

Measuring The Impact Of Perceived Authentic Leadership On Innovative Work Behavior: The Mediation Moderation Analysis

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Abstract

Leader support has the power to increase employee creativity and create an environment that is favorable for job autonomy in innovative behaviors. The study set out to investigate the impact of perceived authentic leadership on employees' innovative workplace behavior. The study also suggested looking at how job autonomy shapes the association between workers' innovative work practices and their perception of authentic leadership. Supervisors provided insights into employees' innovative behavior, while employees reported other aspects. A total of 384 middle and functional management employees from information technology companies were surveyed. The data was then subjected to a number of studies using Smart PLS 4 and SPSS, including structural equation modeling, confirmatory factor analysis, ANOVA, and reliability analysis. The results of structural equation modeling showed a strong predictive link between workers' innovative activity at work and their perception of authentic leadership. Furthermore, the relationship between innovative work behavior and perceived authentic leadership was found to be significantly mediated by employees' creativity. Significantly, the association between employee creativity and creative work practices was found to be moderated by social cognitive theory. The study concludes that perceived authentic leadership support has a critical role in improving staff

performance in the information technology sector, which in turn promotes overall firm growth.

Key words: Perceived authentic leadership, Innovative Work Behavior, Employee Creativity, Job Autonomy

Introduction

In today's fiercely competitive business landscape, organizations must implement innovative work behavior as a strategic approach to enhance quality and maintain competitiveness (Asbari & Wijayanti, 2020; Sopa, 2020). Innovative work behavior, which encompasses critical thinking and the pursuit of new ideas, not only fosters creativity but also encourages employees to find effective and efficient solutions to problems (Novitasari, 2021). Previous studies highlight the importance of employees exhibiting innovative work behavior as valuable assets to any company (Fikri, 2020). The absence of this behavior can lead to a decline in overall work performance, making it crucial for companies to prioritize hiring individuals with innovative work behavior (Basuki, 2020). Experts emphasize that innovative diversion at work is essential for an organization's ability to remain competitive and dynamic.

As an Information Technology (IT) sector in Pakistan navigates the challenges and opportunities of a rapidly evolving landscape, understanding the intricate relationship between perceived authentic leadership and innovative work behavior becomes a practical necessity for organizational success (Arpatech, 2019). This study aligns with several Sustainable Development Goals (SDGs), particularly those related to economic growth, innovation, and industry. The research attempts to close the knowledge gap by empirically analyzing a unique and new approach in understanding employees in the Information technology sector of Pakistan, which has been previously overlooked in studies focused on the western world (Bahzar, 2019; Covelli & Mason, 2017). Specifically, study focuses on the contact of certain leading styles on innovative work behavior in the context of Pakistan. This particular

interest given the challenges employees face in maintain motivation and creativity during and after the global pandemic (Bahzar, 2019; Covelli & Mason, 2017).

According to recent studies, which have gained augmented attention in the past decade, there is a need to understand the influence of leader's style on the innovative work behavior and the creativity, particularly in current challenging economic times (Shafi et al., 2020). It has noted that previous studies were conducted in a different economic environment and may not accurately reflect the current situation (Sultana, 2020). To be effective in the current study, leaders must not only address negative impairments but also promote positive facilitating factors (Shafique, 2019). Therefore, the studies pursuits to refill the space by way of inspecting the effect of perceived authentic leadership on the innovative work behavior and the employee's creativity in the presence of employees' job autonomy, assumed the current economic downturn, post mature stage of the industrial and business life cycles, and global financial crises and where employees face continuous challenges. Regarding the role of employee creativity as a mediator in the relationship between creative work behavior and perceived authentic leadership, there is a research vacuum in the prior literature in the information technology industry (Mall, 2017; Wang & Rode, 2018).

Although earlier research has indicated a positive correlation between innovative work practices and perceived authentic leadership, there is little empirical support in the information technology industry especially (Wang & Rode, 2018). Additionally, there is not enough research that examines how a worker's creativity may mediate this relationship in the Information technology sector (Mall, 2017). Therefore, there is a need for further investigation into the factors that promote innovative work behavior among employees in the field of information technology, with a particular emphasize on the mediating function of employee creativity (Wang & Rode, 2018). By understanding how perceived

authentic leadership, employee creativity, and innovative work behavior are related in this industry, organizations can develop effective strategies that promote a culture of innovation and enhance their competitive advantage (Mall, 2017).

Additionally, the field of information technology is concerned with the moderating role that job autonomy has for employees in the connection between perceived authentic leadership and innovative work behavior (Chang, 2021; Zafar & Gill, 2021). Little empirical evidence backs up the theory that employee job autonomy has a moderating effect on this relationship, despite research showing a positive association between perceived authentic leadership and innovative work behavior in the information technology sector (Chang, 2021). While, the existing literature provides mixed results regarding the state between employee job autonomy on innovative work behavior (Zafar & Gill, 2021). Therefore, there is a need for further research to explore the moderating effect of these variables in the Information technology sector in order to comprehend better of how perceived authentic leadership can be leveraged to promote innovative work behavior. This knowledge can help organizations to design effective leadership interventions and job design strategies to encourage an innovative culture in this sector (Chang, 2021; Zafar & Gill, 2021).

The current study on the impact of Perceived authentic leadership on innovative work behavior is limited in Pakistan's Information technology sector with a particular gap in recognizing the role that employee creativity plays as a mediator in this interaction. While some studies have linked perceived authentic leadership to both creativity and innovative work behavior, but further research is required to completely perceive the mechanism by which this relationship can operate. Specifically, it is necessary to investigate how perceived authentic leadership can promote employee creativity, this ultimately results in to increased innovative work behavior. According to Afsar (2017), without

employee creativity and a support of employee's job autonomy, attempts at innovations are likely to fail.

Therefore, realize the function of perceived authentic leadership in promoting employee creativity is important for successful innovation in the Information technology sector of Pakistan. Despite recent studies in a number of industries, the impact of perceived authentic leadership on creative and innovative work practices in Pakistan's information technology sector has not received enough attention. Sensitive to the relationship between innovative work behavior and perceived authentic leadership is essential as Pakistan's IT industry experiences revolutionary changes. In the context of Pakistan's information technology sector, this study seeks to fill this knowledge vacuum in the literature and add to the body of knowledge that guides innovative and authentic leadership practices. This study endeavors to scrutinize the relationship between perceived authentic leadership and innovative work behavior among employees in Pakistani Information technology firms. Thus, this research work is guided by following five research questions

1. To what extent does perceived authentic leadership impact innovative work behavior in Pakistan's IT industry?
2. To what extent does perceived authentic leadership influence employee creativity in this sector?
3. To what extent does employee creativity affect innovative work behavior in Pakistan IT sector?
4. To what extent does employee creativity mediate the relationship between perceived authentic leadership and innovative work behavior?
5. To what extent does job autonomy moderate the relationship between employee creativity and innovative work behavior.

Theoretical Underpinning and Literature Review

Albert Bandura's Social Cognitive Theory (SCT) offers a valuable framework for understanding the dynamics in the information technology (IT) sector by emphasizing the role of innovative work behavior, perceived authentic leadership, and employee creativity. IT professionals often enhance their skills and adopt new practices by observing peers, mentors, and online communities, which helps them learn through modeling. Employee creativity believing in one's ability to effectively handle IT tasks plays a critical role in motivating and performing in areas such as coding, system design, and problem-solving. Furthermore, social factors like peer support and collaborative projects significantly influence IT professionals' creativity and innovation. Social Cognitive Theory, therefore, provides a comprehensive view of how personal, behavioral, and environmental factors interact to foster innovative work behavior and creativity in the ever-evolving IT sector (Bandura, 2001; Li et al., 2020).

In research exploring the link between innovative work behavior (IWB), perceived authentic leadership (PAL), and employee creativity, Social Cognitive Theory (SCT) offers valuable insights. SCT suggests that learning takes place within a social context, driven by the interaction of personal factors, behavioral patterns, and environmental influences. Authentic leaders who are marked by transparency, ethical behavior, and consistency create an environment that nurtures both employee creativity and innovative work behavior among IT professionals. This supportive setting encourages employees to adopt innovative practices by modeling creative actions and offering constructive feedback. When employees view their leaders as authentic, they are more inclined to embrace these behaviors and feel more confident in their creative contributions. Thus, Social Cognitive Theory highlights that perceived authentic leadership can enhance innovative work behavior by utilizing social learning processes and strengthening

individuals' belief in their creative abilities within the IT sector (Bandura, 2001; Leroy et al., 2020).

Research has shown that employee creativity plays a critical role in the long-term development and profitability of small and large enterprises alike (Laguna, 2019). In small organizations where the business owners typically also serve as a manager, their attitude and leadership style have a particularly significant impact on innovation. Previous studies have established the significance of managerial support for encouraging innovative behavior among employees (Ardana, 2016). In a meta-analysis examining factors that predict innovation among organizational members, (Hammond, 2020) found that immediate supervisors have an ability to stimulate innovation among their subordinates (Konga & Ramaiah, 2021). Previous studies have established the significance of managerial support for encouraging innovative behavior among employees (Databoks, 2021).

Perceived authentic leadership theory suggests that authentic leaders can encourage innovation by promoting imagination and daring among their followers (Yukl & Gardner, 2019). Through high relational transparency, managers can openly express their support and value for their employees, abilities and build personal capital, which encourages employees to generate and use new ideas (Verawati & Hartono, 2020). Additionally, authentic leaders encourage a range of viewpoints and are more accepting of ambiguity, which empowers workers to question accepted workplace norms and see their leaders as reliable sources of feedback (Yukl and Gardner, 2019). Furthermore, unusually self-assured and fearless in taking chances and experimenting, authentic leaders can encourage creative activity in their staff (Hartono, 2020). In light of the conversation above, the first hypothesis is put forth as,

Hypothesis 1: Perceived authentic leadership may significantly impact on innovative work behavior of employees.

In the last decade, perceived authentic leadership has become a crucial aspect of leadership in organizations. Leaders who are authentic can help their employees find significance and association, which is especially important in today's novel, chaotic and dynamically changing work environment. Authentic leaders can introduce novel concepts that set their organizations apart from others. Additionally, because it gives workers the psychological stability and reinforcement, they need to feel inspired to share their ideas; perceived authentic leadership fosters creativity and innovation in the workplace. Research by (May and Ghosh, 2015) lend credence to the idea that workers' creativity is enhanced when they perceive authentic leadership.

According to (Michie & Gooty 2005), by reducing their employees' sense of vulnerability, authentic leaders can also help their staff members become more authentic. In order to encourage creativity and novel thinking in the workplace, employees require the support and reassurance of their leaders, who can create a positive and transparent work environment (Vignoli 2018). By fostering relationships in the workplace that are reasonable, helpful, positive, and transparent, perceived authentic leadership helps to increase favorable attitudes among workers (Wong, 2010), which in turn promotes higher employee creativity. Employee creativity is positively correlated with moral and ethical viewpoints, according to research by Valentine (2011). This literature review leads to the following hypothesis:

Hypothesis 2: Perceived authentic leadership may be related to employee creativity.

An individual who exhibits innovative work behavior makes a conscious effort to implement novel and advantageous concepts, ideas, or practices inside a team, organization, or job role. Although

the definition of creativity is the presenting of novel and practical ideas for goods, services, operations, and processes, creativity is also an essential component of the execution of innovative ideas. creative ideas are the foundation of creativity, according to Ven de Ven (2017), and this study suggests that creativity might encourage people to operate in a creative manner. Amabile and Pratt's (2016) research indicates a clear relationship between an employee's creative work practices and their innovative work behavior.

Hypothesis 3: Employee creativity may be related to innovative work behavior.

The effectiveness and efficiency of an organization can be improved through the formation of novel ideas, which is referred to as the employee creativity. Employee creativity plays a significant role in this regard, and organization should encourage their employees to work hard and come up with breakthroughs. Leaders should encourage and value creative and innovative work in order to have a good effect on employees' creativity and innovation. Authentic leaders can motivate and enhance employee's creativity by setting performance standards, demonstrating confidence in employees and encouraging them to present fresh concepts and make use of cutting-edge methods for solving problems (Khalili, 2016). Authentic leaders play critical role in encouraging employee creativity and promoting innovation within the organization. (Baldegger & Gast, 2016) state that authentic leaders create and articulate a shared vision that inspires and appeals to employees. This along with intellectual stimulation encourages employees to think creatively and come up with the innovative solutions. Employee creativity is a foundational element of innovation and a raw resource required for corporate development (OECD, 2010). Employee creativity is essential for organizational success and efficiency and it can be refined to achieve innovative behavior among employees (Jong & Hartog, 2008). Thus, it is postulated that

employees' perceptions of authentic leadership have a favorable impact on their creativity, which in turn encourages innovative work behavior.

Hypothesis 4: Employee creativity may significantly mediate the relationship of perceived authentic leadership and innovative work behavior.

The degree of independence and freedom that employee is given over their work is known as job autonomy Hackman and (Oldham, 1976). In the workplace, autonomy is defined as a worker's sense of freedom to decide how to behave in relation to tasks, deadlines, and schedules with little guidance from superiors (Baard, 2004 & Deci; Ryan, 2002). Innovative work behavior (IWB) is defined by (Kloll and Linge, 2009) and (Jaskyte, 2004) as a complex pattern of activity exhibited by employees that results in the development, introduction, and use of original ideas. These skills give the organization a benefit. Employee job autonomy, or the right to work as easily as possible, is essential for encouraging creativity (Chung-Yan, 2010). Depending on the procedures and nature of the business, this autonomy may take many forms (Ryan & Deci, 2006).

Through automation of processes, increased equality and transparency, regulatory compliance, and the resolution of labor shortages, workforce optimization a business strategy that integrates corporate performance metrics with human resource management has been demonstrated to enhance innovative work behavior (Vovk, 2021). To foster a work atmosphere that encourages innovative work behavior, the setting should be maximized for inclusive management and considerate behavior toward everyone (Abbas, 2022). Establishing a brainstorming wall that promotes individualism and facilitates the exchange of actionable ideas as well as the initiation of small-scale demonstrations against uncomfortable workplace practices is one method of integrating innovative behavior (Baruah & Paulus, 2019). This approach gives

each person the autonomy to decide what is acceptable and what is not (Battistelli, 2019).

In addition, a mentor can help with communication by letting someone bounce ideas off of someone else and select a team member they can work on a project with without feeling judged (Odongo, 2018). A place for self-reflection, moderation, and acknowledgment of those who think outside the box can be created by pushing staff members to try new things through presentations of unusual ideas, sharing of motivational articles, and group brainstorming, all of which promote social and psychological maturity (Brimhall, 2019 & Abbas, 2021). According to studies, autonomy is crucial for creative people and their projects since it boosts their self-esteem and gets rid of obstacles that keep them from being creative. Fulfilling employees' psychological needs and enabling them to be intrinsically driven can be made possible by management support for autonomy (Mumford, 2002). In contemporary businesses, the usage of self-managed autonomous teams has grown in popularity.

According to (Ramamurthy, 2005), workplace autonomy affected creative people's sense of obligation to use their innate ability for innovation in both direct and indirect ways. According to (Axtell, Shalley, 2000), having autonomy and control over one's work environment fosters creative work habits and increases employee job satisfaction. It has been discovered that autonomy combined with well-defined goals increases the likelihood of creative results (Hackman & Oldham, 1976). Furthermore, (Song, 2012) hypothesized that work autonomy served as a moderating construct to explain inventiveness in the behavior that was creative. This study emphasizes job autonomy as a critical component that directly affects employee creativity and acts as a spark to encourage innovation in committed employees. If employees aren't motivated to see the need of innovative thinking inside the organization which calls for independence or a high level of task-related autonomy their

creativity might not necessarily result from affective commitment. When strong affective commitment is paired with job autonomy, employee creativity may increase significantly. Therefore, the present study advances the hypothesis that worker autonomy at work plays a major role in the growth of innovative work behavior.

Hypothesis 5: Job autonomy may significantly moderate the relationship of employee creativity and innovative work behavior.

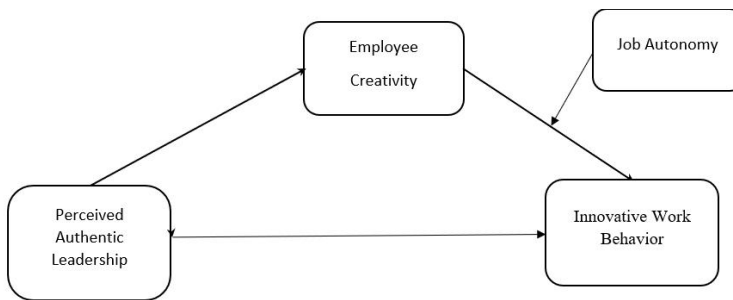


Figure. Theoretical Framework

Research Methodology

The population of this research was information technology companies in Pakistan that employed middle-level and functional-level managers, including senior managers, divisional managers, team leaders, project managers, zonal managers, web designers, graphic designers, video editors, app developers, online security specialists, and social media specialists. The unit of analysis was justified by the aim to gain comprehensive insights into various hierarchical levels within IT companies in Pakistan. This approach ensures a holistic understanding of perspectives, responsibilities, and contributions across different managerial roles and employee positions. By encompassing a diverse range of roles, the research aimed to capture a nuanced view of the organizational dynamics related to innovation, employee creativity, job autonomy and other relevant factors within the IT sector. Furthermore, it is important to state that the study variables employee innovative work behavior

could be best reflected in these mentioned middle-level and functional level management of IT sector of Pakistan.

The study focused on the information technology companies with a combined estimated are 8516 out of which 90% companies located in four major cities Karachi, Lahore, Islamabad and Rawalpindi (Annual report of Ministry of Information technology of Pakistan 2021-22) .It was hard to approach the employees of all the registered information technology companies so by using convenience sampling techniques the sample size chosen and also utilizing the Krejcie and Morgan formula, a sample size of 384 employees was determined, and survey questionnaires were distributed through a Google-generated form for data collection. Collaboration with the HR departments of the selected IT companies ensured the accuracy of data collection. A convenience sampling approach was used to get the minimum sample size of 384 for this study. Every member of the population has an equal probability of being chosen using the convenience sampling technique (Sekaran, 2001). The present investigation employed validated assessment instruments from previous studies to evaluate multiple dimensions, including employee creativity, creative work environment, perceived authentic leadership, and innovative work behavior.

Part	Measures	No. of Items	Developed By
Part 1	Demographic Profile	4	////
Part 2	Perceived Authentic	8	Walumbwa, 2007
	Employee Creativity	7	Tierney and colleagues (1999)
	Job Autonomy	3	Voydanoff (2004
	Innovative Work Behavior	6	Scott and Bruce
Total number of items		28	

Table 1 Questionnaire Items

Results and Findings

The table provides respondents' frequency and percentage distribution based on demographics of respondents in the research study. According to the table 2, 222 (57.8%) of the total respondents identified as male, while 162 (42.2%) identified as female. This data indicates a higher representation of male respondents in the study, accounting for nearly 57.8% of the total respondents. On the other hand, female respondents constituted approximately 42.2% of the total sample.

Table 2 also represents that people aged between 25 to 35 years of age were 44.8 per cent, from 36 to 45 years were 33.4 per cent, 46 to 55 years were 16.9%, and above 56 were only 4.9 percent. This shows the ethnicity of different respondents of the study. The table 2 also represents the qualifications of different respondents to the research. It can be seen that 45.8 percent of the respondents have done intermediate, 33.3 percent have done graduation, 18.7 percent have completed masters and 02.8 percent of the respondents have Ph.Ds.

Constructs	Sub-Constructs	Frequency	Percent
Gender	Male	222	57.8
	Female	162	42.2
Age	25-35	172	44.8
	36-45	128	33.4
	46-55	65	16.9
	Above 56	19	4.9
Qualification	Intermediate	176	45.8
	Graduation	128	33.3
	Masters	72	18.7
	Doctorate	08	02.8

Years of Experience	<3 years	99	25.8
	3 to 6 years	120	31.1
	6 to 9 years	80	20.8
	9 to 12 years	56	14.6

Table 2 Demographic Analysis

The correlation study looked at the links between the independent variable (PAC), the mediating variable (EC), the moderating variable (JA) and the dependent variable (IWB). Pearson correlation analysis (Table 3) reveals a moderately favorable association between perceived authentic leadership and employee creativity ($r=0.548$, $p\text{-value} < 0.001$). Additionally, there is a strong correlation between perceived authentic leadership and innovative work behavior ($r =.211$ and $.340$) as well as job autonomy. There exists a positive and moderate association among employee creativity, job autonomy, and creative work behavior.

		PAL	EC	JA
EC	Pearson Correlation	.548	1	1
	Sig. (2-tailed)	.000		
	N	348		
JA	Pearson Correlation	.211	1	1
	Sig. (2-tailed)	.000		
	N	348		
IWB	Pearson Correlation	.340	.398	1
	Sig. (2-tailed)	.000	.000	
	N	348	348	

Table 3 Correlation Analysis

For Hypothesis testing, the Regression Analysis Using Process Hayes was used. A standard multiple linear regression is used to

gauge how well the independent and dependent variables can be correlated. The table 4 shows that the dependent variable, innovative work behavior, has an R^2 of 36.7%, indicating that independent variables account for 36.7% of the variation in the dependent variable. The adjusted R^2 value is less than R^2 that is 36.7% for innovative work behavior so the value of the dependent variable is explained by all independent variables. All three hypotheses have shown positive and significant relationships that are accepted. According to the H1 (Perceived Authentic Leadership \rightarrow Innovative Work Behavior), innovative work behavior is favorably and significantly impacted by perceived authentic leadership (beta = 0.165, p-value = 0.024). According to the H2 (Perceived Authentic Leadership \rightarrow Employee Creativity), employee creativity is positively and significantly impacted by perceived authentic leadership (beta = 0.557, p-value = 0.000). Employee creativity positively and significantly influences innovative work behavior, as demonstrated by the H3 (employee creativity \rightarrow innovative work behavior) (beta = 0.178, p-value = 0.020).

<i>Hypo</i>	<i>Path</i>	<i>Beta</i>	<i>T value</i>	<i>P values</i>	<i>Remarks</i>
<i>H1</i>	AL \rightarrow IWB	0.165	2.263	0.024	Accepted
<i>H2</i>	AL \rightarrow EC	0.557	11.308	0.000	Accepted
<i>H3</i>	EC \rightarrow IWB	0.178	2.333	0.020	Accepted
<i>H4</i>	AL \rightarrow EC \rightarrow IWB (Indirect)	0.099	2.081	0.038	Accepted
<i>H5</i>	JA \times EC \rightarrow IWB	0.248	4.831	0.000	Accepted

Table 4 Path Analysis

H4 (AL → EC → IWB) shows how employee creativity acts as a mediator and positively mediates the relationship between perceived authentic leadership and innovative work behavior (beta = 0.099, p-value = 0.038).

Furthermore, explaining the hypothesis H4, which posits an indirect relationship between perceived authentic leadership (AL), employee creativity (EC), and innovative work behavior (IWB), was accepted. The beta effect for this indirect path is 0.099, with a T statistic of 2.081 and a P value of 0.038, indicating statistical significance. This suggests that employee creativity partially mediates the relationship between perceived authentic leadership and innovative work behavior. While the direct effect of perceived authentic leadership on innovative work behavior is significant, the mediation analysis reveals that the indirect effect through employee creativity also plays a crucial role. In table 4, moderation analysis has been shown. The association is strengthened by H5 (JA x EC → IWB), which demonstrates that job autonomy has a significant and favorable effect on employee creativity and innovative work behavior (beta = 0.248, p-value = 0.000). So hypothesis 5 is also accepted.

Discussion and Recommendations

The empirical analysis conducted for this research suggests that the ability of employees in an organization to creatively rework processes, devise new strategies, generate technological products and services, and incorporate innovative ideas or technological solutions significantly influences innovative work behavior. This impact is particularly remarkable when overall employee creativity is predominant at higher levels among employees (Hughes et al., 2020). This implies that if a substantial number of executives or employees in an information technology firm in Pakistan exhibit characteristics like specific routine working behavior, resistance to

new adjustments, or a fear of losing authority and control, the organization may struggle to achieve meaningful innovative changes in its work environment, regardless of its pursuit of enhanced innovative capabilities (Chaubey & Sahoo, 2019).

Moreover, individual creative behavior also has a predictive effect on the innovation success of the firm, an outcome of the organization's innovation capabilities, ultimately contributing to innovative changes in existing work behaviors of employees (Chaubey & Khatri, 2019). These results are consistent with previous studies that highlight the important role that employee creativity plays in the innovative work behavior that employees in the information technology sector often exhibit (Zhang et al., 2020). Recent research also emphasizes that employee creativity is a crucial internal factor influencing both innovative work behavior (Lee et al., 2020) and the overall innovation success of perceived authentic leadership (Tian et al., 2020). The study focuses on the empirical investigation of the function of employee creativity in the overall inventive work behavior within the particular setting of Pakistan's information technology sector. It tackles a difficult research subject that has been modeled by current literature.

Practical Implications

The study highlights several practical implications for IT companies. Specialists in IT firms can enhance innovative work behavior by practicing authentic leadership styles and providing more job autonomy to their employees. Adopting a leadership style that encourages the two-way feedback among supervisor and supervisee with more improved interactions with mutual trust, consequently establishes the more innovative behavior of employees. Furthermore, the IT specialist needs to acknowledge that the employees of the IT sector need to be supported by their leaders with accurate description of how they view their employee's capabilities, this would further enhance the creativity of the IT sector's employees. Another important implication of this study reveals that the

supervisor (leaders) of the IT sector's employee need to be clearer in exactly what they communicate their instructions.

The more clarity and the transparent behavior in terms of willingness to admit their mistakes would be more beneficial for employee to showcase the creativity at workplace. Another important practical implication of the study revealed that the ethical consideration by the supervisor (leaders) and the aptitude of analyzing the different perspectives before decision-making plays a crucial role in regulating the employee creativity and innovative work behavior among the IT sector employee.

Another important implication for IT companies is the use of the research instruments developed in this study. Strategists and practitioners can employ these questionnaires to identify problem areas within their organization and enhance innovative work behavior by addressing those issues. These tools allow for self-assessment of strategies related to perceived authentic leadership, employee creativity, job autonomy, and innovative work behavior. By evaluating these components, practitioners can make informed decisions. Overall, these research instruments provide a foundation for more informed and strategic decision-making.

Directions for Future Research

This study aims to fill gaps in the literature by empirically investigating the factors that drive and impact innovative work behavior in Pakistan's information technology (IT) industry. However, several limitations should be acknowledged. Methodologically, data collection relies on multiple respondents from one or more organizations selected through convenience sampling. Additionally, the study's scope is confined to IT companies in Pakistan, meaning the empirical findings on the enablers of innovative work behavior may not be universally applicable to other service segments or industries within Pakistan's cultural context. This limitation is primarily due to constraints in time and financial resources. Another limitation is the oversight of

the role of experimentation and learning processes in identifying diverse innovative capabilities and their impact on other enablers.

While research suggests that learning procedures, knowledge acquisition, and equitable work practices foster innovative work behaviors among employees, the precise nature of these effects as characteristics of employee creativity has not been fully explored. This gap opens up new research directions. Moreover, the study neglects various organizational variables. Innovative work behavior requires a philosophy that defines the boundaries of internal organizational structures, mechanisms for value generation, and the maintenance of information technology governance. Although the research explores perceived authentic leadership, it overlooks the role of organizational technological cognition, serving as a limitation.

Future studies should focus on the missing links between innovative work behavior and perceived authentic leadership, including (but not limited to) examining the involvement of various cognitive technology processes in management decisions. To enhance the theoretical framework, future research is recommended to utilize a larger sample from the diverse service sectors of Pakistan. Comparative studies among different IT companies could also be conducted to assess the extent of innovative work behavior achieved and its effects on competitive positioning in the industry. Furthermore, future research can extend the present theoretical framework by investigating the role of other organizational factors, such as organizational innovative culture, knowledge exploration and exploitation, human-AI collaboration and organizational technological cognition etc.

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