Project Management Journal*, 50(2), 243–258. <https://doi.org/10.1177/8756972819827670>
- Pradhan, S., & Jena, L. K. (2019). Does Meaningful Work Explains the Relationship Between Transformational Leadership and Innovative Work Behaviour? *Vikalpa*, 44(1), 30–40. <https://doi.org/10.1177/0256090919832434>
- Qureshi, S. M., & Kang, C. W. (2015). Analysing the organizational factors of project complexity using structural equation modelling. *International Journal of Project Management*, 33(1), 165–176. <https://doi.org/10.1016/j.ijproman.2014.04.006>
- Radaelli, G., Lettieri, E., Mura, M., & Spiller, N. (2014). Knowledge sharing and innovative work behaviour in healthcare: A micro-level investigation of direct and indirect effects. *Creativity and Innovation Management*, 23(4), 400–414. <https://doi.org/10.1111/caim.12084>
- Rampa, R., & Agogué, M. (2021). Developing radical innovation capabilities: Exploring the effects of training employees for creativity and innovation. *Creativity and Innovation Management*, 30(1), 211–227. <https://doi.org/10.1111/caim.12423>
- Rogelberg, S. (2013). Quantitative Research Approach. In *Encyclopedia of Industrial and Organizational Psychology*. <https://doi.org/10.4135/9781412952651.n251>
- Saad, A., Zahid, S. M., & Muhammad, U. Bin. (2022). Role of awareness in strengthening the relationship between stakeholder management and project success in the construction industry of Pakistan. *International Journal of Construction Management*, 22(10), 1884–1893. <https://doi.org/10.1080/15623599.2020.1742854>
- Seyis, S. (2019). Pros and Cons of Using Building Information Modeling in the AEC Industry Author keywords: Building information modeling; Benefits of building information modeling (BIM); Challenges of building information modeling (BIM); Risks of building information mode. *El.Asce.Org*. [https://doi.org/10.1061/\(ASCE\)CO.1943](https://doi.org/10.1061/(ASCE)CO.1943)
- Shahab, M. A., Sobari, A., & Udin, U. (2018). Empowering leadership and organizational citizenship behavior: The mediating roles of psychological empowerment and emotional intelligence in medical service industry. *International Journal of Economics and Business Administration*, Vol. 6, pp. 80–91. <https://doi.org/10.35808/ijeba/165>
- Shan, Y. (2022). Philosophical foundations of mixed methods research. *Philosophy Compass*, 17(1). <https://doi.org/10.1111/phc3.12804>
- Sohmen, V. S. (2013). Leadership and Teamwork: Two Sides of the Same Coin. *Journal of IT and Economic Development*, 4(2), 1–18. <https://doi.org/10.13140/RG.2.1.4241.7766>
- Steinmann, B., Klug, H. J. P., & Maier, G. W. (2018). The path is the goal: How transformational leaders enhance followers' job attitudes and proactive behavior. *Frontiers in Psychology*, 9(NOV), 2338. <https://doi.org/10.3389/fpsyg.2018.02338>
- Tan, J. X., Zawawi, D., & Aziz, Y. A. (2016). Benevolent leadership and its organisational outcomes: A social exchange theory perspective. *International Journal of Economics and Management*, 10(2), 343–364. Retrieved from [http://www.ijem.upm.edu.my/vol10no2\(8\)-VOL_10\(2\)2016_Dahlia_Benerolent Leadership.....pdf](http://www.ijem.upm.edu.my/vol10no2(8)-VOL_10(2)2016_Dahlia_Benerolent Leadership.....pdf)
- Tapp, E. (2021). Work Ethic and Productivity: The Mediating Role Of Leadership. Retrieved from <https://digitalcommons.murraystate.edu/etd/217/>
- Teng, W., Ma, C., Pahlevansharif, S., & Turner, J. J. (2019). Graduate readiness for the employment market of the 4th industrial revolution: The development of soft employability skills. *Education and Training*, 61(5), 590–604. <https://doi.org/10.1108/ET-07-2018-0154>
- Tesfaw, T. A. (2014). The relationship between transformational leadership and job satisfaction. *Educational Management Administration & Leadership*, 42(6), 903–918. <https://doi.org/10.1177/1741143214551948>
- Tsai, M. T., Chen, K. S., & Chien, J. L. (2012). The factors impact of knowledge sharing intentions: The theory of reasoned action perspective. *Quality and Quantity*, 46(5), 1479–1491. <https://doi.org/10.1007/s11135-011-9462-9>
- Tsegaye, W. K., Su, Q., & Malik, M. (2020). The Quest For A Comprehensive Model Of Employee Innovative Behavior: The Creativity and Innovation Theory Perspective. *The Journal of Developing Areas*, 54(2). <https://doi.org/10.1353/jda.2020.0022>
- Urbański, M., Haque, A. U., & Oino, I. (2019). The moderating role of risk management in project planning and project success: Evidence from construction businesses of Pakistan and the UK. *Engineering Management in Production and Services*, 11(1), 23–35. <https://doi.org/10.2478/emj-2019-0002>
- Varajão, J., Marques, R. P., & Trigo, A. (2022). Project Management Processes - Impact on the Success of Information Systems Projects. *Informatica (Netherlands)*, 33(2), 421–436. <https://doi.org/10.15388/22-INFOR488>
- Wang, Y., Liu, J., & Zhu, Y. (2018). Humble leadership, psychological safety, knowledge sharing, and follower creativity: A cross-level investigation. *Frontiers in Psychology*, 9(SEP). <https://doi.org/10.3389/FPSYG.2018.01727/FULL>
- Yasin, K. (2019). Impact of Transformational Leadership on Project Success with Mediating Effect of Self-Efficacy and Moderated Effect of Conscientiousness. 1–86. Retrieved from <https://thesis.cust.edu.pk/UploadedFiles/kalsoom%20yasin%20final.pdf>
- Yu, H. (2017). Motivation behind China's 'one belt, one road' initiatives and establishment of the Asian infrastructure investment bank. *Journal of Contemporary China*, 26(105), 353–368. <https://doi.org/10.1080/10670564.2016.1245894>
- Zaman, U., Nadeem, R. D., & Nawaz, S. (2020). Cross-country evidence on project portfolio success in the Asia-Pacific region: Role of CEO transformational leadership, portfolio governance and strategic innovation orientation. *Cogent Business and Management*, 7(1). <https://doi.org/10.1080/23311975.2020.1727681>
- Zhang, F., Zuo, J., & Zillante, G. (2013). Identification and evaluation of the key social competencies for Chinese construction project managers. *International Journal of Project Management*, 31(5), 748–759. <https://doi.org/10.1016/j.ijproman.2012.10.011>
- Zhang, X., Zhang, Y., Sun, Y., Lytras, M., Ordóñez de Pablos, P., & He, W. (2018). Exploring the effect of transformational leadership on individual creativity in e-learning: a perspective of social exchange theory. *Studies in Higher Education*, 43(11), 1964–1978. <https://doi.org/10.1080/03075079.2017.1296824>
- Zubaidah, R. A., Haryono, S., & Udin, U. (2021). The effects of principal leadership and teacher competence on teacher performance: The role of work motivation. *Quality - Access to Success*, 22(180), 91–96. Retrieved from https://www.researchgate.net/profile/Siswoyo-Haryono/publication/353935557_quality_management_91/links/611af20b169a1a0103078645/quality-management-91.pdf
- Zuo, J., Zhao, X., Nguyen, Q. B. M., Ma, T., & Gao, S. (2018). Soft skills of construction project management professionals and project success factors: A structural equation model. *Engineering, Construction and Architectural Management*, 25(3), 425–442. <https://doi.org/10.1108/ECAM-01-2016-0016>