#### ISSN (Online): 2959-4405



## GREEN TRANSFORMATIONAL LEADERSHIP & GREEN PERFORMANCE: GREEN MINDFULNESS AS MEDIATOR

#### Ahsan Khan<sup>1</sup> & Muhammad Saqib Khan<sup>2</sup>

<sup>1</sup>MBA Scholar, Department of Management Sciences, University of Lakki Marwat, Pakistan <sup>2</sup>Assistant Professor, Institute of Business Administration, Gomal University, KP, Pakistan

KEYWORDS	ABSTRACT
Green Transformational Leadership, Green Performance, Green Mindfulness, Mediation Effect	The current study aims to investigate dynamic relationship between green transformational leadership (GTFRS), Green Performance (GPRF) as well as Mediation Effect of green mindfulness (GMFN) among employees working in USTB, Bannu Medical College and new Green and clean Bannu Project initiative teams in Bannu region. For this purpose, data was collected from 200" project managers/executives in target area and obtained data was entered into SPSS to examine the hypothesized relationship. Findings depict that beta value for the Green Transformation leadership is (B=.484) which confirm that one percent increase in GTRFS will leads to improve (48%) of Project Performance. Further, it was evident from regression analysis that GTRFS has a positive and significant effect on GMFN. Finally, the mediation results evident that Beta value for GTRFS reduced from ( $\beta$ =.462 to $\beta$ = 0.366) and results in 2nd model also denote significant for GTL after adding GM, that confirm the partial meditational role of GM between employees GTL capabilities and project performance that helps in offering certain valuable recommendations.
Corresponding Author	Ahsan Khan
Email:	engrahsankhan007@gmail.com
DOI	https://doi.org/10.53664/JSSD/02-01-2023-01-01-13

## INTRODUCTION

In today's world, environmentalism has become increasingly popular due to the harmful effects of pollution and global warming. As result, businesses are striving to create environmentally friendly and innovative practices (Chen, 2011). Green innovation has become a powerful competitive tool because customers are now concerned about the environment and seek environmentally friendly products (Chen & Chang, 2012). The organizations should adopt green innovation to meet the environmental needs of the market and to develop various strategies (Chen, 2008; Sheu, 2014). The green transformational leadership (Saif, Goh, Ong, & Khan, 2023) is vital for promoting innovation and improving environmental performance (Elkins & Keller, 2003). However, previous studies

have overlooked the impact of green transformational leadership and green mindfulness on green performance, and have relied upon surveys, which only provide cross-sectional data and do not capture dynamic changes in green transformation, green mindfulness, and green performance at different levels (Khan, Amin & Saif, 2022). The lack of green transformational leadership in an organization can lead to decreased green performance, contributing to environmental pollution and global warming in society.

The impact of green mindfulness on green transformation and performance is also limited, leading to suboptimal green performance. This study has a broad scope beyond the manufacturing sector, encompassing banking, hospitals, education, NGOs, and other sectors globally. In Pakistan, green transformational leadership is crucial due to increasing environmental concerns. However, there is limited research on this topic in Pakistan. Therefore, this study aims to evaluate the impact of green transformational leadership on green performance in the presence of green mindfulness. Now a day's rapid technological development provides opportunities for better life style. While on the other side it creates problem for human natural environment. Currently across the globe rapid development in almost all areas stress for focusing on leadership and employee's relationship for better clean  $\mathcal{E}$  green environment through green motivation. However, green transformational leadership is study extensively in research for sustainable environment. However, no study so for investigate the attributes of green transformational leaders with employees' performance. At the same time green transformational leaders and employee's performance can be better understand by study the mediating role of green mindfulness. Consequently, as mindfulness is designed by leaders' direction/action.

#### **Research** Questions

- 1. Is there any existing of the relationship between green transformational leadership and employee's Performance?
- 2. Is there any difference existing between green transformational leadership attributes  $\mathcal{E}'$  employees' Performance?
- 3. Is the relationship between green transformational leadership and employee Performance mediated by GMFN?

#### LITERATURE REVIEW

According to Chen (2013), green transformational leadership as a leader's ability to motivate their colleagues to achieve environmental goals and exceed expected socio-environment culture. In contrast, green performance refers to the performance of software and hardware involved in the company's innovation process, which includes environmentally friendly processes and products (Chen et al., 2006). Green innovation has become a powerful competitive tool because customers are now concerned about the environment and seek environmentally friendly products (Chen & Chang, 2012). TRFS attributes (Saif, Khattak, & Khan, 2016; Shah, Saif, Khan, & Khan, 2022) are important characteristics in determining the personality traits (Naveed Saif & Shaheen, 2022), employees behavior during the job insecurity (Naveed Saif & Khan, 2020) (Naveed Saif, Khan, Shaheen, & Bangash, 2020), QM practices (Naveed Saif, Khan, Ali, & Wadood, 2019), (Naveed

Saif, Ali, Shaheen, & Ayaz, 2022), commitment (Igbal, Fatima, & Naveed, 2020), performance appraisal (Naseeb, Saif, Khan, Khan, & Afag, 2019) and librarian (Saif et al., 2022), and customer loyalty (Saif, Khan, Khan, & Adnan, 2022).

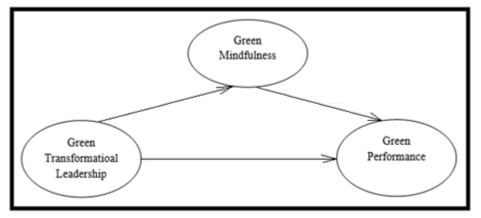
Transformational leaders (Faroog, Saif, & Shaheen, 2022) use stimulating inspiration (Khan, Amin, & Saif, 2022) and rational encouragement to promote innovation in their organizations. Khan, Amin and Saif (2022) express that transformational leaders (TRFMS) can develop new ideas and energize their followers for change. Previous studies have shown that (TRFMS) has a strong relation (Naveed Saif, 2014) on organizational innovation (Chen, Chang et al., 2014). TRFMS plays beneficial role in fostering new ideas (Saif et al., 2016), and leaders can act as promoters by motivating their subordinates to consider all aspects of a problem (Waldman & Bass, 1991; Keller, 1992). The Green transformational leadership will enhance the performance of organization and decrease negative effects that impact the overall performance of the corporation or organization (Khan, Amin & Saif, 2022). We will also find the best green transformational leader attribute that will help to find the green performance of employees of project. Behavioral aspects are involved in transformational leadership, which compels followers to think creatively. Transformational leadership plays critical role (Saif et al., 2016; Shah et al., 2022) approach for problem-solving from diverse angels (Naseeb, Saif, Khan, Khan, & Afag, 2019).

According to Bass and Avolio's (1990) research, transformational leadership has beneficial impact by encouraging followers to approach problems as indicated by Waldman and Atwater (1994). However, there has been limited investigation into the effect of green transformational leadership on green performance in previous studies. Therefore, this study aims to bridge this research gap by constructing a framework to examine this relationship. Thus, transformational leadership has a positive impact on mindfulness (Chen, Chang et al. 2014). Previous studies have paid little attention to the effect of Green leadership on GMFN, and so we discuss this effect in our study. Previous research has indicated that intentional mindfulness positively affects job performance (Dane, 2011). In this connection, the green transformational leadership will enhance the performance of the organization and decrease the negative effects that impact the overall performance of corporation or organization (Khan, Amin & Saif, 2022). Mindfulness is also considered to have an impact on peripheral motivation and improved job performance (Herndon, 2008), as well as reducing the likelihood of errors by promoting better attention as well as understanding of work-related tasks (Vogus & Sutcliffe, 2012).

The employees who feel more connected to their work perform better and are more innovative (Friedman & Forster, 2001). Mindfulness can improve employees' skills, which in turn can enhance performance and innovation. Therefore, mindfulness is believed to have a positive impact on performance (Chang et al., 2014). Langer (1997) argued that mindfulness reflects an essential human propensity and plays a crucial role in resisting negative influences and circumstances. Mindfulness can be an effective tool for organizations to navigate uncertain situations and mitigate potential negative outcomes (Weick & Roberts, 1993). Thus, the green transformational leadership refers to a leadership style that emphasizes environmental sustainability and promotes the adoption of eco-friendly practices within organizations. The green mindfulness refers to a state of awareness and

consciousness that focuses on the environment and promotes sustainable living (Khan, Amin & Saif, 2022). It involves being present in the moment and making intentional choices that minimize harm to the environment and promote ecological well-being. By promoting dynamic wakefulness and open-mindedness to new information, mindfulness allows members to continuously learn, adapt, and improve (Langer, 1997). However, there has been little research on the impact of GMFN, which we address in our study to bridge this gap.

Figure 1 Research Framework



## Hypothesis of Study

H1: Green transformational leadership has a positive relation with employees' green performance. H2: Green transformational leadership has a positive relation with the green mindfulness (GMFN). H3: Green mindfulness has significant and positive relation with the green performance (GPRF). H4: GMFN significantly mediates the relationship between the GTRFS and green performance.

## **RESEARCH METHODOLOGY**

## Population and Sampling

Population refers to entire group of people, events, or things of interest that the researcher wishes to investigate (Babbie, 2002). Population for study includes project managers and employees working in new construction of buildings in district Bannu. In this regard USTB, Bannu Medical College as well as new Green and clean Bannu Project initiative team will be assessed. Sampling is the process of selecting a portion of a population to represent that population. The researcher in this study used a method called convenient sampling to collect data. This involved contacting individuals working in Project Management office who were readily available to participate in the study. Convenient sampling is a type of non-probability sampling method that relies on data collection from easily accessible members of the population. The sample size is almost 200 and convenience sampling will be used to collect responses. Sample for research will consist of 200 project managers/executives, employees working in USTB, Bannu Medical College, and new Green and Clean Bannu Project initiative teams in the Bannu region.

### Data Collection Methods

Survey Questionnaire of (Cheng & Chen 2013), consist of 6 items through five point Likert Scale used to measure GTRFS. While Green Performance scale developed by Chen et al, (2013) having five items. GMFN scale developed by Chen et al, (2013) is adopted and consist of 5 items, response was recorded on 5 point Likert scale. Data was analyzed over frequency procedure and regression analysis was performed for mediation effect.

## **RESULT AND DISCUSSION**

ibie i response about						
		5	4	3	2	1
Item GTRFS_1		SA	А	Ν	DA	SDA
	Response	100	45	15	10	00
	%	58.8	26.4	8.8	5.8	00
Item GTRFS 2		SA	А	Ν	DA	SDA
	Response	95	45	10	10	10
	%	55.8	26.4	5.8	5.8	5.8
Item GTRFS_3		SA	А	Ν	DA	SDA
	Response	70	79	12	9	00
	%	41.1	46.4	7	5.2	00

Table 1 Response about GTRFS (Independent Variable)

Table 1a Response about GTRFS (Independent Variable)

		5	4	3	2	1
Item GTRFS_4		SA	А	Ν	DA	SDA
	Response	75	55	35	10	15
	%	44.1	32.3	20.5	5.8	8.8
Item GTRFS _5		SA	А	Ν	DA	SDA
	Response	80	45	25	10	10
	%	47	26.4	14.7	5.8	5.8
Item GTL_6		SA	А	Ν	DA	SDA
	Response	70	85	5	10	00
	%	41.1	50	2.9	5.8	00

Table (1) depict the information about response of item No.1 most of respondents regarding item 1 (GTRFS -1) are strongly agree and just agree, which are 58.8% and 26.4% respectively. According to item 2 "The survey results of this item mostly respond with strongly agree and agree i.e. 41.1% and 50% respectively. In this (GTRFS -2) some of the respondents are neutral i.e. 2.9% and some results are disagreeing which is 5.8%. Item (3) in this (GTRFS -3) strongly agree ratio is decreases to 41.1% and agree ratio increase of 46.4%, here neutral responses increased to 7% respectively. Item (4) mostly responses are strongly agreeing and agree which 44.1% and 32.3% respectively. Some of the responses are neutral which is 20.5%. In this item disagree and strongly disagree ratio increases are 5.8% and 8.8%. Item (5) responses of strongly agree and agree increased to 47% and 26.4%. According to item (6) results of this item mostly responds with strongly agree and agree i.e.

35%, 42.5% respectively. In this (GTRFS -6) respondents are neutral i.e. 2.5% and some results are disagreeing which is also 5%.

		5	4	3	2	1
Item GM_1		SA	А	Ν	DA	SDA
	Response	95	45	10	10	10
	%	55.8	26.4	5.8	5.8	5.8
Item GM_2		SA	А	Ν	DA	SDA
	Response	80	45	25	10	10
	%	47	26.4	14.7	5.8	5.8

Table 2 Response about GMFN (Mediator)

Table 2a Response about GMFN (Mediator)

Item GM_3		SA	А	Ν	DA	SDA
	Response	70	79	12	9	00
	%	41.1	46.4	7	5.2	00
Item GM_4		SA	А	N	DA	SDA
	Response	70	75	25	10	00
	%	41.1	44.1	14.7	5.8	00
Item GM_5		SA	А	Ν	DA	SDA
	Response	70	55	20	15	10
	%	41.1	32.3	11.7	8.8	5.8

Table depict information about diverse questions from depicting attribute of GMFN that (GM-1) item responses from survey of employees' show's mostly strongly agree and agree and some of them are neutral and disagree as well while in item 2. In (GM-2) mostly responses were that members of this project knows that how to deal uncertain issue, in a survey results mostly people are strongly agreeing and agree some of them are neutral and remaining are disagree and disagree. In item 3 of said table it must be known to members of green innovation project that what to do in the occurrence of environmental or other issues, as usual majority of survey responses are strongly agree and agree and few of responses are neutral and disagree. According to item 4 of above table the percentages of survey responses are SA:41.1%, A:44.1%, N14.7 and DA5.8% respectively. Massive responses of (GM-5) were strongly agree and agree and agree and agree and agree and strongly agree.

 Table 3 Green Project Performance (dependent Variable)

		1	2	3	4	5
Item GPP_1		SA	А	Ν	DA	SDA
	Response	75	55	20	13	7
	%	44.1	32.5	11.7	7.6	4.1
Item GPP_2		SA	А	Ν	DA	SDA
	Response	67	53	30	20	00
	%	39.4	31.1	17.6	11.7	00

Item GPP_3		SA	А	Ν	DA	SDA
	Response	75	60	15	20	00
	%	44.1	35.2	8.8	11.7	00
Item GPP_4		SA	А	Ν	DA	SDA
	Response	65	55	25	15	10
	%	38.2	32.3	14.7	8.8	5.8
Item GPP_5		SA	А	Ν	DA	SDA
	Response	85	55	15	10	5
	%	50	32.3	8.8	5.8	2.9

	Table 3a Green	Project Performance	e (dependent Variable)	)
--	----------------	---------------------	------------------------	---

Table display information about performance of Green Project. Item 1 of GPP-1) depict information about the materials which produce less amount of pollution chosen by Green innovation project during product development process some of them are Neutral, disagree and strongly disagree, while the responses were agree and strongly agree. (GPP-2) responses with SA:39.4%, A:31.1%, N:17.6% and DA:11% respectively, there is no single response of the strongly disagree. (GPP-3) responses with SA: 44.1%, A: 35.2%, N: 8.8% and DA: 11.7% respectively, there is no single response of Strongly Disagree. (GPP-4) responses with SA:38.2%, A: 32.31%, N:14.7%, DA: 8.8% and SDA: 5.8% respectively. (GPP-5) responses with SA: 50%, A: 32.3%, N: 8.8%, DA: 5.8% and SDA: 2.9% respectively.

Descriptive Statistics									
	N MIN MAX Mean SD Skewness Kurtos							osis	
	STAT	STAT	STAT	STAT	STAT	STAT	SE	STAT	SE
GTRFS	170	1.53	5.00	1.3	.25245	.267	.140	061	.278
GMFN	170	1.22	5.00	1.24	.21456	.757	.140	112	.278
GPP	170	1.74	5.00	1.34	.27876	.188	.140	1.055	.278
Valid N	170								

Table 4 Descriptive Statistics

Table discuss in detail about minimum, maximum and mean values and normality of guestionnaire. According to the results from above table skewness values of all the items are within the threshold level of (<2: <-2) as depicted by (Hair et al. 2010; Bryne 2010). Kurtosis shows data degree of the tiredness in frequency distribution and as recommended by researchers (Hair et al. 2010; Bryne 2010) acceptable range (7 and ~7). In our study values lie between acceptable ranges. Hence data is considered as normal for further analysis.

Table 5 Reliability of the Construct

SN	Construct title	Adopted	Items	Reliability
1	Green Transformation Leadership	(Cheng and Chen 2013)	4	.879
2	Green Mindfulness	Chen et al, (2013)	5	.908
3	Green Project Performance	Chen et al, (2013)	5	.648

The table shows details about statistics of items reliability of GTRFS, GMFN and green project performance. In reliability analysis of the GTRFS we initially we had taken 6 items, in which the

reliability results for item 4 an item 5 results were creating problems. So they were removed and alpha values for remaining 4 items scale of the Green Transformation leadership became equal to (.879), which is in acceptable range. in GMFN 5 items are analyzed which created acceptable range of reliability which is (.908) while in Green Project Performance the reliability analysis results in acceptable range of (.648). Table (4.8) shows details about items reliability statistics of the adopted constructs from previous studies. According to (Taber, 2018; Adeniran, 2019) the acceptable range of reliability for guestionnaires is higher than (.7). In our study the values for all the construct is higher than (.7).

	GTRFS	GMFN	Green Performance			
Green Transformation Leadership	1					
Green Mindfulness	.329**	1				
Green Performance	.484**	.434**	1			
**. Correlation is significant at the 0.01 level (1-tailed).						
*. Correlation is significant at the 0.05 level (1-tailed).						

Table 6 Correlation among Variables

The table shows the relationship between inter relationship of major variable of the study as well as demographic attributes. Although gender and age were controlled during regression analysis. Findings shows that highest correlation (.711) exist between project culture and risk management, while only 24% correlation exist between risk management and project Quality. According to the general rule of thumb correlation values between (0.2 & 0.4) are moderate nature, while higher than (0.7) shows stronger correlation (Gorsuch, & Lehmann, 2010; Hassan & Abdullah, 2014). Relationship between Project guality and project control is (.598), which means that project guality and control having moderate relationship.

Model Summary										
Model	R	R Square	Adjı	usted R2	SEE		F		Sig.	
1	.462a	.209	.5211	5	45.615	5	.000b			
	Coefficients									
Model				Unstand	ndardized Standardized		T		Sig.	
			Coeffi	cients	Coe	fficients				
B SE Beta										
1 (Co	nstant)	1.842	.282			6.5	531	.000		
Gre	en Transforr	.484	.072		.462	6.7	54	.000		
Green P	erformance									

Table 7 Regression Analysis (Green Transformation leadership on Green Project Performance)

Table shows the detail information for simple regression between GPR as a dependent variable and GTL as an independent variable. According to the findings beta value for GTRFS is (B=.484) which confirm that one percent increase in GTRFS will leads to improve (48%) of Project Performance in the diverse situations and contexts. Hence H1 is accepted that GTRFS has significant impact on project performance.

				Model Su	mmary				
Model	R	R Square	Adj	usted R2	SEE	SEE			Sig.
1	.332a	.110		.105	.52373	52373 20.859		)	.000b
	Coefficients								
Model	Model						Standardized		Sig.
				Coefficients		Coe	Coefficients		
				В	SE		Beta		
1 (Co	nstant)			2.420	.284			8.537	.000
Gree	en Transforr	nation Leaders	hip	.329	.072		.332	4.567	.000
Green N	lindfulness								

## Table 8 Regression Analysis of GTRFS on GMFN

Table shows the detail information for simple regression between GMFN as a dependent variable and GTRFS as an independent variable. According to the findings beta value for GTRFS is (B=.329) which confirm that one percent increase in risk through Green Transformational leadership will leads to improve (32%) of GMFN. Hence H2 is accepted that GTRFS has a positive and significant effect on GMFN.

Table 9 Regression Analysis for GMFN on Green Performance

						Model Su	mm	ary				
Mo	odel	R	R So	quare	Adju	usted R2		SEE	]	F		Sig.
	1	.410a	.1	.68		.163		.53597 33.		33.968		.000b
	Coefficients											
Mo	Model			Unstandardized			Standardized		Т		Sig.	
				Coefficients			Coefficients					
				В		Std. Errc	or	Beta				
1	1 (Constant)		2.12	22	.279				7.613		.000	
	Green Mindfulness		.43	4	.074		.410		5.828	3	.000	
Gr	Green Performance											

Table shows detail information for simple regression between Green Performance as a dependent variable and GMFN as an independent variable. According to the findings beta value for GMFN is (B=.434) which confirm that one percent improvement in GMFN through stranded procedures will leads to improve (43%) of Green Performance. Hence H3 is accepted that GMFN has a positive and significant effect on Green Performance.

Table 10 Mediating role of GMFN between GTRFS and Green Performance

	-								
			Model Sum	mary					
Model	R	R Square	Adjusted F	82 8	SEE	F		Sig.	
1	.462a	.214	.209	.5	.52115		15		000b
Model	R	R Square	Adjusted F	82 8	SEE	F			Sig.
2	.536b	.288	.279	.4	9752	752 33.69			000c
			Coefficier	nts					
Model-1			Unstanda	ardized	Standa	ardized	Т		Sig.
			Coefficients		Coefficients				0
			В	SE	Be	eta			

1	(Constant)	1.842	.282		6.531	.000		
	Green Transformational	.484	.072	.462	6.754	.000		
	Leadership							
	(	Green Perfori	nance					
Mod	lel-2	Unstand	ardized	Standardized	Т	Sig.		
			cients	Coefficients				
		В	SE	Beta				
2	(Constant)	1.104	.322		3.423	.001		
	Green Transformational	.383	.073	.366	5.289	.000		
	Leadership							
	Green Mindfulness	.305	.073	.288	4.164	.000		
Gree	Green Performance							

Table shows details information about mediating role GMFN amid GTRFS and Green performance. In this regard in model one shows significant relationship between GTRFS and Green Performance. That shows moderate but significant relationship between variables. In the next model GTRFS was entered in model one, while GMFN was added in second model. Based on findings from the above table it is evident that Beta value for GTRFS reduced from ( $\beta$ =.462 to  $\beta$  = 0.366) and results in 2nd model denote significant for GTL after adding GM, confirm partial meditational role of GM amid employees GTL capabilities and project performance. Hence, Hypothesis 4 is also accepted and thus substantiated.

### Hypothesis Statement

Hypothesis	Statement	Results	Decision
Hl	GTRSF has a positive impact on green performance	β=.484; P<0.05	Accepted
H2	GTRFS has a positive impact on GMF.	β=.329; P<0.05	Accepted
H3	GMF has a positive impact on green performance.	β=.434; P<0.05	Accepted
H4	GMF mediates effect of GTRFS & green performance	β=.366; P<0.05	Accepted

## CONCLUSION

Current study tries to link dynamic relationship between GTRFS and project performance through GMFN. Empirical results show that GTRFS has significant impact on project performance in one of the world most devolving region. That increases the importance of green leadership in emerging economies of the world developing countries like Pakistan. Furthermore, GTRFS shows significant association with employees GMFN. Actually it is leaders that transform the ability, functions and way of thinking of their employees. If organization top management focus on promoting clean and green initiatives in their under construction projects, ultimately employees will tend to behave in the similar spectrum. Hence GTRFS inspires employees to think for sustainability of environment (Saif, Ali, et al., 2022; Naveed Saif & Khan, 2020; Naveed Saif & Shaheen, 2022). As a result, the employees try to focus on green/clean aspect of the work assignment, while performing their duty. Once employees perceive that in order to protect environment from hazards of the pollution, they (employees) behave and perform their duty in such a way that each step works for the betterment of natural resources.

For instance, GMFN employees focus their intention to solve their local issues through innovation/ creativity. For this purpose, employees with GMFN use the minimum water to avoid /stop water extra use. Employees enrich with GMFN dumb waste material properly at the work place. Hence overall GMFN of employees enhance organization productivity in the form of improved project life cycle. Surprisingly GMFN shows partial meditational role amid GTRFS and project performance. The results are in line with findings of (Chen et al, 2014, Zafar et al, 2017). Results of Zafar et al (2017) based on the information obtain from manufacturing sector, while (Chen et al, 2014) findings are associated with Taiwan Electrical companies. However, the result of current study is deducted from construction project. Hence the results of current study add additional contribution to the field of Green HRM and project management area, as construction projects are strongly associated with environment and if top management take corrective actions in advance to safeguard environment through green behavior of employees. The result will be clean, green and safe environment for the future generation.

#### Theoretical Contribution & Future Recommendations

Based on findings of current study it is evident that employees GMFN attitude can be developed through active personality of project leaders green imitative approach. If employees and leadership work in the parallel direction. Results will be successful projects which will be beneficial for general population. The current study also supports the theoretical under pinning of Blav (1967) theory of social exchange. The theory proposed that relationship between employer/employees depend upon social exchange behavior. If leader exhibit such behavior that is socially recognizable, then employees will inspire and follow the footprints of their leader. As a result, project success or organization goal is achieving easily. That future researcher may get data from different sectors, and geographic area to get more detail findings. That current study obtains data at one point (only one time survey). However, future studies may get data for different interval (before, during and after) completion of the project. That future study may evolve the current model through different mediating variables i.e. (green self-efficacy, green collective efficacy, organization culture and employees' green knowledge).

#### REFERENCES

- Arendt, L. A. (2009). Transformational leadership and follower creativity: The moderating effect of leader humor. *Review of Business Research*, 100–106.
- Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. Organization Dynamics. 20 (4), 262–275.
- Bass, B. M. (2000). The future of leadership in learning organizations. *Journal of Leadership Studies*. 18 (2), 9–21
- Bono, J. E., Judge, T. A. (2003). Self-concordance at work: Toward understanding the motivational effects of transformational leaders. *The Academy of Management Journal*, 46 (5), 554–571.
- Chen, Y. S. (2011). Green organizational identity: Sources and consequence. *Management Decisions*, 49 (3), 384–404.
- Chen, Y. S. (2008). The driver of green innovation and green image-green core competence. *Journal of Business Ethics*, 81, pages 531–543.

- Chen, Y. S., Chang, C. H. (2012). Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decisions*. 50 (3), 502–520.
- Chen, Y. S., Chang, C. H. (2013). The determinants of green product development performance: Green dynamic capabilities, GTRFS, and green creativity. *Journal of Business Ethics*, 116 (1):107–119.
- Chen, Y. S., Chang, C. H., Yeh, S. L., Cheng, H. I. (2014). Green shared vision and green creativity: The mediation roles of GMFN and green self-efficacy. *Quality & Quantity: International Journal* of Methodology, 49(3), 1169–1184.
- Dane, E. (2011). Paying attention to mindfulness and its effects on task performance in workplace. Journal of Management, 37(4):997–1018.
- Elkins, T., Keller, R. T. (2003). Leadership in research and development organizations: A literature review and conceptual framework. *The Leadership Quarterly*, 14(4):587–606.
- Faroog, U., Saif, N., & Shaheen, I. (2022). Mediating Role of Transformational & Transactional Leadership in Understanding Mclean & Delone Information System. *Journal of Social Research Development*, 3(1), 9–21.
- Friedman, R. S., Forster, J. (2001). The effects of promotion and prevention cues on creativity. *Journal of Personality and Social Psychology*, 81(6), 1001–1013.
- Igbal, K., Fatima, T., & Naveed, M. (2020). The impact of transformational leadership on nurses' organizational commitment: A multiple mediation model. *European Journal of Investigation in Health, Psychology and Education*, 10(1), 262–275.
- Jung, I., Chow, C., Wu, A. (2003). Role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings. *The Leadership Quarterly*, 14 (4–5), 525–544.
- Keller, R. T. (1992). Transformational leadership and the performance of research and development project groups. *Journal of Management*, 18 (3).
- Khan, I. U., Amin, R. U., & Saif, N. (2022). The contributions of inspirational motivation and intellectual stimulation in connecting individualized consideration and idealized influence. International Journal of Leadership in Education, 1–11.
- Mumford, M. D. (2000). Managing creative people: Strategy and tactics for innovation. *Human Resource Management Review*, 10, 313–351.
- Faroog, U., Saif, N., & Shaheen, I. (2022). Mediating Role of Transformational & Transactional Leadership in Understanding Mclean & Delone Information System. Journal of Social Research Development, 3(1), 9–21.
- Igbal, K., Fatima, T., & Naveed, M. (2020). The impact of transformational leadership on nurses' organizational commitment: A multiple mediation model. *European Journal of Investigation in Health, Psychology and Education*, 10(1), 262–275.
- Khan, I. U., Amin, R. U., & Saif, N. (2022). The contributions of inspirational motivation and intellectual stimulation in connecting individualized consideration and idealized influence. *International Journal of Leadership in Education*, 1–11.
- Naseeb, S., Saif, N., Khan, M. S., Khan, I. U., & Afag, Q. (2019). Impact of performance appraisal politics on work outcome: multidimensional role of intrinsic motivation and job satisfaction. *Journal of Management and Research*, 6(1), 1–37.

- Saif, N, Goh, G. G. G., Ong, J. W., & Khan, I. U. (2023). Green transformational and transactional leadership in fostering green creativity among university students. *Global Journal of Environmental Science and Management*, 9(3), 577–588.
- Saif, Naveed. (2014). Preferred Leadership Style of Civil Services Officers of Pakistan. Journal of Poverty, Investment and Development, 5(c), 17–28.
- Saif, Naveed, Ali, S., Shaheen, I., & Ayaz, S. (2022). Understanding Librarian Transformational and Transactional Leadership Capabilities Through the Lens of Students Response While Spending Time in University Library. Library Philosophy & Practice.
- Saif, Naveed, Khan, M. T., Ali, S., & Wadood, F. (2019). Laohavichien model of Leadership and Quality for Pakistan. What it is and why it's important for SME's. *IBT Journal of Business Studies* (JBS), 15(2), 43–61.
- Saif, Naveed, Khan, M. T., Khan, I. U., & Adnan, M. (2022). Designing and validating customer loyalty construct for the banking sector (evidence from Pakistan). *International Journal of Business Excellence*, 28(3), 397–418.
- Saif, Naveed, Khan, M. T., Shaheen, I., & Bangash, S. A. (2020). Neglected Field of Research Related to Job Insecurity and Outcomes in Pakistan. *City University Research Journal*, 10(2).
- Saif, Naveed, & Khan, S. (2020). Impact of job insecurity on general strain issues of employees through moderated meditation analysis. SMART Journal of Business Management Studies, 16(1), 80–89.
- Saif, Naveed, Khattak, B. K., & Khan, I. U. (2016). Relationship between transformational leadership and organization citizenship behaviour (OCB) in Sme's sector of Pakistan. Gomal University Journal of Research, 32(2), 65–77.
- Saif, Naveed, & Shaheen, I. (2022). Investigating the Relationship between the Big Five Personality Traits model and Selfie Posting behavior with the moderating role of Culture and Marital status among University Students. *Journal of Innovative Research in Management Sciences*, 1–15.
- Shah, A. N., Saif, N., Khan, M. T., & Khan, I. U. (2022). Demographics impact on management capabilities through the lens of transactional and transformational leadership. *International Journal of Services and Operations Management*, 43(3), 338–358.
- Sheu, J. B. (2014). Green supply chain collaboration for fashionable consumer electronics products under third-party power intervention—A resource dependence perspective. *Sustainability*.
- Vogus, T. J., Sutcliffe, K. M. (2012). The Organizational mindfulness and mindful organizing: A reconciliation and path forward. Academy of Management Learning & Education (2012).
- Waldman, D. A., & Atwater, L. E. (1994). The nature of effective leadership and championing processes at different levels in an R&D hierarchy. *Journal of High Technology Management Research*, 5(2), 233–245.
- Waldman, D. A., & Bass, B.M. (1991). Transformational leadership at different phases of the innovation process. The Journal of High Technology Management Research, 2 (2), 169–180.
- Weick, K. E., Roberts, K. H. (1993). Collective mind in organization: Heedful interrelating on flight decks. Administrative Science Quarterly, 38 (3), 357–381.