Relationship between Authentic Leadership, Employee Creativity, Work Engagement & Psychological Empowerment in Construction Sector

Saqib Jamil[1], Haider Ali Shams[2,3],*, Sana Ahmed[4], Dr. Saqib Ahmed Saki[5], Dr. Mohsin Ali Shams[6]

[1]MS Scholar, Riphah International University, Pakistan.
[2]Assistant Professor, Department of Computer Science, National University of Sciences & Technology, Pakistan.
[3]PhD Scholar, School of Graduate Studies, Asia e University, Malaysia.
[4]PhD Scholar, Henley Business School, University of Reading, United Kingdom.
[5]Construction Risk Manager, Amazon.com Inc. Luxembourg.
[6]Assistant Professor, Department of Mass Communication & Media Studies, GIFT University, Pakistan.

*Corresponding Author: Haider Ali Shams
*Email: haider@nbc.nust.edu.pk

Abstract

The paper sought to determine the relationship between authentic leadership & employee creativity in the construction industry. This study also examined the mediating impacts of job engagement & the moderating effects of psychological empowerment on the connection between authentic leadership & employee creativity. The data was primarily acquired by questionnaires, using convenience sampling from 60 respondents from seven select construction companies. According to the study, real leadership, job engagement, & psychological empowerment are all linked to employee innovation. Employees who are highly engaged are more creative & empowered, & engagement serves as a bridge between true leadership & employee innovation. This study will contribute to research evidence demonstrating that real leadership encourages employee creativity through job engagement & psychological empowerment.

Key Words: Authentic leadership, work engagement, psychological empowerment & Employee Creativity

1. Introduction

In today's world of competition in the business environment, innovation & creativity have gained significance, like never before. Creativity is having new & fresh thought & implications of new & modern systems, procedures, & services, without which no organization can flourish & prosper & negating this by organizations will be their end within no time. (Amabile et al., 2005). Organizations need to focus on creativity in order to flourish with ever advancing technology, induction of new systems & dynamic economic environment all over the globe. Creativity is something which is exhibited by the individuals & innovation is generally exhibited by the teams (Cerne et al., 2013). Positive behavior & employees' creativity can be generated through motivation by leaders (Lee, Mazzei, & Kim, 2018). Although it may not be mentioned in their charter of duties, but it will have played a dynamic role in contributing to the productivity approach in the organization (Kumari et al., 2022)

Today's workplace values employee inventiveness (Yaakobi & Weisberg, 2020). Leadership boosts employee invention & creativity, according to extensive studies. However, to compete in the global business scenario, it is essential to take a step forward & move to an authentic leadership style rather than a traditional style (Torre & Sarti, 2020). Strong leadership will address all stakeholders' issues. It should be mature enough to operate the system & procedures alone. Another factor affecting employee creativity is psychological empowerment (PE) (Chenji & Sode, 2019). The motivating notion PE contains purpose, competence, self-determination, & influence (Sptreitzer, 1995). Previous study suggests that PE affects employee creativity (Seibert et al., 2011). As authentic leadership has a major effect on employee attitude & behaviors, since authentic leadership empowers project team members, it affects their creativity. Previous studied shoes that psychological empowerment positively effects Employees creativity. (Beak & Sun, 2017; Tu & Lu, 2013)

Researchers have shown that real leadership improves employee inventiveness (Yıkılmaz& Sürücü, 2023). An analysis examined how authentic leadership affects employee creativity in project-based organisations. This study also investigated how occupational engagement & psychological empowerment may mediate this link (Mubarak & Noor, 2018). Researchers should explore the elements & utilize Psychological Empowerment as a Moderator to determine if it moderates the Authentic Leadership-employee creativity relationship.

2. Literature Review:

2.1. AL & EC

Daft (2014) defines leadership as motivating others to achieve organizational goals. Positive leadership begins with authenticity (May et al., 2003; Ilies et al., 2005). It measures how open & clear leaders are with others, giving information,

accepting recommendations, & revealing their thoughts, feelings, & ambitions in a way that inspires subordinates to follow them (Walumbwa et al., 2010).

Organizations require authentic leaders to assist people discover purpose & connection in the modern, chaotic, & fast changing workplace (Wu & Chen, 2019). Theoretical writing has been affected by Greek philosophy's authenticity (Harter, 2002).

Lack of ethics & business integrity has made AL social trend (Carroll, 2015) & a top leadership requirement in firms (Ibarra, 2015). Without authenticity, short-term success is conceivable, but long-term leadership requires authenticity George (2007). Creativity entails developing innovative goods, services, procedures, & processes. Creativity seeks creative approaches to problems & new possibilities (Amabile, 1983). In the workplace, creativity fosters new ideas, appreciation, & meaningful solutions to problems. Many professionals & industrialists respect innovation all throughout their careers. Creativity helps businesses, workers, society, & finances thrive. Innovative products, services, processes, management practices, business models, and competitive tactics are useful (Zhou & Ren, 2011). Creative performance generates new products & services, adapts market opportunities to the company, & improves efficiency via problem-solving. Authentic leaders boost employee creativity by building supportive, friendly, reasonable, & honest relationships (Peterson, Walumbwa, Avolio, & Hannah, 2012). Previous research has shown that ethical & moral perspectives boost creativity (Bierly et al., 2009; Valentine et al., 2011). Previous study has shown that authentic leaders excite their people by supporting (Ilies et al., 2005). Hence, proposed that:

H1: AL has significant positive effect on EC.

2.2. AL & WE

Work engagement is a strong, committed, & absorbing mentality that makes work enjoyable (Schaufeli et al., 2002). Moreover, WE refers workers way see their job (Bakker et al., 2008) for comprehensive & work fulfillment considerate search (logical engagement), enticing & stimulating (emotional-engagement), & encouraging vibrant devoted about serving. Work engagement is important for organizations because of its various benefits. It benefits employees & the organisation (Saks, 2006). Work engagement connects people personally & mentally to their company, improving job performance & outcomes (Kumar & Pansari, 2015).

A major tool for improving organizational efficiency is empowerment. Empowerment means providing people with decision-making power (Coy, Malekpour, Saeri & Dargaville, 2021). Psychological empowerment is inspiration based on purpose, proficiency, autonomy, & influence, according to Spreitzer (1995). Psychological empowerment requires these four aspects, & if it lacks them, it fails. Explanation of dimensions:

(1) Meaning: Work's perceived value.
(2) Competence: The belief that one possesses the necessary skills to complete a task.
(3) Self-determination: Personal decision to initiate & regulate actions.
(4) The perception of oneself impacts one's workplace.

Therefore, an employee who is empowered appreciates his work & is inwardly driven; is confident in his ability to perform well; has control over his workplace & can introduce & regulate his own activities. All these aspects empower & assure the employee. Leaders may boost employee engagement & reduce stress by fostering a "Us" culture (Steffens et al., 2014). Therefore, hypothesis that:

H2: AL has positive effect on Work Engagement

2.3. WE & EC

Bakker & Albrecht (2018) found that employees are the most asset of any organisation & must be appreciated for ideal work-life balance, which is the best way to engage employees. Therefore, organizations must be forthright to meet employee expectations, which will improve employee performance & boost performance. Research of 105 school administrators & 232 teachers examined job engagement & performance (Bakker *et al.,* 2006). The study found a strong positive correlation between work engagement & performance.

Job involvement mostly connected to creativity; engaged workers solved workplace difficulties creatively; & positive feeling ideas. Emotions however beneficial like enjoyment, inquisitive & satisfaction help people extend their momentary thought–action repertoires & accumulate financial, intellectual, social, & psychological resources, according to Fredrickson (2001). Joy increases resources by encouraging play & realism. Employee insight into work is crucial to work engagement. Higher effort equals higher job engagement. It boosts creativity & helps him develop more dynamic job results. Employee engagement boosts productivity & results. Therefore, hypothesized that:

H3: WE have significant positive Effect on EC.

2.4. WE Mediating impact

When their task is substantial & significant, employees are more likely to critically evaluate an issue (Shalley & Gilson, 2004). Most importantly, people feel more powerful at work when they trust in their abilities & have the means to do their jobs. Due to their behaviour & performance, individuals can quickly determine fruitful results. They tend to concentrate & persevere on creative ideas & solutions (Zhang & Bartol, 2010; Deci & Ryan, 1991; Spreitzer, 1995).

Authentic leadership helps workers, societies, & organizations (Walumbwa et al., 2008). Authentic leaders inspire positive feelings, well-being, employee creativity, & work engagement, which leads to entrepreneurial success (Jensen & Luthans,

2006b). A new study found that worker involvement boosts creativity, making it a workplace requirement. Considering this, we can predict hypothesis:

H4: WE mediates association among Authentic leadership & employee-creativity such that link is much stronger with higher WE.

2.5. Moderating role of psychological empowerment

Few studies have examined how psychological empowerment moderates real leadership-employee relationships. Although psychological empowerment moderates many factors yet, another study revealed that psychological empowerment effects moderately on authentic & transformative leadership (Matej Groselj et al., 2020). Hence, psychological empowerment highest degrees were seen in both genuine & transformational leadership styles, & the newness of work behaviour did not vary. Even with limited psychological empowerment, authentic & transformative leadership increased innovation. PE involves competence, autonomy, meaning, & effect. However, job engagement means being thoroughly immersed & excited about one's professional responsibilities, feeling dedicated, & having great energy while doing them. Employee creativity is the production & use of new & valuable ideas at work.

Employees may feel empowered when real & transformative leaders supervise & micro-manage less. Staff feel valued & self-motivated under this leadership style (Yang, 2015) & promotes innovation by giving them control & increasing their confidence in overcoming challenges. Yang (2015) found that highly talented people respect autonomy & innovate since leaders are not involved. Low psychological empowerment reduces employee autonomy or motivation. Thus, honest & transformative leadership has less impact on staff innovation. Both leadership philosophies say followers are most inventive when leaders are real. Hence, we can predict below hypothesis.

H5: PE positively moderates association among WE & EC such link is much stronger with more higher PE.

2.6. Research Model

The following model was explored to determine how project-based organizations AL affect EC (Figure 1).
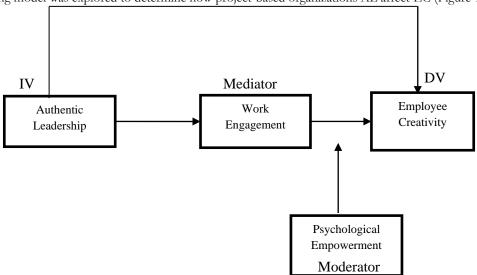

Figure 1: Research framework

3. Research Design

This study conducted systematically literature review from 2000 to 2023, The quantitative research approach was deployed to collect data from middle management employees of project base construction sector from Islamabad & Rawalpindi. Data collected via non-probability sampling, as it was depicting the true reflection of population. Convenience sampling is faster & cheaper than other sampling methods, therefore it helped pick the sample size rapidly. Krejcie & Morgan (1970) recommended population-specific sample size. The online questionnaires were distributed in seven selected construction sector firms in the, Rawalpindi & Islamabad to form a reasonable sample size. 60 questionnaire distributed & 53 questionnaires returned. The study utilize modified scale questionnaire. However, questions measured via 5 points scale range strongly disagree to strongly agree.

3.1. Variables Measurements

Authentic leadership (AL) is the independent variable in this study, Walumbwa et al. (2008) provided 16-item scale items. Employee creativity (EC) is the dependent variable in this study, Tierney et al. (1999) provided the scale the 4-item Scale. The study's mediator is Work Engagement (WE), measured using Schaufeli, Wilmar B., Marisa Salanova, & Vicente Gonzalez-Roma's (2002) 4-item scale. Authentic leadership (AL) is the independent variable in this study, while Tierney et al. (1999) provided the 16-item scale.

4. Results

The data collected from respondents is presented here. Data was analyzed by SPSS to answer research questions. Variable results are tallied & evaluated.

4.1. Demographic Analysis

Table 1 below depicts the gender, age, education, experience & the level of management of the employees. It is clearly depicting that the male percentage is high & is 87%. Also, the bulk of responses were 34-40 years old. Data shows 56% of employees have over 15 years of experience. The quantity of respondents having bachelor's degree is high. & finally, in table 5, the middle level of management is high.

Table 1: Demographics of Respondents

		Frequency	%	Valid Percent	Cumulative %
Gender.	Male.	46	86.8	86.8	86.8
	Female.	7	13.2	13.2	100
	Total	*53*	*100*	*100*	
Age	26-33 years	14	26.4	26.4	26.4
	34-40 years	27	50.9	50.9	77.4
	41-49 years	11	20.8	20.8	98.1
	over 50 years	1	1.9	1.9	100
	Total	*53*	*100*	*100*	
Education	Intermediate	13	24.5	24.5	24.5
	Graduation	30	56.6	56.6	81.1
	Masters	8	15.1	15.1	96.2
	Others	2	3.8	3.8	100.0
	Total	*53*	*100.0*	*100.0*	
Experience	1-5 Years	1	1.9	1.9	1.9
	6-10 years	4	7.5	7.5	9.4
	11-15 years	21	39.6	39.6	49.1
	Above 15 years	27	50.9	50.9	100
	Total	*53*	*100*	*100*	
Level of Management	Top Management	2	3.8	3.8	3.8
	Middle	46	86.8	86.8	90.6
	Lower	5	9.4	9.4	100.0
	Total	*53*	*100.0*	*100.0*	

4.2. Control Variable

Gender, age, qualification, experience, & level of management affect the employee's Creativity (DV). Therefore, these demographics variables were included in the study. However, it was found that no element had significant effect on employee's creativity. Thus, we don't need to control any demographic variable during the regression analysis. Table 2 shows demographic variables with one-way ANOVA results.

4.3. Reliability of Variables

Cronbach's alpha coefficients of independent variables, dependent variables, mediator, & moderator were collected for reliability analysis. Table 4.3 shows all factors are dependable. Sekaran (2000) recommends Cronbach Alpha over 0.70. Variable reliability indicates steadiness & consistency. Table 3 indicates that all variable measurements are dependable.

Table 2: Control Variable

Demographics	Employees Creativity	
	f Statistics	p value
G&er	0.437	0.511(ns)
Age	2.171	0.103 (ns)
Education	0.783	0.509 (ns)
Experience	1.726	0.174 (ns)
Level of Management	.672	0.51 (ns)

ns =non-significant

<div align="center">Table: 3   Reliability - Tools Used & Their Cronbach Alpha</div>

Variable name	Mean	Cronbach's Alpha
AL	3.741	0.873
PE	3.533	0.853
WE	3.543	0.75
EC	3.632	.758

Cronbach's Alpha value at-least 0.70 is preferable

4.4. Correlation Analysis

By significant level & direction (either positive or negative), analysis indicates relationship among two variables. Positive signs suggest that variables are going in the same direction, whereas negative signs indicate opposing motions. The correlation coefficient is calculated using Pearson correction. Coefficient ranges from +1.00 to -1.00. Zero means variables are uncorrelated. Correlation analysis examines link among AL, WE, psychological empowerment, & employee creativity.

<div align="center">Table 4: Correlation Coefficient</div>

	AL	PE	WE	EC
AL	1			
PE	.357**	1		
WE	.404**	.634**	1	
EC	.297*	.364**	.567**	1

should be below 0.50%

Table 4 shows that all the variables are positively related as discussed in our Hypotheses. However Psychological empowerment is mixing with work engagement (0.634). On the other h&, Work engagement is also mixing with Employees creativity (0.567).

4.5. Regression analysis- moderator:

Regression analyses commonly anticipate & examine variable relationships. Correlation analysis demonstrates X-Y connection strength. Regression analysis predicts Y from X values. It draws conclusions on variable dependency. This approach predicted the dependent variable on independent variable to estimate dependency. A linear regression between two variables is described by the regression line & the components not considered.

Table 5 shows the non-significant positive impact of PE on EC (β =.009 ns, p=0.959) & the also represents the results of interaction terms of PE x WE. It shows that no moderation exists between WE & EC. Initially, demographic characteristics must be controlled. It was not applicable on the data obtained for this study as indicated in table 4.2 of control variable. In the second stage, PE & WE were included, although PE did not explain much variation in EC (β =.009 ns***, p=0.959). Whereas the table shows the positive significant effect of WE on EC. (β =.576 ns***, p=0.000).

Moderated regression analysis included the interaction term, which did not explain much variance in EC, ΔR^2 = .000, p > .05. Therefore, H5 is rejected.

<div align="center">Table 5: Regression Analysis</div>

Predictors	Employ Creativity		
	β	R^2	ΔR^2
Step-1			
Control			
Step-2			
PE	.009 ns		
WE	.576***	0.322***	
Step 3			
PE*WE	0.05 ns	.323	0.124 ns

4.6. Regression Analysis – Mediator

Mediation examines whether (the independent variable- X) affects (the dependent variable- Y) via M. Mediation explains "how" two variables are causally related. Preacher & Hayes tried mediation to prove work engagement mediates.

Table 6 shows the result of regression analysis. AL has positive but non-significant on project success (β =0.4004, p> .0.5), rejecting the first hypothesis. AL has significant impact on WC (β =.5327, p <0.05), accepting second hypothesis. WE have positively significant impact on EC (β=.575, p < .01), accepting third hypothesis. The indirect effect of ALon EC through the mediation of WEare non-significant as employee engagement (mediator) has non-significant impact on project success (dependent variable).

Table 6: Regression Analysis - Process Macro

Mediation effect of mediator between IV & DV	β	SE	t	p
Authentic leadership ⟶ Employees creativity	0.4004	0.2543	1.5741	0.1217
Authenic Leadership ⟶ Work Engagement	0.5327*	0.2067	2.577	0.0129
Work Engagement ⟶ Employee Creativity	0.5475**	0.1728	3.1688	0.0026
AL ⟶ WE ⟶ EC	0.1087	0.2085	0.5214	0.6044
Bootstrap results indirect effect	In-direct effect	LL 95% CI	UL 95% CI	
	0.2917	0.1078	0.5545	

CI= Confidence Interval, UL=Upper Limit; LL=Lower Limit

5. Discussion:

However, this research has significant scholarly & organizational implications. It is the first research to rigorously examine how job engagement mediates real leadership & employee innovation & how psychological empowerment moderates it. Previous studies only mediated AL & EC via psychological capital. Insignificant coefficient range indicate no association among variables. Findings imply good leadership enhances employee creativity. Rego et al. (2012) found similar results. Authentic leaders empower & engage colleagues, making them more innovative.

According to the data, genuine leadership has a substantial positive link with work engagement, indicating that an authentic leader may create a particular connection with his staff to keep them interested & involved. Giallonardo et al. (2010) found that real leaders engage employees.

The final hypothesis that works involvement positively affects employee creativity was likewise supported by the data. Being more involved in work naturally leads to better performance. Bakker et al. (2006) found that people with high work engagement used a variety of approaches to overcome employment obstacles, proving that engagement & creativity are linked.

Work engagement also predicts a mediating association of AL & employee inventiveness, suggesting that authentic leaders inspire more creativity among engaged workers who value their work. According to recent research, job engagement boosts creativity, thus employers must keep workers interested.

This study also emphasizes psychological empowerment's moderating influence. However, psychological empowerment mediating function among job engagement & creativity was not recognized in this pilot study, although other researchers have shown it. Authentic leadership is closely connected with psychological empowerment, showing how it empowers employees. In 2004, Zue, May, & Avolio projected a significant link between authentic leadership & empowerment. A true leader respects & bonds with his colleagues at work. This empowers & motivates employees. Psychologically empowered employees are more motivated because they know their work matters, are confident they can do something special, have some control over their work environment, & can introduce & regulate their own activities. Employees feel empowered by these amounts. Thus, people will regularly generate new ideas & be more creative at work.

6. Recommendations:

This study shows that team leaders' authenticity favorably affects employees' creativity, which can assist managers & construction businesses for importance of authentic leadership. Leaders must understand how personalities affect their followers & subordinates. Organizations should also hire real leaders & teach them to boost staff innovation. Organizations should assist managers to become more real to boost employee creativity. Feedback from various sources includes role acting, & leaderless group conversations, can assist leaders understand their workers' viewpoints & become more authentic leaders (Hsiung, 2012; Ilies et al., 2005). Monitoring engagement & empowerment through feedback & surveys is crucial. Genuine leaders may foster a creative work atmosphere that boosts staff performance.

7. Conclusion

This research might make several additions to the literature. First, a model was developed & tested to measure how genuine leadership affects employee creativity using work engagement as mediator & PE as moderator. To get outcomes & positive employee behavior, leaders & managers must examine these findings. Leaders & supervisors may be trained to be more honest to boost staff creativity. We discover WE considerably mediates relationship among AL & EC. Authentic leaders boost employee creativity by increasing work engagement. It was noted that real leaders engaged workers. Thus, project-based organizations should consider HR actions to boost employee engagement. It was also noted that psychological empowerment showed a strong moderating relationship among employee engagement with their creative abilities. Thus, more empowered employees will be more creative. Project-based organizations should empower their staff by taking suitable initiatives.

8. Limitations:

A few limitations were present in this study. Firstly; research conducted in construction companies in Islamabad & Rawalpindi, so data collection was limited. Hence the results obtained cannot be relied on 100%. Therefore, generalizing the findings of the study is questionable even within the country. Due to time & resources limitation, the unit of analysis was

individuals which could have been dyads. To represent the targeted population accurately, to check the generalizability of current model, future study may collect date from other contractual based construction companies & sectors of Pakistan. Future study can also increase the spectrum of unit of analysis, to have more accurate results.

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Conflict of Interest Statement

The authors of this article declare that there are no conflicts of interest that could potentially bias the research, analysis, or conclusions presented herein. This research has been conducted with the utmost transparency & impartiality, & no financial, personal, or professional relationships exist that could be perceived as influencing the content or the outcomes of this study. We have complied with the guidelines & policies, & we affirm that this statement accurately represents the potential for conflicts of interest related to this publication.

(Haider Ali Shams)