MEASURING THE IMPACT OF PERCEIVED AUTHENTIC LEADERSHIP ON INNOVATIVE WORK BEHAVIOR: THE DUAL MEDIATION MODERATION ANALYSIS

By

Javeria Rasheed

MSBA HRM, AUGUST 2024

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTERS of SCIENCES

In **BUSINESS ADMINISTRATION**

FACULTY OF MANAGEMENT SCIENCES

NATIONAL UNIVERSITY OF MODERN LANGUAGES,

RAWALPINDI

THESIS/DISSERTATION AND DEFENSE APPROVAL FORM

The undersigned certify that they have read the following thesis, examined the defense, are satisfied with the overall exam performance, and recommend the thesis to the Faculty of Management Sciences

Thesis/ Dissertation Title: _____

_____

Submitted By: _____ (Name of Student) _____ **Registration # _____**

_____

Degree Name in Full (e.g. Master of Philosophy, Doctor of

_____(Name of Supervisor) _____ _____

Signature

Dr. Shoaib Hassan
HOD (MS)

_____

Signature

Dr. M Zahid Iqbal
Dean FMS

_____

Signature

Date_____

CANDIDATE DECLARATION FORM

(Declaration Form to be filled in by Candidate at the time of Submission of Thesis to the Supervisor for Internal and External Evaluation. Follow this pattern strictly, and also let the dotted lines appear on the page)

I _____JAVERIA RASHEED_____

Daughter/ Son of ____Abdur Rasheed_____

Registration # ___NUML-F21-16142_____

Discipline: Human Resource Management_____

Candidate of___MS-HRM_____ at the National University of

Modern Languages do hereby declare that the thesis (Title): Measuring the impact of perceived authentic leadership on innovative work behavior: the dual mediation moderation analysis_____

Submitted by me in partial fulfillment of MPhil/ PhD degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution. I also understand that if evidence of plagiarism is found in my thesis/dissertation at any stage, even after the award of a degree, the work may be cancelled and the degree revoked.

Signature of Candidate _____

Date____22 July 2014_____

Name of Candidate___Javeria Rasheed_____

Abstract

According to the study, 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

Table of Contents

Contents

List of Tables

Acknowledgments

I would like to express my deepest gratitude to all those who have supported and guided me throughout the course of this research.

First and foremost, I am profoundly grateful to my advisor, **Dr Malkah Noor Kiyani** for her invaluable guidance, support, and encouragement. Her expertise and insight were instrumental in shaping this thesis, and her patience and understanding have been greatly appreciated.

I also extend my heartfelt thanks to the members of my thesis committee, **Dr Fawad** and **Dr Aiza** for their constructive feedback and helpful suggestions.

I would like to acknowledge the **NUML University Lalkurti Campus** for providing the resources and facilities necessary for this research. Special thanks to **Dr Shoaib (HOD)** and **Sir Shoaib Ghulam (Thesis Coordinator)** for their assistance and support.

I am grateful to my colleagues and friends, **Muhammad Ammar Naveed, Sobia Mureed, Maryam Hassan,** and **Hina Nisar**, for their solidarity, support, and valuable discussions that helped refine my ideas.

I would also like to express my appreciation to my family, **My Parents and siblings** for their unwavering support, understanding, and encouragement throughout this journey. Their belief in me has been a constant source of motivation.

Thank you all for your contributions and encouragement, without which this thesis would not have been possible.

Javeria Rasheed

CHAPTER 1

INTRODUCTION

Background of Study

In a time defined by swift technological progress and intense global competition, the Information technology sector has an important feature in driving monitory growth and societal advancement (Evalina Et al., 2021). The industry's dynamic nature necessitates a continuous commitment to innovation, adapting to changing consumer needs, evolving technological landscapes, and shifting regulatory frameworks (Evalina Et & E., 2021). As organizations within the Information technology sector navigate this ever-changing environment, understanding the factors that foster innovative work behavior becomes paramount (Evalina Et & E., 2021).

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.

Focusing on the IT industry, which plays a crucial role in fostering innovation and enhancing infrastructure, this research delves into the factors that drive innovative work behavior in IT companies. By examining these factors, the study contributes to advancing technological capabilities and promoting sustainable industrialization. This aligns with SDG 9: Industry, Innovation, and Infrastructure, which emphasizes the importance of building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation.

Through this exploration, the study not only seeks to improve organizational success within the IT sector but also aims to support broader economic and sustainable development goals. By understanding how authentic leadership influences innovative work behavior, IT companies can better navigate the complexities of the modern business environment, driving progress and contributing to the sustainable growth of the industry.

Additionally, by investigating aspects such as perceived authentic leadership, employee creativity, and innovative work behavior, the study sheds light on how organizations can create a conducive work environment. This, in turn, leads to increased productivity, job satisfaction, and economic growth within the IT sector, which falls under SDG 8: Decent Work and Economic Growth. Collaboration with IT companies in Pakistan for data collection highlights the importance of partnerships, according to SDG 17: “Partnerships for the Goals, showcasing the value of involving multiple stakeholders and obtaining support from company management”. Overall, the study's focus on innovation, industry growth, education enhancement, and partnerships reflects its alignment with various SDGs, contributing to broader efforts for sustainable development.

Previously a Malaysian study found that while some employees exhibit innovative work behavior through idea generation to solve problems and improve performance, others struggle to do so, possibly due to their direct communication style (Chidir, 2020; Goestjahjanti, 2020; and Hutagalung, 2020). Innovative work behavior is influenced by both external and internal factors, including environmental conditions, leadership support and an individual's innovative capacity and ability to participate (Li & Zheng, 2014). Additionally, the organizations to remain outstanding and competitive, employees' creativity and inner aspects must be motivated to operate in an innovative manner (Asbari et al., 2020). Perceived authentic leadership which emphasizes sincerity and authenticity in the work relationship has been proposed as a framework for examining the effect of leader characteristics on employee inventive behavior at work. Perceived authentic leadership promotes positive self-development in employees to create and innovate (Walumbwa, 2018). Still, additional empirical research is wanted to evaluate how authentic leaders influence employees' creativity and innovative behavior (Purwanto & Sopa, 2020). Studies have found that creativity can lead to improved organization performance and even survival. In the workplace, creativity is defined as a generation of creative and practical concepts for goods, services, methods and techniques.

Organizations must not only find and hire creative workers, but also establish environments that encourage creativity. Perceived authentic leadership, characterized by transparency, ethical decision-making, and a sincere concern for the well-being of followers, has gained recognition as a leadership approach with the prospective to positively impact organizational results. The interplay between perceived authentic leadership and creative work practices in the particular setting of the information technology sector in Pakistan represents a rich and unexplored domain, offering opportunities for exploration (Purwanto & Sopa, 2020).

Over the past few years, the information technology sector in Pakistan has experienced significant growth and its market size has greatly expanded. Despite this growth, there are

many challenges for the industry to remain innovative and competitive in delivering top-notch services to its vast customer base (Raykov, 2014). The information technology sector must remain innovative to keep up with the changing market and growing consumer needs (Arpatech, 2019). Employee creativity is a key to innovation, and creating an environment that fosters and encourages innovation and creativity is essential (Prameswari & Purwanto, 2020). Authentic leadership theory may provide insights into how leader characteristics influence innovative work behavior, and research in this area may benefit organizations in the Information technology sector. However, despite the importance of innovation for long term success, there is less research on how leaders encourage innovation within the organizations (Avoli, 2004; Walumbwa, 2018). Therefore, it is needed to investigate the role of perceived authentic leadership in promoting innovation to establish a culture of innovation. Moreover, when employees are highly involved in their jobs, they will be more inspired to interact in progressive work behavior & come up with productive solutions to problems. However, if employees feel disconnected from their jobs or are not fully engaged, they can be less probable to have interactions in such behaviors. Findings from (Sardar's, 2021) research on job participation and innovative work conduct may be applicable to Information technology sector. In this sector, employees perform crucial part in creating and implementing new technologies, services, and solutions to satisfy the converting needs and requirements of customers. Moderate levels of job participation have been found to be most beneficial for promoting innovative work behavior and employee creativity in various industries, including the information technology sector (El-Said, 2019). When employees feel moderately involved in their line of work, they may be more likely to be influenced and empowered to come up with creative solutions and try new approaches, resulting in the creation of novel goods and services. However, the optimal level of job participation may differ based on the particular situations and goals of the company in the Information technology sector. Other factors, such as job autonomy, leadership, and the

availability of resources and support, can also show an essential part in encouraging innovative work behavior and employee creativity (El- Said, 2019). In the information technology sector, a moderate level of job autonomy may be necessary to promote innovative work behavior and employee creativity, while considering the specific context and goals of the organization and other relevant factors.

In the context of the Information technology sector, job autonomy can be essential for promoting innovative work behavior and employee creativity. Job autonomy refers back to the diploma to which employees have influence over their work and the independence to make decisions about how to perform the tasks (Lee & Choi, 2021). A previous study has shown that the job autonomy can moderate the relation between innovative work behavior and the employee creativity in the Information technology sector (El-Said, 2019). When employees possess a significant degree of job autonomy, they are more inclined to interact with innovative work behaviors and exhibit creative outcomes. This is because they have the freedom to experiment with different approaches and solutions, which may lead to the modification of innovational products and services. However, it is crucial to understand that there is nonlinear link between job autonomy and innovative work practices. While high levels of job autonomy can be beneficial, too much autonomy can also have negative effects on employee creativity (El-Said, 2019). Therefore, finding the right balance between job autonomy and control may be crucial for promoting innovative work behavior and employee creativity in the Information technology sector. Job autonomy may intermediate the kinship between innovative work behavior and employee creativity in the information technology sector. A high degree of job autonomy could encourage creativity and innovation, but it is crucial to strike the correct balance between control and autonomy.

Broad Problem Area/ Gap Analysis

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 operates. 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.

To remain competitive and stay up to date with technological changes, the information technology sector needs an innovative work environment. According to earlier studies, in the field of information technology, innovative work practices and job autonomy are positively correlated when there is a perception of authentic leadership. The correlation between job autonomy and innovative work behavior is stronger when perceived authentic leadership is present (Liu & Lu, 2019). Job autonomy positively influences innovative work behavior. Therefore, a culture of trust and support that is fostered by the accumulation of job autonomy and perceived authentic leadership can encourage employees to pursue innovative work behaviors in the information technology sector (Liu & Lu, 2019). However, research on this relationship is limited. Therefore, the purpose of this research is to examine how employee creativity and innovative work behavior are impacted by perceived authentic leadership in the context of job autonomy in Pakistan's information technology industry. To do this, the social

cognitive theory will be used to analyze the relationship between perceived authentic leadership and employee creativity and innovative work behavior (Afsar et al., 2017).

The Information technology sector in Pakistan has undergone remarkable growth, marked by advancements in mobile technologies, increased internet penetration, and the proliferation of digital services as the sector evolves, the ability of groups of companies to cultivate a society of innovation becomes crucial for sustainable success (Arpatech, 2019). This study endeavors to scrutinize the relationship between perceived authentic leadership and innovative work behavior among employees in Pakistani Information technology firms.

Specific Problem Statement

The IT industry in Pakistan plays a significant role in the country's GDP growth, contributing 1% as reported by the Ministry of Information Technology (2023). However, the Global Innovation Index of 2023 ranked Pakistan's IT industry at a low 171st position. This disparity draws attention to a serious problem facing the sector: the promotion of innovation and creativity is severely lacking. The absence of authentic leadership declines innovative work behavior among employees, while inadequate job autonomy limits employees' control over their work, further hindering their creativity. This study aims to address these challenges by examining how these factors impact innovative work behavior of employees within Pakistan's IT sector.

Aim/Significance of the Study

The social cognitive theory has been used to explain the study's theoretical and practical significance. This illustrates how significant and pertinent the study's findings are in light of the body of current literature.

Theoretical Significance

The impact of perceived authentic leadership on creative work behavior in the IT industry has theoretical significance since it adds to the body of knowledge already available on the subject of innovation and leadership (Avolio & Gardner, 2005). According to Walumbwa et al. (2008), perceived authentic leadership fosters a positive work environment by fostering a sense of certainty, openness, and transparency with their colleagues. This in turn, promotes innovative behavior among employees, who feel the sense of empowerment to share new content and take risks (Carmeli et al., 2009).

Thus, by looking at the connection between innovative work behavior and perceived authentic leadership within the context of the IT industry, the study clarifies how managers can create an environment at work that fosters creativity. This has significant effects on competitiveness and organizational effectiveness in the information technology sector, where success in a quickly evolving technological landscape depends on innovation (Wei & Wu, 2018). According to a different study, the idea of perceived authentic leadership contends that ethical, transparent, and transparent leaders can foster employee innovation and creative work practices (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008). Furthermore, as employee creativity fosters the development of unique ideas for goods and services, it is thought to be a crucial element of innovation in businesses (Amabile, 1988).

The study offers important insights into the elements that can promote a creative and innovative work environment by analyzing the relationship between employee creativity, perceived authentic leadership, and innovative work behavior. According to Shin and Zhou's (2013) research, employee creativity acted as a mediator factor between creative work behavior and perceived authentic leadership. In a similar vein, a study conducted in 2007 by Farh, Hackett, and Liang discovered a favorable correlation between employee creativity and

innovative work behavior and perceived authentic leadership. Therefore, the theoretical significance of exploring the state of relation between employee creativity, perceived authentic leadership, and innovative work behavior lies in its potential to inform leadership and innovation strategies in organizations. By understanding the factors that can enhance employee creativity and innovative work behavior, organizations can create a competitive advantage and promote organizational success. Innovative work behavior is defined as the generation, sharing, and use of new and useful ideas at work (Scott & Bruce, 1994). It is recognized as a driving factor behind organizational innovation and competitive advantage in the fast-paced, constantly-changing business landscape of the modern world.

The degree of control and independence that employees possess over their work responsibilities and decisions is known as job autonomy (Hackman & Oldham, 1976). By examining the relationship between innovative work behaviors, job autonomy, the study can provide perceptions into the factors that encourage employees to put effort in innovative work behavior. It can also inform organizational practices that promote employee motivation, creativity, and job satisfaction. In the Information technology sector, where innovation is important for organizational success and growth, understanding the relationship between innovative work behavior, job autonomy can have significant theoretical and practical implications.

A study by Liu et al. (2010) observes that job autonomy positively relates to innovative work behavior, and that this relationship was moderated by employee creativity (Gong, 2013). Therefore, the theoretical significance of investigating the partnership between innovative work behaviors, job autonomy has potential to inform organizational strategies and practices that promote employee motivation, creativeness, and invention in the Information technology sector.

Practical Significance

In the highly competitive and rapidly changing Information technology sector, innovative work behavior is crucial for organizational success (Janssen, 2000). Employee creativity, defined as generating novel and useful ideas, is an important ingredient of innovative work behavior (Amabile, 2014). According to recent studies, employees' perceptions of authentic leadership have a beneficial effect on their creativity, which in turn fosters innovative work behavior in the information technology industry (Li, 2020& Wei, 2019). The mediating effect of employee creativity is an essential mechanism through which perceived authentic leadership can influence innovative work behavior. Specifically, when employees realize their leaders as authentic, they are more encourage to participate in creative thinking and generate innovative ideas that can lead to improved performance outcomes (Chen & Hou, 2020).

The functional significance of perceived authentic leadership's impact on innovative work behavior with the mediating role of employee creativity is that it can lead to enhanced organizational performance, improved employee job satisfaction, and a competitive advantage for information technology companies. By emphasizing authenticity and encouraging employee creativity, leaders can foster an environment that promotes innovation and enhances the overall achievement of the company.

According to recent studies, workplace autonomy may play a moderating effect in the association between workers' inventive work practices and creativity. Wei (2019) found that job autonomy positively moderates the relationship between employee creativity and innovative work behavior in a study of Chinese information technology companies. Put another way, employees who have greater job autonomy are more likely to use their creativity and inventiveness to drive novel workplace practices. For example, Yucel (2019) discovered that job autonomy positively moderates the association between employee creativity and innovative

work behavior in a study of information technology professionals in Turkey. This suggests that innovative work behavior is more likely to result from highly engaged and dedicated individuals' creative ideas.

The relationship between employee creativity and innovative work behavior can be moderated by job autonomy, which has practical implications for information technology organizations. By encouraging job autonomy among their employees, these firms can improve their capacity for innovation. Organizations can stimulate the production of creative ideas and their implementation into innovative work behavior, leading to increased organizational performance, by granting employees greater autonomy and encouraging their job involvement. In conclusion, it is crucial for the information technology industry that job autonomy plays a moderating role in the relationship between employee creativity and innovative work behavior. Employees that are given more freedom in their jobs are more likely to behave creatively, which boosts an organization's productivity and competitiveness. This study is significant for both academic and practical reasons. Academically, it contributes to the expending principal of written literature on leadership and innovation, offering insights into the unique dynamics of the Information technology sector in Pakistan. Practically, the findings may inform leadership development programs and human resource practices within telecommunications organizations, fostering a culture that supports and encourages innovation.

Research Objective

1. To investigate the connection between perceived authentic leadership and innovative work behavior.
2. To assess the impact of perceived authentic leadership on employee creativity.
3. To assess the influence of employee creativity on innovative work behavior.

4. To assess the mediating effect of employee creativity on the relationship between perceived authentic leadership and innovative work behavior.

5. To assess the moderating effect of job autonomy on the relationship between employee creativity and innovative work behavior.

Research Question

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

CHAPTER 2

LITERATURE REVIEW

Underpinning Theory (Social Cognitive Theory)

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).

Social Cognitive Theory aims to understand and foster both individual and collective creativity, which involves the confidence in one's ability to organize and execute the actions needed to handle future situations. This framework clarifies how employee creativity affects their willingness to engage in innovative behaviors and how authentic leadership can reinforce this sense of creativity, thereby promoting a creative work environment. Recent research has shown that when leaders display authentic behaviors, employees feel more empowered and confident in their abilities, which boosts their innovative efforts and creativity (Newman et al., 2022). Thus, Social Cognitive Theory not only seeks to explain how behaviors are acquired and maintained but also emphasizes the significance of a supportive social environment in nurturing innovative and creative behaviors in the workplace.

Job autonomy plays a vital role in moderating the relationship between perceived authentic leadership and employee creativity. By granting employees the freedom and control to explore new ideas and methods without excessive restrictions, job autonomy fosters a sense of ownership and intrinsic motivation (Ryan & Deci, 2000). Recent research highlights that environments characterized by authentic leadership and high job autonomy significantly boost employee creativity by providing a context where individuals feel empowered to experiment and take risks (Gong et al., 2013). Combining Social Cognitive Theory with the concepts of perceived authentic leadership and job autonomy offers a thorough understanding of how these elements together enhance innovative work behavior and employee creativity. This approach underscores the importance of a supportive social and organizational environment in nurturing

creative potential, while also recognizing the moderating effect of job autonomy (Newman et al., 2022; Wang et al., 2023).

Concepts and Definitions

Innovative Work Behavior

Employees that exhibit innovative work behavior (IWB) are able to recognize, produce, develop, and put into practice advantageous work-related ideas. Innovative work behavior is a multifaceted concept that encompasses both idea generation and idea implementation. Innovative ideas need the backing of leaders, managers, colleagues, and a positive work environment to be implemented successfully. Inventiveness among employees is crucial for a firm to survive in the cutthroat business world of today. Innovative work behavior is defined as a sequential process that requires devoting time, effort, and resources to developing and implementing novel ideas at work. (Scott & Beuce, 1994) Innovative work behavior involves an employee's performance within the organization to achieve novelty in ideas and procedures that are helpful and beneficial. (Scott & Beuce1994) defined innovative work behavior as a three steps procedure that includes idea production, idea promotion and concept realization. Innovative work behavior begins with identification of problem and a search for the potential solution (Scott & Beuce 1994; Janssen, 2004). After identifying a problem, the first step in innovative work behavior is idea generation, and creativity plays a big role in this process (Scott & Beuce 1994; Janssen, 2004).

The second phase is idea implementation which involves proposing the generated idea to higher management for approval (Hartog & Jong, 2010). However, to implement the proposed idea, support is necessary (Janssen, 2000). The next step is idea application, where people take the selected idea and implement productively, and this phase is critical for the success or failure of the idea (Kanter, 2009). IWB helps employees to develop innovatively,

which drives the organization towards progress (Dutta & Sobal, 2016). Innovative work behavior leads the organization to compete in the industry and enable employees to create new and different products and services for their competitors (Baer & Frese, 2003). According to Jong and Kemp (2003), innovative work behavior is any action taken by an employee that prompts them to propose, start, and carry out fresh, original, and practical solutions to issues at any level of the business. Innovative work behavior, according to Bos-nehles and Janssen (2017), is the drive and actions of an individual to generate and use novel concepts that advance both the organization's and the individual's development. Innovative work behavior is a process of innovation that depends on an employee's desire to provide worthwhile outcomes for the company at any time and from any location. According to Anderson et al. (2004), researchers and practitioners widely agree that innovation and creativity are the driving forces behind development in various fields, such as economics, sociology, technology, and organizations. As noted by Oldham and Cummings (1996), Amabile (1988), Damanpour and Gopalakrishnan (2001), and Marinova and Phillimore (2003), innovation is essential for organizations to improve and streamline their interior structures, in order to function well and acquire long-term the advantages over rivals needed for long-term survival in the era of economic processes. The benefits of innovation at work are manifold, including increased flexibility in organizational structures, member empowerment, and the expectation that employees will take up creative work practices in order to drive organizational change (Morrison & Phelps, 1999; Shalley, 1995). This reflects the expectation for employees to proactively accomplish their tasks and prepare themselves for upcoming and unforeseen challenges that may arise. According to (Amabile, 1988; Oldham and Cummings, 1996; Marinova and Phillimore, 2003; Damanpour and Gopalakrishnan, 2001), innovation is critical for organizations to function more efficiently, gain sustainable competitive advantages, and enhance and streamline their internal rule system—all of which are necessary for long-term survival in the age of globalization. Diverse

benefits of innovation at work include more adaptable organizational structures, empowered individuals of the organization, and an expectation that workers will engage in new work practices for the benefit of the company (Morrison & Phelps, 1999; Shalley, 1995). This reflects the expectation for employees to proactively accomplish their tasks and prepare themselves for upcoming and unforeseen challenges that may arise. As highlighted by Amabile (1988), Oldham and Cummings (1996), Damanpour and Gopalakrishnan (2001), Marinova and Phillimore (2003), and others, innovation is critical for organizations to enhance and optimize their internal systems, gain long-term competitive advantages, and function more efficiently in the age of globalization. Diverse benefits of innovation at work include more adaptable organizational structures, empowered individuals of the organization, and an expectation that workers will engage in new work practices for the benefit of the company (Morrison & Phelps, 1999; Shalley, 1995). This indicates that proactive work completion and self-preparation for potential future and unforeseen obstacles are expected of employees. According to Damanpour and Gopalakrishnan (2001), Amabile (1988), Oldham and Cummings (1996), Marinova and Phillimore (2003), and other scholars, innovation is critical for organizations to enhance and optimize their internal systems, gain competitive advantages that are necessary for long-term survival in the globalization era, and function more efficiently. Diverse benefits of innovation at work include more adaptable organizational structures, empowered individuals of the organization, and an expectation that workers will engage in new work practices for the benefit of the company (Morrison & Phelps, 1999; Shalley, 1995). This indicates that proactive work completion and self- preparation for potential future and unforeseen obstacles are expected of employees. Kim and Park (2017) define creative work behavior as any actions and procedures taken by employees in the workplace that result in innovative results. These tasks could be cognitive, physically demanding, or social in nature—for example, addressing problems with coworkers to better a product's design or building on each other's ideas. Because of this,

workers frequently take on several responsibilities as a team to improve the company. The amalgamation of intricate procedures in which individuals of an organization engage on a physical, emotional, cognitive, and social level is known as innovation (Kleysen & Street, 2001; Dorenbosch, Van Engen, & Verhagen, 2005). It can be examined from several perspectives due to its intricate structure and non-linear pattern. Organizational scholars have historically ignored the examination of innovative work behavior's conceptual manifestations in favor of concentrating primarily on the observable and concrete features of the behavior (Scott & Bruce, 1994; Janssen, 2000; Dorenbosch et al., 2005; Jong & Hartog, 2010).

It is acknowledged that innovative work behavior is contextually bound and exhibits dynamism, as certain industries place a higher emphasis on innovative tasks than others. While innovation signifies a form of advancement for both organizations and individuals, the specific outcomes for employees may not be explicitly defined. Innovation is a continuous procedure as opposed to a single instance, implying that individuals can continually develop professionally within the intricate landscape of innovation, engaging with a diverse array of tough and difficult tasks. This developmental journey finally contributes to career advancement through enhanced performance (Woerkom, 2004).

In fact, innovation has become a prerequisite for survival in this constantly changing environment. Innovations can refer to both processes and concepts that are used to determine and resolve the problems, as well as to advance the actual assumption of products, tasks, and organizations (West & Farr, 1990). As a result, innovation has become an integral part of an organization's mission, vision, and strategies, due to its significant role in enhancing and sustaining the organization's performance and survival. As organizations seek to compete globally (Renkema, and Janssen (2017), innovative work behavior is a critical tool for achieving their desired success (Korzilius, 2017). Yuan and Woodman (2010) emphasized that innovative work behavior among employees as a potent force that enables organizations to

thrive in a dynamic business environment. Previously innovativeness was associated only with products but not services (Woodman, 2010). However, the current study focuses on the perceived authentic leadership which is equally important in improving innovative work behavior.

Perceived Authentic Leadership

According to Avolio and Gardner (2005), authentic leadership theory is a leadership paradigm that prioritizes leaders' self-awareness and transparency, moral behavior, and moralistic reasoning. Authentic leaders are believed to foster trust and credibility among their followers, which can result in positive outcomes for individuals and organizations. Based on authentic leadership theory, leaders who demonstrate authenticity are more likely to gain followers' trust, commitment, and engagement Walumbwa et al. (2008) Positive organizational outcomes including employee creativity, organizational commitment, and autonomy are also seen to be encouraged by authentic leaders (Avolio et al., 2009).

According to the notion of authentic leadership, authenticity consists of four components: moral reasoning, self-awareness, stable processing, and relative transparency (Avolio & Gardner, 2005). Being self-aware entails analyzing oneself and being aware of one's feelings, values, and strengths and shortcomings. To build trust, relationship transparency requires being frank and honest in communication with others. Balanced processing involves gathering and analyzing information objectively, considering different perspectives, and making decisions based on evidence. Finally, moral reasoning involves making ethical decisions based on a strong moral code. Prior research has demonstrated the beneficial effects of perceived authentic leadership on organizational success. For instance, Walumbwa et al. (2008) discovered a favorable relationship between work satisfaction and organizational commitment and perceived authentic leadership. According to Avolio (2009), employees'

creative skills and innovative work behavior were favorably correlated with perceived authentic leadership. Perceived authentic leadership holds that leaders who demonstrate authenticity via self-awareness, transparency, and moral grounding can promotes a positive work environment and productive organizational outcomes. Perceived authentic leadership is a contemporary theory that emphasizes transparency between leaders and followers, (Walumbwa, 2008).

Numerous essential characteristics of this theory include relational transparency, inner moral perspectives, balanced processing, and self-awareness. These characteristics show that a leader can take responsibility for their acts and thoughts, encourage candid communication with their followers, uphold moral principles, and make wise decisions (Zhang & Liu, 2018) also identified specific traits that contribute to trait theory, which overlaps with Perceived authentic leadership theory in it emphasize on transparency. Found that perceived authentic leadership is more effective than other forms of leadership, resulting in improved morale, performance and reduced turnover (Azana, 2013). Additionally, high levels of perceived authentic leadership conduct have been shown to improve job performance and reduce attrition and burnout at work Lunkka and Suhonen, (2018); Walumbwa (2010) and Semedo (2016) conducted more study on the origins and impacts of perceived authentic leadership on employee and organizational challenges. Stander and Coxen (2019) emphasized the importance of perceived authentic leadership in promoting trust and enhancing job performance between supervisors and employees. In order to foster self-awareness and constructive actions in leaders and associates that lead to good self-development, perceived genuine leadership is a process that requires both positive psychological characteristics and a supportive organizational context (Wiewiora & Kowalkiewicz, 2019). Generally speaking, authenticity is the free and unrestricted expression of one's genuine self in day-to-day actions (Kasa, 2020). Therefore, trust, self-awareness, and positive behaviors are promoted by perceived authentic leadership,

which benefits organizations and their workforce. Observable characteristics can be used to study perceived authentic leadership (Qiu, 2019). Self-awareness, relational transparency, balancing processing, and an internalized moral stance are some of these dimensions. A leader that is self-aware knows their own advantages and disadvantages, goals, and how other people view them as a leader. A leader that demonstrates relational openness is prepared to divulge details and communicate real feelings and ideas. Prior to reaching a choice, balancing processing entails objectively evaluating all pertinent data and getting advice from people who have different viewpoints. A leader who upholds their own moral principles is said to have absorbed their moral perspective.

Therefore, (Qiu,2019) suggested that perceived authentic leadership can be through these observable dimensions. Semedo et al. (2017) described perceived authentic leadership as an ability to maintain personal values and principles, even when facing external pressures. The evaluation of perceived authentic leadership is based on the four criteria: self- awareness, relational transparency, internalized moral perspective, and balancing processing. These criteria are critical in assessing a leader's authenticity and the impact they have on their followers and the organization. It is crucial for leaders to consistently demonstrate to build trust, inspire confidence and achieve success. Therefore, perceived authentic leadership is an important aspect of leadership that can be evaluated based on observable dimensions (Semedo et al., 2017).

The behavior of authentic leaders is derived from their moral principles, values, and beliefs, and it stimulates improved worker productivity (Alshammari et al., 2015). (Levy, 2020) posits that the relationship between ethical behavior exhibited by authentic leaders and enhanced employee performance arises from the empowerment that these workers receive, which allows them to function more independently in their roles. According to earlier studies, employee performance and perceived authentic leadership are positively correlated (Clapp-

Smit, 2009; Wang, 2014; Ribeiro, 2018). Based on social support and social learning theories (Bandura, 1977), employees' capacity to succeed is facilitated by their perception of leaders as authentic, who demonstrate respect, care, concern, and support (Hinojosa, 2014). According to social exchange theory (Blau, 1964), people who perceive authentic leadership may feel obligated to maintain a balanced exchange relationship by improving their performance in response to positive leader behaviors. This is in line with the norm of reciprocity (Gouldner, 1960) and how people perceive authentic leadership (Cropanzano & Mitchell, 2005). Several researches have confirmed that followers improve their own performance in response to their leaders' authenticity (Wang, 2014; Ribeiro, 2018). According to Fredrickson's (2004) broaden-and-build hypothesis, employees who are exposed to pleasant emotions at work may experience long-lasting impacts that are essential for achieving effective individual performance.

According to earlier research (Avolio & Gardner, 2005 George, 2003 & Ilies, Morgeson, & Nahrgang, 2005; Alshammari, Almutairi, & Thuwaini, 2015; Avolio & Mhatre, 2012 & Walumbwa, 2008), perceived authentic leadership improves employees' positive attitudes and behaviors. Although there are many similarities between AL and other leadership theories, AL is distinguished by its own elements: relational transparency, internalized moral perspective, balanced information processing, and self-awareness. These elements are essential for encouraging positive attitudes and actions in workers, like affective dedication and innovation. For example, the internalized moral attitude discourages unethical behavior within businesses and promotes honesty and integrity. Positive interpersonal relationships and trust among followers are fostered by authentic leaders who exhibit self-awareness, relational transparency, and balanced information processing (Avolio, 2004; Walumbwa et al., 2011). Authentic leaders cultivate an atmosphere of openness and sincerity that supports staff development and potential realization. Increased inventiveness at work and the growth of an

emotional attachment to the company are possible results of this. While some research indicates that transformation or ethical leadership and perceived authentic leadership overlap, other studies indicate that perceived authentic leadership has distinct elements and has incremental validity beyond these leadership theories (Walumbwa et al., 2008). AL theory differs from theories of transformative, charismatic, servant, and spiritual leadership, according to Avolio and Gardner (2005). Essentially, even with certain areas of overlap, perceived authentic leadership is regarded as a foundational concept that supports the growth of other constructive leadership styles (Avolio & Gardner, 2005; Avolio & Mhatre, 2012; Nazari & Emami, 2012).

Employee Creativity

Employee creativity is the generation of new concepts to enhance employee performance and productivity (Gong, 2009). This involves an employee's creative intelligence and ability to come up with new ideas based on their experiences and qualification. It requires a high level of rational action, and employees need to be motivated to work hard to accomplish their goals. Creative employees can be a valuable asset to an organization as they can share useful and innovative ideas to improve goods and services (Shalley & Gilson, 2018). (Khalili, 2016) emphasized the importance of leaders in encouraging creativity and innovation among employees to enhance organizational productivity. Creativity holds significant importance for employees within the organizational work environment as it plays a crucial role in achieving the company's objectives innovatively. As defined by (Liu, 2013), creativity involves the process of utilizing ideas, expertise, and up-to-date information possessed by employees to fulfill the company's goals. Employee creativity, as described by (Chang, 2014), encompasses the generation of creative ideas and responses within the workplace. Furthermore, Beheshtifar and Zare (2013) define employee creativity as the means by which employees enhance efficiency, drive organizational change, and navigate competition in the global market. According to Cohen-Meitar et al. (2009), a positive experience for employees, coupled with a

sense of recognition for their contributions to their work, enhances their competence, fostering engagement in creative behaviors, the generation of novel ideas, and innovative problem-solving. Employee creativity is considered an important aspect of organizational development (Lukes & Stephan, 2017) and it is a significant driver of innovation in products and services (Ogbeibu et al., 2019). Creativity is of paramount importance for employees in the organizational work setting, serving as a pivotal factor in achieving the company's objectives through innovative means. As outlined by (Liu, 2013), creativity is a process that entails the utilization of employees' ideas, expertise, and contemporary information to effectively realize the company's goals. Employee creativity, as articulated by (Chang, 2014), involves the generation of inventive ideas and responses within the workplace.

Moreover, Beheshtifar and Zare (2013) characterize employee creativity as the avenue through which employees augment efficiency, instigate organizational change, and navigate global market competition. (Cohen-Meitar, 2009) theorize that a positive employee experience, coupled with a sense of recognition for their contributions to their work, amplifies their competence, thereby promoting engagement in creative behaviors, the generation of novel ideas, and innovative problem-solving. Previous research on employee creativity suggests a connection to various factors such as personality traits, cognitive abilities like divergent thinking, and the motivation to generate new and valuable products (Anderson, 2014). Specifically, creativity tends to flourish in individuals with an open-minded personality, fostering an environment conducive to creative problem-solving (Caniels, 2014). Openness to experience allows for a more accurate assessment of environmental needs, enhancing the creativity required for addressing everyday challenges (Patel & Thatcher, 2012). Individuals scoring high on openness exhibit greater imagination, tolerance for ambiguity, and a willingness to entertain novel ideas, making them more prone to engaging in divergent thinking (Costa et al., 1991; Tagger, 2002).

Moreover, creativity is closely associated with having a pro-active personality characterized by an inclination toward active role orientation and the initiation of change. (Kim, 2009) discovered that proactive individuals actively seek improved ways to perform tasks when given the opportunity. This proactive disposition, coupled with intrinsic motivation, becomes a crucial driver for discovering and implementing new ideas (Caniels, 2014). Amabile (1996) proposes that intrinsic motivation fosters creativity by providing rewarding feelings of competence and interest, sustaining domain-relevant knowledge and skills. As individual creativity is demonstrated to correlate with overall work performance, its importance extends to influencing innovative work behavior (Amabile, 1996 & Caniels, 2014).

The contribution of creativity in the workplace is increasingly acknowledged as a crucial component in a quickly changing world and global economy. In the face of current business globalization and economic shifts, the creativity of employees, manifesting as novel ideas, practices, procedures, products and services, is deemed essential for a company's success (Shalley, 2009). In previous times, creativity was primarily conceptualized within the framework of the creative process, where outcomes were recognized as creative. However, creativity is a broad and complex term or activity, and various definitions are employed for its analysis.

As creativity involves a continual process of organizing, disorganizing, and reorganizing. It necessitates the active dismantling of assumptions, norms, and traditions, pushing boundaries and venturing beyond comfort zones (Montuori,2006). (Hughes, 1998) defines creativity as encompassing advancements in technology, knowledge, practices, work systems, norms, and beliefs. It essentially involves breathing new life into an organization by instigating change in its current work practices.

Given the intensifying global competition and the imperative for business survival, organizations are increasingly directing their focus toward creativity, making it a core organizational objective. Past research on creativity emphasizes encouraging a fresh perspective on a 'problem' and actively providing solutions, involving alterations in previous methods and ideas. In the deep research on creativity posits constitutional motivation as an internal process that fosters employee creativity (Grant & Berry, 2011). Recognizing employee creativity as a vital beginning of innovation for organizations and a basis for gaining a competitive advantage, contemporary organizations are placing greater emphasis on individual creativity. A key aspect of an organization's learning process for enhanced innovation is absorptive capacity, which signifies the firm's ability to be creative and generate new ideas (Grant & Berry, 2011).

Organizations that prioritize creativity and innovation can achieve a competitive edge in the market (Kremer et al., 2019). Therefore, it is essential for modern organizations to adopt creativity and innovative technology to survive globally (Yang, 2019). According to the social exchange theory (Cropanzano and Mitchell, 2005) leaders should provide more benefits and support to their subordinates in the process or creativity and innovation. In addition, leaders should help employees to develop a more creative self-image, allowing them to feel more comfortable to expressing new ideas (Zada, 2022). Leadership plays a significant role in promoting employee creativity and establishing a supportive atmosphere for their efforts. The social exchange theory suggests that leaders and employees are engage in a mutual exchange relationship that encourages problem identification and appropriate substitutions. Other factors that can affect employee creativity include the completion of tasks rewards and penalties and inspiration provided by managers and senior executives. Perceived authentic leadership which involves providing mentoring, support and knowledge- based inspiration can help to motivate

employees to engage in creative activities and development. Ultimately, employee creativity is important for enhancing both job performance and organizational performance.

Job Autonomy

Job autonomy is the degree of judgment, independence, and freedom an employee has when doing their duties—including the ability to select their own work schedules and protocols (Hackman and Oldham, 1976). Sisodia and Das (2008) describe job autonomy as an individual's degree of freedom in selecting how to perform their employment. According to Shahzad (2018), autonomy in the workplace refers to an employee's level of control and freedom to perform the many tasks associated with their profession. Job autonomy is seen as a crucial job resource and is defined as an individual's level of independence and freedom in carrying out their regular work duties (Hackman & Oldham, 1975; Parker, 2001; Stamps & Piedmonte, 1986). According to research, autonomy is crucial for professional growth (Gray & Pratt, 1989; Hart & Rotem, 1995) and advantageous for job satisfaction (Blegen, 1993, Finn, 2001 & Weismann, 1980). The degree of discretion afforded to workers in deciding how to carry out their duties is known as job autonomy (Hackman & Oldham, 1976). The meta-analysis carried out by (Hammond, 2011) provided insightful information about the connection between job autonomy and Innovative Work Behavior (IWB), emphasizing that the degree of perceived liberty in job execution is a critical factor in the adoption of innovation. In simpler terms, the realization of novel and valuable ideas in an individual's work environment requires situational autonomy to break away from routine practices (Orth and Volmer, 2017). Previous researchers (Slatten & Mehmetoglu, 2011; Theurer, 2018) assert that individuals tend to exhibit more innovative behavior when they have the choice and autonomy to accomplish a specific job. Going forward, it is commonly known in a cross-sectional setting that job autonomy has an impact on motivating individuals to engage in innovative work behavior. It appears that job autonomy not only encourages the generation of new ideas but also gives workers the ability

to carry them out successfully (Kim, 2017). This viewpoint is reinforced by (Spiegelaere, 2014), who contend that coming up with novel ideas is a non-routine task that calls for people to go above and beyond conventional operating procedures, and that empowerment and autonomy are essential to implementing such ideas. However, prior research in academic journals has demonstrated that job autonomy is a strong predictor of employees' Innovative Work Behavior (IWB) (Orth & Volmer, 2017; Theurer, 2018).

According to Scott and Bruce (1994) and Liu (2011), job autonomy is frequently mentioned as a crucial contextual factor impacting employee creativity and innovation. According to Hackman and Oldham (1976), job autonomy refers to the degree of control that an individual has over the procedures, methods, and effort needed to do their activities or employment.

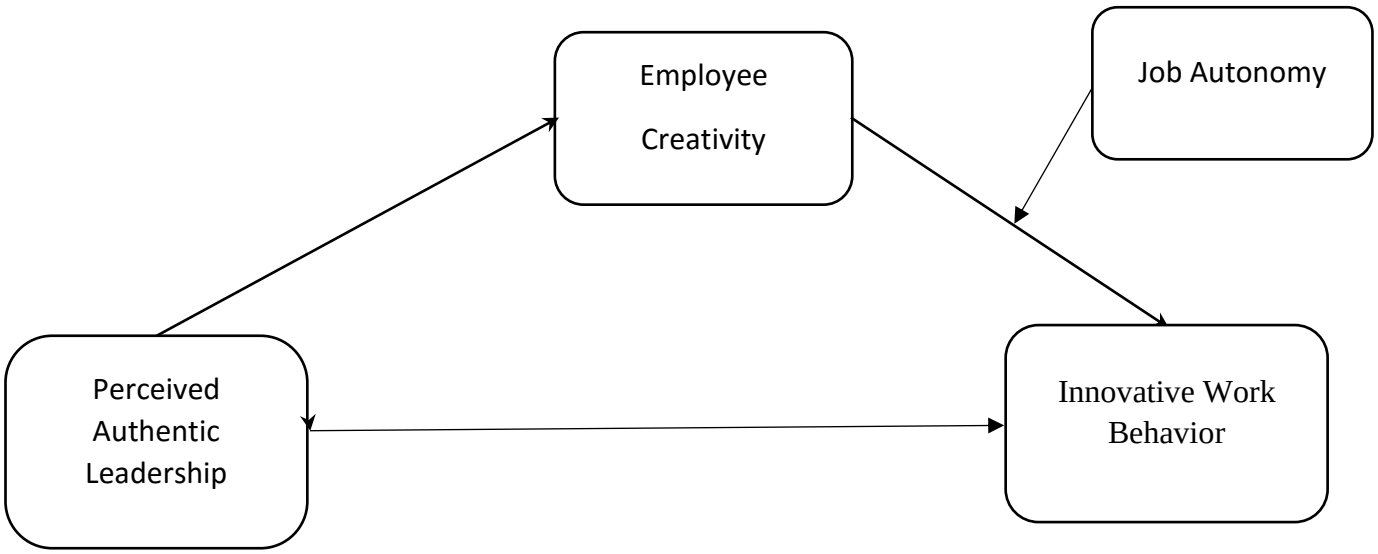
Furthermore, a number of academics have noted a favorable correlation between job autonomy and worker satisfaction (Thompson & Prottas, 2006). Employees can freely follow their hobbies and activities when they work on jobs that allow them a high degree of autonomy, for example, and this enhances their general well-being (Reis, 2000). According to theory, self-determination and purpose in work are facilitated by job autonomy (Deci & Ryan, 2000; Niemiec, 2010). People perceive purpose in their work when they have more opportunity to express themselves (May, 2004). To elaborate on these assertions, it may be argued that individuals possessing a high degree of autonomy are able to respond to the acts of their superiors in the workplace (Wang & Cheng, 2010). Specifically, job autonomy enables employees to take on greater responsibility for their outputs, acting as agents with considerable independence to manage their own work processes (Hackman & Oldham, 1976).

As a result, individuals are more likely to believe that their lives have purpose and that they have control over their circumstances (Rosso et al., 2010). Put simply, a high degree of

job autonomy means that workers have more chances to actively benefit from and receive supervision from their servant leaders, which enhances the meaning-making experience at work (Hartog & Belschak, 2012; Ho & Nesbit, 2014; Gagne & Deci, 2005). Therefore, a high degree of employee autonomy may strengthen the relationship between servant leadership and the significance of workers' work. Conversely, people who don't have as much autonomy in their work could be less psychologically satisfied. This constraint on autonomy could hinder individuals' inclination to participate in favorable innovative behaviors (Hackman & Oldham, 1976). Increased work efficiency and intrinsic motivation are further benefits of autonomy (Hackman & Oldham, 1976; Langfred & Moye, 2004). Moreover, job autonomy is associated with workers' well-being and capacity to manage stress at work (Karasek, 1998). More autonomy gives employees a sense of competence and capability, which enhances their job happiness and performance (Thompson & Prottas, 2006; Saragih, 2011). This is so that employees have the freedom to choose work-related outcomes like goal-setting, pace, and work planning (Chung, 1977).

Job autonomy is especially crucial in difficult tasks because it enables employees to develop effective problem-solving techniques (Frese & Zapf, 1994). More autonomy among employees is also associated with a higher sense of pride in one's work (Mehmood, 2012). Research supports the positive relationship between job autonomy and job happiness. Job autonomy is one of the five essential job traits that (Hackman and Oldham,1976) identified. Prior research (Fried & Ferris, 1987; Lee, 1998; Pousette & Hansen, 2002) has shown that job autonomy and job satisfaction are positively correlated. Employees with greater job autonomy are therefore more likely to be happy in their positions since they have more freedom to make their own judgments.

Proposed Theoretical/Conceptual Framework



Conceptual Frame Work

A leader who practices perceived authentic leadership is characterized by self-awareness, openness, and sincerity with their team members. This leadership style positively correlates with innovative work behavior (IWB), which involves generating and implementing new, versatile ideas in the workplace. Employee creativity, defined as the ability to develop and successfully execute these ideas, mediates the relationship between IWB and perceived authentic leadership. Research, such as the study by Zhang and colleagues (2019), supports this connection, showing that innovative idea development and execution are enhanced when employees are encouraged to be creative. Thus, employee creativity serves as a mediator, promoting higher levels of innovative behavior among workers by strengthening the link between IWB and perceived authentic leadership.

The relationship between IWB, employee creativity, and perceived authentic leadership can be influenced by the moderating role of job autonomy. Job autonomy refers to the extent to which employees can perform their duties independently. Employees who are deeply engaged in their

work are more motivated to engage in innovative activities, such as developing new ideas and solutions. Conversely, employees with high job autonomy have greater control over how they perform their tasks. This freedom to experiment with different strategies and make independent decisions fosters creativity and innovation. As a result, there is likely to be a stronger correlation between IWB and employee creativity, as well as between perceived authentic leadership and job autonomy.

Development of Hypothesis

Relationship of Perceived Authentic Leadership and Innovative Work Behavior

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).

Studies have demonstrated that, through the mediation of variables including employee creativity, employee positive emotions, psychological resources, and attitudes, perceived authentic leadership is positively correlated with innovation (Asurakkody & Kim, 2020). Nonetheless, more investigation is required to examine the connection between employees' innovative activity and their perception of authentic leadership (Hartog 2010). According to authenticity theory, followers should naturally pick up on self-awareness and acting in line with their genuine selves, but this isn't always the case. A leader's perceived sincerity is just as significant as their real words and deeds. The purpose of this study is to investigate how employees view the perceived authentic leadership of business owners and how that perception affects followers' creative behavior. Our suggestion is based on earlier ideas and studies that indicate self-assessment is a useful tool for measuring individual innovative work behavior and that inter subjective employee assessments of leaders' authenticity are more trustworthy. In light of the conversation above, the first hypothesis is put forth as,

H1: Perceived authentic leadership may significantly impact on innovative work behavior of employees.

Relationship of Perceived Authentic Leadership and Employee Creativity

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:

H2: Perceived authentic leadership may be related to employee creativity.

Relationship of Employee Creativity and Innovative Work Behavior

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.

H3: Employee creativity may be related to innovative work behavior.

Employee Creativity Acts as Mediator between Perceived Authentic Leadership and 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.

H4: Employee creativity may significantly mediate the relationship of perceived authentic leadership and innovative work behavior.

Job Autonomy and Employee Creativity

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 (Klol 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.

H5: Job autonomy may significantly moderate the relationship of employee creativity and innovative work behavior.

CHAPTER 3

METHODOLOGY

This chapter describes a comprehensive exploration of the philosophical foundations, encompassing ontological, epistemological, and axiological perspectives that underpin this research study. Drawing from these theoretical underpinnings, the study variables are thoroughly discussed in this chapter, the theoretical model guiding the research, and the inherent relationships among these variables. Subsequently, the methodology employed in conducting the research is expounded upon. This includes a brief overview of the study's design, the population and sample frames that were identified, the sampling plan that was chosen, how the sample size was determined, how the research instrument was made, and a brief summary of the analytical techniques that were applied.

Research Philosophy

According to (Saunder, 2009), the research idea is composed of six essential layers that are arranged in the research onion model. These layers include philosophy, approach, strategy, choices, time horizons, and data collection procedures. Research philosophy, an essential layer, serves to explain the underlying beliefs and assumptions shaping the research study (Saunder, 2009). Within this study, the research philosophy, including its ontological and epistemological assumptions, is expounded upon.

Ontological Stance of Study

The foundational belief of this study's ontological stance lies in the objective existence of the phenomena under investigation within the organizational environment (Tumelius, 2022).

It aligns with a realistic perspective, asserting that perceived authentic leadership, employee creativity, innovative work behavior, and job autonomy are tangible entities that exist independently of individual perceptions (Raisanen, 2022). This perspective posits that these constructs are observable and measurable elements within the organizational context, suggesting their existence irrespective of human interpretation. Within this ontological framework, the study recognizes the distinctiveness of each variable and their potential interconnections (Alarauhio, 2022).

Perceived authentic leadership is considered a distinct, observable trait influencing employees' cognitive processes and behaviors (Alarauhio, 2022). (Zheng, 2020) views employee creativity as an intermediary factor that is further impacted by innovative work behavior and perceived authentic leadership. According to (Song, 2020), innovative work behavior is a consequence of the relationship between employee creativity and perceived authentic leadership. Furthermore, it is recognized that job autonomy is a moderating element that can affect how employee creativity, innovative work behavior, and perceived authentic leadership interact with one another within an organizational setting (Zhang, 2020).

This ontological stance is grounded in the belief that these constructs exist objectively and interact in discernible ways, guided by the theoretical underpinning of social cognitive theory (Usher& Ford, 2022). It offers a structure of examining and comprehending the relationships between these variables, emphasizing their observable nature and their influence on individual and collective behaviors within organizational contexts.

Epistemological Stance of Study

This study's epistemological underpinnings are an interactive synthesis of the social cognitive theory and the suggested research model, in which the dependent variable is innovative work behavior, the dependent variable is perceived authentic leadership, the

mediating variable is employee creativity, and the moderating variable is job autonomy (Larregue, 2022).

In the realm of the social cognitive theory, knowledge is perceived as a construct emerging from the dynamic interaction between individual's experiences, cognitive processes, and environmental influences. It underscores the significance of observational learning, self-regulation, and reciprocal interactions between individual behavior, personal factors, and the social environment (Larregue, 2022). Aligned with this theoretical framework, the proposed research model recognizes the subjective nature of perceptions related to perceived authentic leadership, employee creativity, innovative work behavior, and job autonomy.

The epistemological stance of this research integrates the social cognitive theory by asserting that knowledge about these variables is not solely derived from objective observations but is co- constructed through cognitive processes influenced by social interactions and environmental factors (Kyritsi, 2021). It acknowledges that individuals' interpretations and understandings of perceived authentic leadership, employee creativity, innovative work behavior, and job autonomy are shaped by both personal experiences and social contexts, consistent with the principles of social cognitive theory.

Furthermore, this epistemological perspective endorses the utilization of both quantitative and qualitative research methods. Quantitative analysis provides empirical evidence and statistical validation, aligning with the objectivity of social cognitive theory (Pantic, 2021). Simultaneously, qualitative approaches such as interviews or observations are considered valuable for capturing subjective experiences and perceptions, offering insights into the intricacies of the interrelationships among these variables within organizational settings.

The epistemological stance adopted in this study recognizes the symbiotic relationship between the social cognitive theory and the proposed model, emphasizing the co-construction

of knowledge through personal experiences, social interactions, and empirical evidence (Florian, 2021). It underscores the dynamic nature of knowledge generation and interpretation, shaped by the interplay between cognitive processes, social contexts, and the variables outlined in the research model.

Axiological Stance of Study

The axiological stance of a study refers to the researcher's values and how they influence the research process and interpretation of findings. The axiological stance in the framework of the social cognition theory-based study can be comprehended via the prism of values related to appreciating, comprehending, and appreciating the relationships among employee creativity, innovative work behavior, perceived authentic leadership, and job autonomy.

In the framework of the social cognitive theory, which emphasizes the importance of observational acquisition, self-regulation, and reciprocal interactions between personal factors, behavior, and the environment, there are certain values that become apparent. (Yamoah, 2021). The axiological stance of the study recognizes the value of acknowledging the subjective nature of perceptions related to perceived authentic leadership, employee creativity, innovative work behavior, and job autonomy. It embraces the idea that individuals' interpretations and understandings of these variables are shaped by personal experiences and social contexts, aligning with the values inherent in the social cognitive theory. Perceived authentic leadership influencing employees' cognitive processes and behaviors (Haque, 2021).

This implies a value in recognizing the impact of leadership authenticity on individuals within an organization. Employee creativity is emphasizing the value of understanding how perceived authentic leadership influences and interacts with creativity, which in turn affects innovative work behavior (Hurlow, 2022). The axiological stance here values the exploration

of these intricate relationships within the organizational setting. Similarly, job autonomy is a value that denotes the recognition of the role that autonomy plays in forming the relationship that exists between employee creativity, perceived authentic leadership, and innovative work behavior (Kaplan, 2023). The axiological stance values an understanding of the renowned ways in which job autonomy may impact the dynamics between these variables.

The axiological stance of this study, rooted in the social cognitive theory, reflects values associated with recognizing the subjective nature of perceptions, understanding the intricate relationships between variables, and acknowledging the impact of leadership authenticity, creativity, and autonomy on individual and collective behaviors within organizational contexts (Anderson, 2023). The values inherent in the axiological stance guide the research process and interpretation of findings, emphasizing the importance of these variables and their interplay in the organizational settings.

Research Design

The design of research as "the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with the economy in procedure" Durrheim and Terre Blanche, 1999) (Sellitz et al. 1965). It was essential to have a well-designed research plan to achieve successful results in establishing hypothesized relationships (Wiersma & Jurs, 2005). study design serves the function of giving the researcher a comprehensive grasp of the original study questions (De Vaus & De Vaus, 2001). (Labaree, 2009) further emphasizes that research design played a crucial role in establishing the study's conceptual framework, decision-making process, and data analysis.

The research design pertains to the plan outlining how the research questions will be addressed (Saunder, 2009). In this research work, the chosen research strategy is a survey, recognized for its efficiency in data collection, providing researchers with more accurate results

while minimizing biases (Saunder, 2009). Given the nationwide geographic distribution of the unit of analysis of the framework, independently administrated research survey questionnaires are distributed to HR departments, aiming for comprehensive responses from selected participants. The research employs a mono-method approach, utilizing a single data collection technique, specifically surveys, aligned with the quantitative methods that correspond to the positivist research philosophy. The collection of data is attempted at a single factor in time, focusing on the population comprising the several IT companies of Pakistan. The unit of analysis includes middle managers and functional managers.

Research Approach

In order to find the answers to the research questions, the main goal of this study was to examine the direct, mediating, and moderating interactions between variables using a hypothesis testing approach. The purpose of the study is to examine the relationship that exists between innovative work behavior and perceived authentic leadership, with a focus on the contribution that employee creativity and job autonomy make to this relationship. In addition to a conceptual framework that elucidates the theoretical connections between the variables, the study used a descriptive research design. The present study employed a relational survey questionnaire to collect data, which will be examined to ascertain the moderating role of job autonomy and employee creativity as well as the relationship between innovative work behavior and perceived authentic leadership.

Type of Study

In current study, a quantitative research method was employed, involving the collection of data through questionnaires, which analyzed using statistical tools such as Smart PLS and SPSS. Due to the limited time and resources available, a cross-sectional study design will be used, focusing on a single industry to ensure the accuracy of the findings. This research design

approach was considered appropriate by Levin (2006) for situations where resources and time were constrained.

Population Frame

This study focuses on Pakistan's information technology (IT) sector, specifically targeting information technology companies' employees nationwide. The IT sector is chosen as the population of this research work because of its dynamic environment marked by continuous technological evolution. Information technology companies engage in perpetual software development, demonstrating a dedicated commitment to staying at the forefront of technological inventions. Considerable investments in research and development (R&D) contribute to ongoing experimentation with cutting-edge technologies, fostering continuous innovation. The information technology industry is known for its agility in adopting emerging technologies such as cloud computing, block chain, Internet of Things (IoT), and machine learning. Additionally, it promotes a culture of creativity, injecting fresh ideas and disruptive innovations. The sector's global nature encourages collaboration and networking, facilitating the exchange of ideas and best practices globally. Therefore, the variable employee creativity, innovative work behavior and the perceived authentic leadership style could be best studied among the information technology sector of Pakistan. IT solutions from Pakistan play a pivotal role in addressing complex business challenges, including streamlining operations, enhancing cyber security, and leveraging data analytic.

Agile development practices emphasize adaptability, fostering a culture of continuous improvement and innovation (Khan et al. (2022); Islam., 2022). Moreover, the industry plays a key role in driving digital transformation across various sectors, reshaping business processes, customer experiences, and overall industry landscapes. In essence, the intrinsic link between the Information technology industry and innovation lies in its commitment to dynamic evolution, continuous research and development, and the adoption of emerging technologies.

This continuous cycle of innovation positions the IT industry as a key driver of technological advancements, contributing significantly to Pakistan's economy.

The information technology sector's contributions to economic growth, job creation, and technological advancements are noteworthy. It serves as a primary catalyst for Pakistan's economic prosperity, contributing significantly to the country's GDP (Arpatech, 2019). The sector provides diverse job opportunities, influencing related industries and services positively. Positioned at the forefront of technological progress, the information technology industry leads innovation, exporting services globally and enhancing Pakistan's global competitiveness (Arpatech, 2019).

Encouraging employee creativity, supporting startups, and actively contributing to skill development are additional dimensions of the information technology industry's influence. This dedication ensures a skilled workforce proficient in leveraging the latest technologies, contributing to overall human capital development. The sector's pivotal role as a key driver of digital transformation further amplifies efficiency, productivity, and competitiveness across diverse industries.

The region is distinguished by the presence of esteemed educational institutions and research centers, integral in shaping the information technology landscape. Collaborations between these institutions and the information technology industry foster a culture of innovation and continuous learning, making the area an ideal setting for a study focused on technological advancements.

The proximity of information technology companies in Islamabad and Rawalpindi, Lahore and Karachi create abundant networking opportunities among professionals and organizations. Collaborations, knowledge exchange, and industry events are more accessible in a region where information technology activities are concentrated. This networking element

enhances the study's potential to gather diverse perspectives and experiences. The selection of Islamabad and Rawalpindi, Lahore and Karachi are motivated by the region's stature as a prominent information technology hub, characterized by a clustering of companies, a proficient workforce, robust technological infrastructure, and governmental support. These elements collectively make the region an optimal context for acquiring comprehensive insights into the dynamics of the information technology industry in Pakistan. The research undertaken received explicit approval and support from the management of the participating information technology companies, underscoring a collaborative and industry-engaged approach. This ensures that the study was conducted with the endorsement and cooperation of key stakeholders within the information technology sector. The involvement of industry management adds a layer of credibility and relevance, affirming the research's alignment with the real-world dynamics of the information technology landscape in Pakistan.

Unit of Analysis

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.

Time Horizon

Data was gathered using a cross-sectional technique by asking employees of information technology organizations to complete questionnaires in order to achieve the research objectives. In the years 2022–2023, the goal is to ascertain how they see the research variables.

Sampling Technique

In this study, a convenience sampling technique was utilized. Non-probability sampling techniques are frequently employed in research to test theoretical relationships without necessarily compromising the quality of the study (Hulland et al., 2017; Memon, 2017). According to Hair et al. (2019), convenience sampling involves selecting participants who are readily available and accessible to the researcher. This approach is particularly advantageous when the exact size or composition of the target population is uncertain or difficult to determine. For instance, if the population is scattered or not well-defined, convenience sampling allows researchers to gather data without needing precise demographic details. In our organizations, data updates are not performed regularly, which makes it challenging for researchers to access an accurate list of employees. To avoid any kind of inconvenience, the convenience sampling strategy has been adopted in this research study. Furthermore, the limitations imposed by confidentiality requirements and the particular research aims also drove the selection of convenience sampling for this study.

Furthermore, the Ministry of Information Technology and the Securities and Exchange Commission of Pakistan (SECP) have strict confidentiality guidelines governing access to information on IT industry personnel and registered firms. Obtaining this data requires a letter

of authorization from SECP and Ministry of Information Technology, which entails a number of formalities and data protection obligations. Because of these limitations, it is difficult to use more rigorous sampling techniques, which normally rely for more comprehensive and organized data access. Additionally, convenience sampling is cost and time efficient. Conducting research with an unknown population size can be resource-intensive if using other methods, such as random sampling, which requires a known sampling frame. In contrast, convenience sampling is quicker and less costly because it relies on participants who are conveniently accessible, reducing the need for extensive logistical planning and recruitment efforts. This helps in understanding the characteristics of the population and estimating parameters for more precise sampling methods in subsequent studies. Moreover, due to time constraints or limited resources, researchers may opt for convenience sampling to conduct preliminary studies or gather data when it is challenging to ascertain the exact population size. This approach allows them to collect valuable insights without the delays associated with determining a complete sampling frame.

Sample Size Estimation

Determining the appropriate sample size for a research study poses challenges, especially when the exact definite number of employees in the target population is not known. In addressing this issue, the present study employed the sample size calculation illustration provided by Krejci and Morgan (1978) to estimate the required sample size. 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 Krejci 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).

This approach enhances the representatives of the selected sample, thereby improving the generalization of the study results (Sekaran, 2001). (Saunders, 2009) recommend non-probability sampling for researchers who do not require face-to-face contact, lack relevant levels in the sampling frame, and encounter no periodic patterns. Given that interactions were not necessary for obtaining responses from middle and functional managers of IT companies, a non-probability sampling strategy, specifically the convenience sampling technique, was chosen. Following Saunders' recommendation, a total of 500 participants were selected under the convenience sampling technique (Saunder et al., 2009).

Data Collection Method

To gather data, online questionnaires were created through Google Forms and distributed to participants via various online platforms, including WhatsApp and email. The study targeted individuals whose job responsibilities involved creative problem-solving or using creativity and innovation to complete work. The primary objective was to collect data from employees working in various departments such as senior managers, divisional managers, team leaders, project managers, zonal managers, web designers, graphic designers, video editors, app developers, online security experts, and social media experts. To ensure the data collected was representative of the diverse offerings within the entire information technology

industry, 500 questionnaires were distributed across various IT companies. Ultimately, 384 completed questionnaires were received.

Data collection took place between June 2023 and September 2023. Prior to the study, proper approval and support were obtained from the management of the respective companies, and all concerned parties were informed about the research. The questionnaires, primarily in English, were made understandable through interpretation where necessary, given that the respondents were university graduates and could comprehend English thoroughly.

Due to scarcity of resources, several reasons highlight the effectiveness of the data collection approach. First, using online questionnaires via Google Forms was a cost-effective method, eliminating the need for physical printing and distribution, which would have incurred additional expenses. Leveraging widely-used online platforms such as WhatsApp and email ensured broad and swift dissemination of the questionnaires without incurring high costs.

Furthermore, obtaining prior approval and support from company management ensured smooth cooperation and increased the likelihood of higher response rates. The choice of English for the questionnaires, considering the educational background of the respondents, reduced the need for extensive translation services, thus saving time and resources. Despite the limited resources, these strategies enabled efficient data collection, ensuring that the study's objectives were met effectively.

Conceptual Definitions of Variables

Perceived Authentic Leadership

Perceived authentic leadership is defined as a leadership style in which the subordinate employee perceives their leader as being open, self-aware, sincere, morally grounded, and capable of inspiring and motivating their followers to reach their full potential (Gardner &

Avolio, 2005). Perceived authentic leadership is founded on the leader's ability to build trustful relationships with their followers, communicate effectively, and act with integrity. It is often known that authentic leaders develop a positive culture at work and instill a feeling of purpose, both of which can encourage followers to become more committed to the business and to their jobs.

Innovative Work Behavior

When people engage in proactive, intentional work-related activity, they are producing, promoting, and implementing new ideas, procedures, products, or services to enhance their own work or the overall performance of their business (Janssen, 2000). This type of behavior is known as innovative work behavior. Innovative behavior is characterized by an individual's ability to think critically, take calculated risks, and exhibit persistence in pursuing and implementing their innovative ideas. The fostering of an innovative work behavior is often dependent on an organizational culture that promotes experimentation, rewards creativity, and provides resources and support for innovative initiatives.

Employee Creativity

Employee creativity is defined as an individual's capacity to generate novel and workable concepts, solutions, or products that are associated with their job duties or the organization's goals (Zhou & Shalley 2003). This creativity can be exhibited in various forms, such as problem-solving, decision-making, product design, process improvement, and innovation. Creative employees are characterized by their ability to think divergent, approach problems from different perspectives, and apply their knowledge, skills, and experiences to develop unique and effective solutions. An organizational culture that fosters creativity, rewards innovative efforts, provides opportunities for experimentation and learning, and

encourages employees to take risks and challenge the status quo can promote employee creativity (Amabile, 1997; Woodman, 1993).

Job Autonomy

The degree of independence and control an employee has over their work, including their capacity for decision-making and problem-solving without continual guidance or direction from superiors, is referred to as job autonomy (Hackman & Oldham, 1976). The degree to which workers believe they have autonomy over their work and can make decisions on their own without constantly consulting their managers is the operational definition of job autonomy in this study.

Development of Research Instrument

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. With the exception of demographic data, the participants' answers were evaluated using a five-point Likert scale, which goes from "strongly disagree" (1) to "strongly agree" (5).

Demographic Variables

The questionnaire contains statistic variables, including age, gender, educational level, and management level, work status and time with organization. These variables were used to gather supplementary information about the respondents.

Operational Definitions of Variables:

Innovative Work Behavior

Six constructs were used in the study by Scott and Bruce (2017) to gauge innovative work behavior. One of the constructs' example items was "Produces original and inventive ideas."

Perceived Authentic Leadership

The research study used a prior study by (Walumbwa, 2007) to measure eight items that are indicative of perceived authentic leadership. Researchers such as (Yamak and Eyupoglu, 2021) have already employed this scale to investigate the influence of perceived authentic leadership on innovative work behavior. "My supervisor listens carefully to different points of view before coming to conclusions." is an example of an item from this scale (Walumbwa, 2007).

Employee Creativity

A seven-item scale developed by Tierney and colleagues (1999) can be used to evaluate an employee's creativity based on their capacity to come up with original and unique ideas. On a scale from 1 (Strongly disagree) to 5 (Strongly agree), each item is given a rating. This scale's sample question is "The employee demonstrated originality in their work."

Job Autonomy

A three-item scale designed by Voydanoff (2004) assesses an employee's capacity for creativity and innovation at work when assessing their job autonomy. Each item on the scale has a rating on a scale from 1 (strongly disagree) to 5 (strongly agree). "I am given the freedom to determine my work tasks" is one example of an item from the scale (Voydanoff, 2004).

Reliability and Validity of Research Instrument

Pre-testing entails evaluating the completed research instruments face validity and content validity. Once a satisfactory level of face validity and content validity is established, the research instrument undergoes rigorous validity and reliability testing using (Kouftero's, 1999) approach. (Kouftero, 1999) outlines a four-step process for testing the validity of the research instrument.

Initially, the traditional method is employed, focusing on construct validity by conducting exploratory factor analysis (EFA) and reliability estimation after item extraction. However, this traditional approach has limitations in assessing uni-dimensional and other measurement model properties, such as item reliability and model fit indices (Kouftero, 1999; Gerbing & Anderson, 1988). Kouftero's approach addresses these shortcomings in the subsequent steps by testing convergent validity (t-values and item reliability) and model fit indices through confirmatory factor analysis. Following the iterative process of confirmatory factor analysis, the construct reliability of remaining eligible items in the measurement models is computed. In the final step, the discriminant validity of the constructs is assessed using Pearson correlation. Average variance extracted is also calculated at this stage. The successful validation of items measuring the constructs and sub- constructs leads to the examination of the structural relationships between constructs.

Face Validity. Face validity involves the scrutiny of the research questionnaire by an expert in the subject area to ensure that the questionnaire effectively measures the intended traits or characteristics (Saunder, 2009). In this research study, the final version of the research instrument was shared with three PhD. faculty members from national universities in the relevant subject area, seeking their valuable expert opinions. The experts evaluated the research instrument, operationalization of constructs, measures of constructs, and sources of measures,

theoretical framework, and research objectives. Based on their assessments, all experts verbally confirmed that the finalized research instrument is a valid measure for the constructs being evaluated. Consequently, face validity for the research instrument was established.

Content Validity. Content Validity ensures that the research measures encompass all facets or contents of the constructs to be evaluated (Saunder, 2009). To evaluate the content validity of the research instrument, three reputable middle management practitioners were invited to review all items for readability, clarity, and comprehensiveness. These practitioners were asked to provide feedback on each item, judging them as either favorable or not favorable based on readability, clarity, and comprehensiveness. The practitioners unanimously rendered favorable judgments for all items in the finalized research instrument, recommending only negligible changes. As a result, the content validity of the research instrument was affirmed.

Data Analysis Tools

During the data analysis phase, SPSS and Smart PLS were used. Tests for reliability and correlation were carried out with SPSS. Smart PLS 4 was used to do regression analysis, moderation analysis, mediation analysis, and confirmatory factor analysis (CFA). Correlation analysis was used to look at overall correlations, direction, and significance. Regression analysis was used to regress the dependent variable on the independent variable, and confirmatory factor analysis was used to evaluate and validate the model's fitness. Various statistical tests were conducted using different software, namely Smart PLS 4, SPSS. Smart PLS 4 and SPSS was utilized for Descriptive statistics, ANOVA, reliability, Correlation analysis, and certain other tests due to its reputation as a robust tool for such analyses. Correlation, Reliability, and ANOVA tests were specifically executed using SPSS. Conversely, a four-factor model's fit was evaluated using Confirmatory Factor Analysis (CFA) using Smart PLS 4, the outcomes of which are presented in the next chapter. Furthermore, Smart PLS 4, selected for its accuracy in generating estimates, was used to do regression analysis for both

independent and dependent variables. Moreover, evaluations of mediation and moderation were carried out using Smart PLS 4.

CHAPTER 4

RESULTS

The primary data, which consists of facts and figures, are interpreted using the quantitative method, which involves gathering data by sampling, observation, and measurement before analysis and interpretation in accordance with the findings. To examine the hypothetical model, Descriptive statistics, Karl's Pearson Correlation Coefficient test was performed on IBM SPSS Statistics and CFA and hypothesis testing was analyzed through Smart PLS 4 software. The SEM (Structural Equation Modeling) technique is used to analyze data because it is thought to be an accurate technique that produces precise results and helps to assess the validity of the gathered facts and figures (Ringle et al., 2005). A total of 384 responses were gathered with the help of a 5-point Likert scale questionnaire survey from the employees of different organizations in Pakistan to explore the effect of perceived authentic leadership on innovative work behavior. Out of 550 respondents from various companies, 500 actively participated, yielding a response rate of 90.91%. 500 is a sufficient sample size to continue the research because 300 is the criterion for a good sample size (Raza & Hanif, 2013; Comrey & Lee, 2013). A sample size of 50 is deemed bad.

Demographics Characteristics

Table 4.1

Gender

Demographics	Frequency	Percentage %
Male	222	57.8
Female	162	42.2
Total	384	100

As listed in Table 4: 222 male's respondents to the survey (57.8%) and the rest of the 162 were female respondents (42.2%).

Table 4.2

Age

Demographics	**Frequency**	**%**
25-35	172	44.8
36-45	128	33.4
46-55	65	16.9
Above 56	19	4.9
Total	384	100

Table 4.2 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. Table 4.4 shows the ethnicity of different respondents of the study.

Table 4.3

WS

Demographics	**Frequency**	**%**
Full time	198	51.6
Part time	186	48.4
Total	384	100

The above, table represents the time of employment of different respondents of the current study. It can be seen that 51.6 percent of the respondents were working as a full-time employee, while 48.4 percent of the respondents were working as part-time employees.

Table 4.4

Education

Demographics	**Frequency**	**%**
Intermediate	176	45.8
Graduation	128	33.3
Masters	72	18.7
Doctorate	08	02.8
Total	384	100

Table 4.4 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.

Table 4.5

Management Level

Demographics	**Frequency**	**%**
Middle level	203	52.9
Functional level	181	47.1
Total	384	100

Table 4.5 shows that 52.9 percent of the respondents of the study are from middle-level management, while 47.1 percent of the respondents are from functional levels.

Table 4.6

Time with Organization

Demographics	**Frequency**	**%**
<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
>13 years	29	7.8
Total	384	100

The table above represents the number of years they have been working for in the current organization. It can be seen that 25.8 % of the participants of the study are working for less than 3 years, 31.1 percent of the respondents are working for 3 to 6 years, 20.8 percent of the participants have worked from 6 to 9 years, 14.6 percent of the participants have worked for 9 to 12 years, and 7.8 percent of the participants have worked for more than 13 years.

Descriptive Statistics

The number of cases or observations for each variable is shown in the N column. It provides information about the quantity of data points available for analysis or the sample size. The average value of the variable over all observations is represented by the mean. It gives the typical value of the variable in the datasets as a measure of central tendency. The standard deviation quantifies the dispersion, or spread, of the data around the mean. A higher standard deviation suggests more variability in the data, whereas a lower standard deviation suggests the data are closer to the mean. The Minimum and Maximum sections show the data's lowest and maximum replies for each item.

Table 4.7

Innovative Work Behavior

Descriptive Statistics	N	Min.	Max.	Mean	Standard Deviation
IWB1	384	1	5	3.42	1.195
IWB2	384	1	5	3.31	1.188
IWB3	384	1	5	3.44	1.227
IWB4	384	1	5	3.39	1.217
IWB5	384	1	5	3.49	1.170
IWB6	384	1	5	3.58	1.167

Descriptive statistics for innovative work behavior are displayed in Table 4.7. All items have a minimum response of 1, which indicates significant disagreement, and a maximum response of 5, which indicates strong agreement. A mean score greater than three indicates that most respondents agree and strongly agree.

Table 4.8

Perceived Authentic Leadership

Descriptive Statistics	N	Min.	Max.	Mean	Standard Deviation
PAL1	384	1	5	3.93	1.034
PAL2	384	1	5	3.79	1.141
PAL3	384	1	5	3.99	.980
PAL4	384	1	5	3.94	1.094
PAL5	384	1	5	3.99	.977
PAL6	384	1	5	4.05	.966
PAL7	384	1	5	3.98	1.033
PAL8	384	1	5	3.89	1.033

Table 4.8 presents descriptive data for perceived authentic leadership. The minimum response for each question is 1, indicating significant disagreement, and the maximum response is 5, indicating strong agreement. A mean score greater than three indicates that most respondents agree and strongly agree.

Table 4.9

Employee Creativity

Descriptive Statistics

	N	Min.	Max.	Mean	Standard Deviation
EC1	384	1	5	3.69	1.129
EC2	384	1	5	3.88	1.068
EC3	384	1	5	3.76	1.156
EC4	384	1	5	3.82	1.040
EC5	384	1	5	3.78	1.023
EC6	384	1	5	3.96	1.016
EC7	384	1	5	3.89	1.043

Table 4.9 presents the descriptive statistics for employee creativity. The minimum response for all questions is 1, indicating significant disagreement, and the greatest response is 5, indicating strong agreement. A mean score greater than three indicates that most respondents agree and strongly agree.

Table 4.10

Job Autonomy

Descriptive Statistics

	N	Min.	Max.	Mean	Standard Deviation
JA1	384	1	5	3.42	1.240
JA2	384	1	5	3.48	1.189
JA3	384	1	5	3.80	.961

Table 4.10 presents descriptive statistics for job autonomy. The lowest response on all items is 1, which indicates significant disagreement, and the highest response is 5, which indicates strong agreement. A mean score greater than three indicates that most respondents agree and strongly agree.

Pearson Correlation Coefficient Test

The Pearson Correlation Coefficient Test was used to examine the data that had been gathered. This technique is used to determine the relationship between two variables and it also measures the direction and strength of that relationship. The r value is considered to interpret the strength of Pearson's Correlation coefficients (Stephanie, 2015). If the value of r is greater than zero, the relationship is positive; if it is less than zero, the relationship is more toward the negative. According to Siegle (2009), if the Sig. (2-tailed) value is less than or equal to 0.05, then there is a significant correlation between the variables; if not, there is no correlation.

Table 4.11

Pearson Correlation Coefficient Test

	Perceived Authentic Leadership	**Employee Creativity**	**Job Autonomy**	**Innovative Work Behavior**
Perceived Authentic Leadership	1			
Employee creativity	0.548	1		
Job autonomy	0.211	0.367	1	
Innovative Work Behavior	0.340	0.363	0.398	1

Pearson correlation analysis (Table 4.11) reveals a moderately favorable association between perceived authentic leadership and employee creativity (r= 0.548, p-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

Confirmatory Factor Analysis (CFA)

To identify the factor construction CFA has also been performed. CFA is used to check the relationship among and within the constructs of the model.

Measurement Model

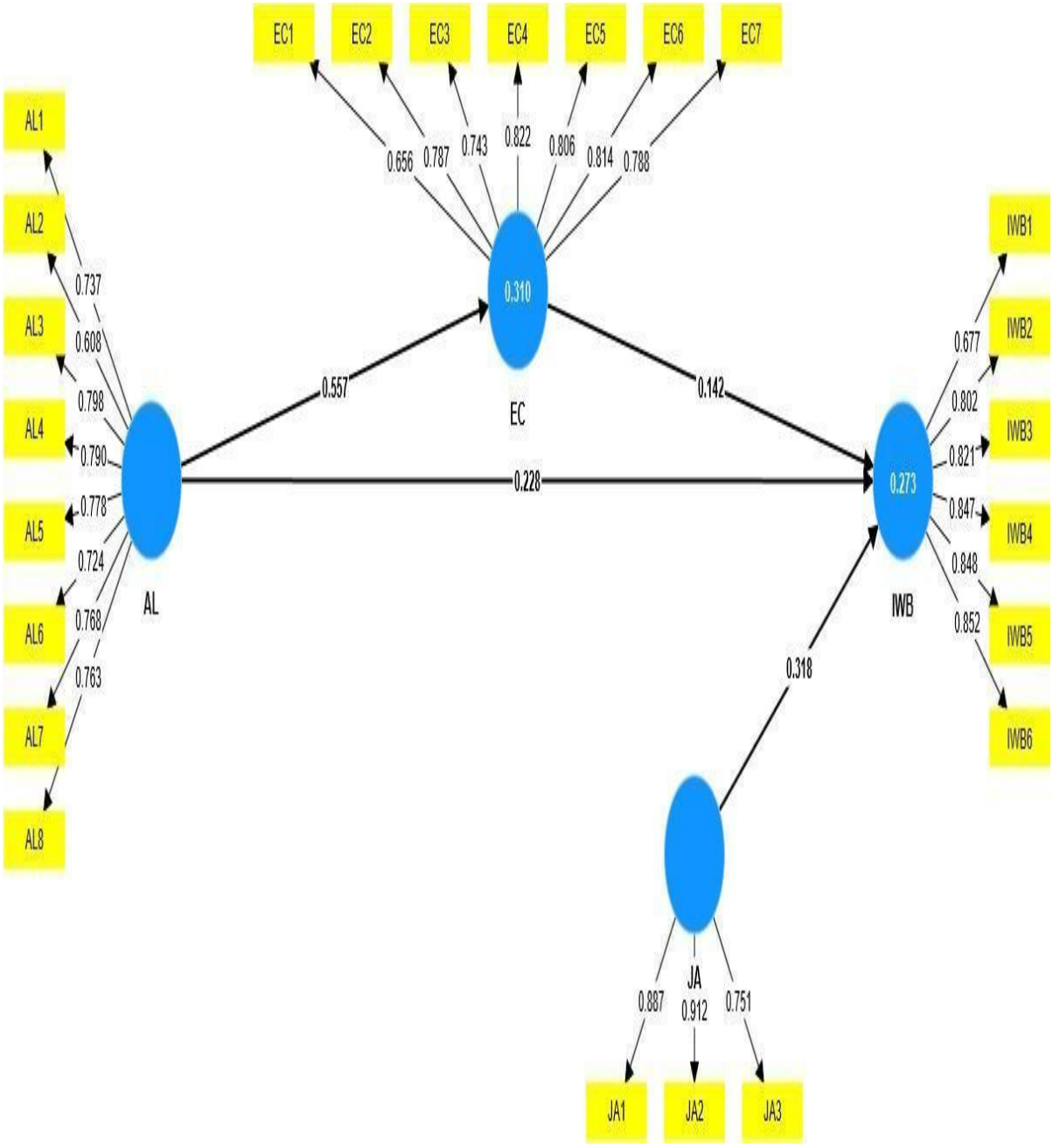


Figure 4- 1 PLS-SEM Diagram

The tests listed below were evaluated for the model's assessment.

Table 4.12

Construct Reliability and Validity

Items	Cronbach A	Composite (Rho_A)	Reliability	Average Variance Extracted (AVE)
AL	0.887	0.894		0.559
EC	0.888	0.890		0.601
IWB	0.896	0.913		0.656
JA	0.818	0.886		0.728

When the reliability values are greater than the cut-off value of 0.7, the Cronbach's α and composite reliability values must be evaluated in order to determine internal consistency (Field, 2009; Hair et al., 2016). The results presented in Table 4.12 clearly show the relationship between all the variables and questions because every score shows a value greater than 0.7, which satisfies the necessary threshold.

Convergent validity provides evidence of the association between the indicators of the same variables (Hair et al., 2016). It is reached when the Average Variance Extracted (AVE) value inside the variables is equal to or greater than the threshold value of 0.5, which is established by (Hair et al. 2016) and (Fornell and Larcker, 1981). The results are shown in Table 5, where it is clear that every variable in the model satisfies the requirements because its AVE value is more than 0.5.

Table 4.13

Factor Loadings

	AL	***EC***	***IWB***	***JA***
PAL1	*0.737*			
PAL2	*0.608*			
PAL3	*0.798*			
PAL4	*0.790*			
PAL5	*0.778*			
PAL6	*0.724*			
PAL7	*0.768*			
PAL8	*0.763*			
EC1		*0.656*		
EC2		*0.787*		
EC3		*0.743*		
EC4		*0.822*		
EC5		*0.806*		
EC6		*0.814*		
EC7		*0.788*		
IWB1			*0.677*	
IWB2			*0.802*	
IWB3			*0.821*	
IWB4			*0.847*	
IWB5			*0.848*	
IWB6			*0.852*	

JA1	*0.887*
JA2	*0.912*
JA3	*0.751*

Convergent validity, according to Hair et al. (2016), shows how the indicators of the same variables relate to one another. It is reached when the Average Variance Extracted (AVE) value inside the variables is equal to or greater than 0.5, the threshold value, according to Hair et al. (2016) and Fornell and Larcker (1981). The results show that every variable in the model has an AVE value more than 0.5, as shown in Table 5, meeting the criteria.

Discriminant Validity

To determine how distinct one construct is from other constructs, discriminant validity is employed. Discriminant validity must be greater than AVE for every measure. DV refers to the degree to which a specific latent construct varies from other latent constructs (Duarte &Raposo, 2010) and is measured using AVE as given by HTMT criteria, (1981). This was done by contrasting every paired construct's squared relationship with the AVEs for every construct. According to Hair et al. (2016), discriminant validity assesses how well indications of one variable differ from those of the other.

Table 4.14

Discriminant Validity (HTMT criterion)

	AL	**EC**	**IWB**	**JA**
AL	**(.559)**			
EC	0.517	**(.601)**		
IWB	0.389	0.408	**(.656)**	
JA	0.255	0.432	0.455	**(.728)**

According to the values observed in Table 4.14, the value in parentheses is showing the AVE value of each variable. The results show that each variable AVE is greater than 0.50 which is minimum benchmark for acceptance. HTMT values in above table are <0.85 which is standard benchmark that shows that there is no discriminant validity issue in the data.

Model Structure

The route analysis has been used to examine the structural model. Every avenue connected to the research hypothesis has been investigated.

Table 4.15

Regression Analysis

	R-square	***R-square adjusted***
EC	*0.310*	*0.308*
IWB	*0.367*	*0.359*

A standard multiple linear regression is used to gauge how well the independent and dependent variables can be correlated. R-squared is the percentage of the response variable's variance that the predictor variables can explain.

Table 4.15 shows that the dependent variable, innovative work behavior, has an R2 of 36.7%, indicating that independent variables account for 36.7% of the variation in the dependent variable.

The adjusted R2 value is less than R2 that is 36.7% for innovative work behavior so the value of the dependent variable is explained by all independent variables.

Table 4.16

Results of Path Analysis

Hypothesis	***Path***	***Beta***	***T statistics (|O/STDEV|)***	***P values***	***Remarks***
H1	*AL -> IWB*	*0.165*	*2.263*	*0.024*	*Accepted*
H2	*AL -> EC*	*0.557*	*11.308*	*0.000*	*Accepted*
H3	*EC -> IWB*	*0.178*	*2.333*	*0.020*	*Accepted*

The values in 4.16 shows the results of the path analysis. All three hypotheses have shown positive and significant relationships that are accepted. According to the H1 (Perceived Authentic Leadership-> 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 -> 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 -> innovative work behavior) (beta = 0.178, p-value = 0.020).

Mediation Analysis

Table 4.17

Mediation Analysis

Hypothesis	**Path**	**Beta Effect Type**	**T statistics (|O/STDEV|)**	**P values**	**Remarks**
H4	AL -> EC -> IWB 0.099	Indirect 2.081		0.038	Accepted

The single hypothesis in the mediation analysis table above is a partial mediation that is approved since it shows a strong and positive relationship.

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.

Table 4.18.

Total Effect, Direct and Indirect Model of Mediation Analysis

Total Effect of PAL on IWB				Direct Effect of PAL on IWB				Indirect Effect of PAL>EC>IWB	
Effect	SD	T	P	Effect	SD	t	P	Effect	Boot SE
0.264	0.05	4.992	.000	0.165	0.07	2.26	0.02	0.099	0.020

In addition, table 4.18 depicts the results of total effect, direct effect and indirect effect of mediation analysis. The indirect effect of 0.099 means that two individuals who differ by one unit in experiencing the Perceived Authentic Leadership are estimated to differ by 0.099 units in bringing Innovative work behavior as an outcome of the propensity for those individuals with relatively more experiencing the Perceived authentic leadership to attain more Employee Creativity because the sign of α is positive, which in results brings the more Innovative work behavior because the direction of β is positive. Table 4.18 also depicts the direct effect of Perceived authentic leadership as c' = 0.165. This direct effect reflects the estimated difference in Innovative work behavior between the two individuals who experience the same level of Employee Creativity but they differ by one unit in their experience of Perceived Authentic Leadership. This direct effect of 0.165 is positive in nature.

Moderation Analysis

Examining the moderating impact involved examining the direct correlations between the exogenous and moderator components as well as the relationship between the interaction component and the intrinsic variable. Using the product indicator technique developed by Chin et al. (1996), moderating effects in the PLS model were examined. If the resulting path coefficient is significant, the moderating impact hypothesis is validated, regardless of the values of the path coefficient displayed in the direct connection (Baron & Kenny 1986).

Standardizing indicator values before multiplication is a technique proposed by (Smith and Sasaki, 1979) to reduce calculation mistakes by improving the relationship between the

product indicators and each of their component parts. This method's objective is to measure moderating effects. After that, all possible products are generated by combining the two sets of standardized indicators for the moderator and predictor variables. These product indications represent the hidden interaction variable. Next, the latent variables are created using the PLS technique as an accurate linear blend of their signals in order to maximize the explained variance for both the indicators and hidden variables.

Table 4.19

Moderation Analysis

Hypothesis	**Path**	**Beta**	**T-value**	**P-value**	**Remarks**
H5	JA x EC -> IWB	0.248	4.831	0.000	Accepted

In 4.19, moderation analysis has been shown in which one hypothesis has shown a positive and significant relationship, so hypothesis 5 is accepted.

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).

Hypothesis

H1	Perceived authentic leadership significantly impact on innovative work behavior of employees.	Accepted
H2	Perceived authentic leadership positively related to employee creativity.	Accepted
H3	Employee creativity is positively related to innovative work behavior.	Accepted
H4	Employee creativity significantly mediates the relationship of perceived authentic leadership and innovative work behavior.	Accepted
H5	Job autonomy significantly moderates the relationship of employee creativity and innovative work behavior.	Accepted

CHAPTER 5

DISCUSSIONS, LIMITATIONS & RECOMMENDATIONS

Discussions:

This chapter looks at the data analysis's conclusions and outcomes in light of the study's research questions. Through a comprehensive discussion, conclusions and key recommendations are drawn for practitioners. Additionally, potential areas for future research are explored, considering the limitations inherent in this study. This study investigates concepts derived from three crucial theoretical foundations of social cognitive theory.

Research Objective I

Recent scholarly work has highlighted a noticeable gap in comprehensive literature addressing the various facets of innovative work behavior within the information technology sector, thereby exposing deficiencies and emphasizing the need for further exploration to achieve conceptual clarity and develop a theoretical framework (Usher & Ford, 2022). The current research on innovative work behavior is still in its infancy, which emphasizes how important it is to investigate the characteristics, causes, and effects of this type of behavior, particularly in the context of information technology (Usher, E., & Ford, C. J. 2022).

A notable gap in the current literature is highlighted by the fact that researchers cannot agree on the definitions of innovative work behavior because there has only been a limited amount of empirical research done to improve our understanding of this concept in the context of information technology (Lee, et al., 2021). Our main goal in this research endeavor is to "examine the impact of perceived authentic leadership on innovative work behavior within the information technology sector of Pakistan, with a focus on the development and delivery of IT services and products." We hope that this may help close this study gap. The operationalization

of innovative work behavior, particularly in the context of IT services and product development, has been confirmed by empirical data, including a strong reliability and validity study (Choi & Kang, 2021). As such, these research findings contribute to the empirical understanding of the characteristics of innovative work behavior in the ever-changing information technology environment. Given our findings, we suggest a more precise definition of the recently created term "innovative work behavior" in relation to Pakistan's IT industry: "Innovative work behavior pertains the acquisition of new capabilities, technology, or equipment, with a particular emphasis on the development and delivery of cutting-edge IT services and products (Purwanto, 2021).

The primary objective is to introduce novel IT products or services, addressing the perceived authentic leadership needs specific to the information technology sector in Pakistan, through online distribution channels. The information technology industry's evolving definition of innovative work behavior, as determined by our research, can be summed up as follows: "Innovative work behavior results in the acquisition of new capabilities, technology, or equipment." The goal is to offer innovative IT products or services, addressing perceived authentic leadership needs within the information technology sector of Pakistan, through enhanced distribution channels. It also encompasses the adoption of more advantageous revenue models and cost structures for IT organizations, capturing value for both customers and the organization" (Asbari et al., 2021)

Research Objective II

The second objective of the research in this study was to assess the predictive role of perceived authentic leadership in encouragement of employee creativity within the context of the information technology (IT) industry. Our goal was to examine whether organizations in the IT sector adapt their innovative work behavior in response to internal driving forces,

particularly focusing on innovation capabilities. Our empirical findings reveal a significant positive change in the value of innovative work behavior within information technology organizations. This change is attributed to the organization's capability to intelligently rework, co-design, and co-produce new ideas or technological options, along with the effective diffusion of these innovations across various functions of the organization. Specifically, our research indicates that information technology organizations with higher perceived authentic leadership morals are more likely to bring about positive changes in employee creativity behaviors. This result is consistent with the social cognitive theory, which holds that firms in the information technology sector that can quickly adapt through innovation to the shifting market dynamics will succeed (Duarte et al., 2020). Additionally, the study by (Ribeiro, 2020) has conceptualized that strong perceived authentic leadership may lead to robust employee creativity, highlighting the need for further empirical testing in future research within the information technology industry. By addressing the recent call for empirical investigation of the possible influence of employee creativity on innovative work behavior within the information technology sector, this empirical result adds to the body of literature already in existence (Duarte et al., 2020).

Research Objective III

Evaluating the effect of employee creativity on innovative work behavior in the Information Technology (IT) industry was the third research goal of the study. The empirical analysis underlines the essential role of organizational executives in leveraging the organization's capabilities to intelligently reshape, redesign, and reproduce new ideas or technological options (Ribeiro & Duarte, 2020). These capabilities, when diffused across various functions of the organization, contribute to higher technological success, apparent in terms of substantial value added to existing products or services, sustained competitive positioning, technological success, and a substance for future technological achievements

(Oliveira, 2020). The success attained through recently introduced IT services also leads to a notable improvement in the organization's creative work culture as a whole. Empirically, the results indicate that is increase in one unit in employee's creativity corresponds to a -unit increase in innovative work behavior within information technology organizations. This suggests that employees in an information technology company, differing by one unit in their approach to regulating employee creativity, are estimated to differ by units in bringing about a substantial positive change in terms of value in their innovative work behavior. These results align with previous research suggesting a complex relationship between employee creativity and innovative work behavior (Afsar, & Umrani, 2020). Moreover, it is conceptualized that exploring the association of these variables with performance indicators, such as employee creativity, is essential within the information technology sector (Lee et al., 2021). These observed findings contribute to the existing body of knowledge by addressing this identified need in the existing research literature (Afsar & Umrani, 2020). But even with these developments, the IT sector still faces assumptions and obstacles that prevent employees from being creative and innovative at work.

Research Objective IV

The fourth research objective of this study is primarily concerned with evaluating the ways in which employee creativity mediates the relationship, both directly and indirectly, between innovative work behavior and perceived authentic leadership in Pakistan's information technology sector.

It's essential to recognize that individuals within an organization, covering middle or functional management levels, serve as the fundamental unit for directing organizational processes. Particularly, certain individuals may resist innovation due to tendencies such as routine-seeking behavior, close- mindedness, resistance to new adjustments, or a fear of losing control (Lee et

al., 2020). The empirical analysis conducted for the fourth research objective 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.

Research Objective V

At the moment, the majority of research on the factors driving innovative work behavior is theoretical in nature, with only a small number of empirical studies offering hard data on these drivers. It's important because recent conceptual research has indicated that internal factors like perceived authentic leadership, employee creativity, and job autonomy are likely to influence employees' innovative work behavior. This suggests the need for additional empirical research (Lee et al., 2020).

This conceptualization identifies a research gap, leading to the establishment of research objective five: "to examine the significant moderating effect on the relationship of employee creativity and innovative work behavior." In this study, hypotheses 5 and 6 look into how job autonomy modifies the effects of perceived authentic leadership and employee creativity on how innovatively employees perform. Overall, the results point to a stronger relationship between job autonomy and innovative work behavior, even when employee creativity remains same. Particularly, job autonomy affects the favorable effects of perceived authentic leadership's indirect influence on creative work practices among employees. Remarkably, while job autonomy is less than employee creativity (which is seen as a positive force), the combined influence of both forces is favorable for innovative work behavior, and vice versa (Pranowo & Supriadi, 2021). According to the hypothesis, an employee's ability to be creative and engage in new work practices depends on how much job autonomy they have. More specifically, it is anticipated that increased job autonomy will bolster the favorable correlation that exists between worker inventiveness and innovative work behavior (Siregar & Sujana, 2021).

This hypothesis speculates that the impact of employee creativity on innovative work behavior depends on the level of job autonomy. Increased levels of job autonomy are expected

to enhance the positive relationship between employee creativity and innovative work behavior, allowing employees to implement their creative ideas more effectively (Siregar & Sujana, 2021). These hypotheses align with Social Cognitive Theory as they explore the driving forces (perceived authentic leadership, employee creativity) and the potential moderating force (job autonomy) in the context of innovative work behavior within the IT industry. The proposed study appears to contribute to filling the gap in empirical evidence, particularly within the information technology culture of Pakistan.

Recommendations

This research concludes with recommendations presented in two categories. The first set of recommendations, termed "managerial implications," and “practical implications” are directed toward practitioners in Information ion technology companies in Pakistan. The second set, addressing future research opportunities, is discussed as "limitations and future research directions" for academicians.

Managerial Implications

The following are some crucial suggestions that the research's findings have for managers and executives in information technology companies:

Innovative Work Behavior Consideration. In the dominion of information technology companies, cultivating innovative work behavior entails creating a culture and surroundings that promote employees to think creatively, take risks, and contribute novel ideas and solutions. Leadership plays a pivotal role, and top-down innovation is crucial. Leaders should not only endorse innovative initiatives but actively participate in them, setting an example for the entire organization. A flexible work environment is essential, allowing employees the freedom to experiment with new ideas without the fear of failure. This flexibility can be facilitated through various means, such as flexible work hours, remote work options,

and dedicated time for personal projects. Cross-functional collaboration is another key consideration, emphasizing the importance of building diverse teams with varied skills and backgrounds. Such teams encourage the exchange of ideas from different perspectives, fostering more innovative solutions. Continuous learning and development are vital, and investing in training programs ensures that employees stay abreast of emerging technologies and industry trends, training them to contribute effectively to innovative projects. Recognition and rewards play a role in fostering a positive culture. Acknowledging employees for their innovative contributions, through both formal recognition programs and informal praise, reinforces the value placed on creative efforts. Establishing innovation metrics and key performance indicators (KPIs) is crucial for tracking progress and success. These metrics could include the number of new ideas generated, the level of creativity displayed by employees, and improvements in processes. Allocating dedicated time and resources for creativity, such as through "innovation days," is another effective strategy. Having open lines of communication is crucial to fostering a culture where staff members feel free to offer suggestions and comments.

This can be facilitated through open-door policies, suggestion boxes, or regular brainstorming sessions. Ensuring access to cutting-edge tools and technologies enables employees to explore new possibilities and experiment with innovative solutions. Regular reviews and assessments help teams refine their ideas and approaches. Inclusive decision-making processes, particularly those related to innovation, foster a sense of ownership and engagement among employees. In the context of measuring the impact of perceived authentic leadership on innovative work behavior managerial recommendations include implementing surveys or assessments to gauge employees' perceptions of leadership authenticity. Furthermore, monitoring and evaluating the innovative ideas and products produced by staff members can offer insightful information on the mediating function of employee creativity.

Organizations may want to keep an eye on employee autonomy levels and their relationship to creative outputs in order to gauge the moderating influence of work autonomy. Regular feedback sessions and discussions can serve as effective tools for understanding the dynamic interplay between perceived authentic leadership, employee creativity, and job autonomy in driving innovative work behavior.

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 supervise with more improved interactions with mutual trust, consequently establishes the more innovative behavior of employees. Furthermore, the IT specialist need to acknowledge that the employees of 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 IT sector's employee. Another importation 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.

Limitations and Future Research Directions

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.

Conclusion

By looking into the factors that contribute to innovative work behavior, this study seeks to fill in some significant gaps in the recent research literature. The study explores the relationship between perceived authentic leadership and innovative work behavior by developing research objectives and questions that are specific to the gaps that have been discovered. Additionally, it conducts an empirical investigation into how job autonomy and employee creativity affect the direct correlation between creative work practices and perceived authentic leadership. Furthermore, the research evaluates the overall indirect impact of perceived authentic leadership on creative work practices, accounting for the moderating effects of job autonomy and the mediating function of employee creativity. An important emphasis is on providing empirical support for the operationalization of creative work practices. In pursuit of these research objectives, the study has formulated guiding research

questions, forming the foundation for six research hypotheses. The comprehensive literature review, coupled with the empirical findings, underscores the significance of addressing employee creativity and job autonomy as driving forces in daily organizational activities. Generous the extent of these two forces—employee creativity and job autonomy—is essential for organizations striving to achieve significant value effects in innovative work behavior, even though enhancing the organization's innovation capabilities can produce substantial impacts on perceived authentic leadership and innovative work behavior. Here, "analysis" pertains to gauging the cumulative impact of the sub-elements of these two forces. The findings of the study bear critical implications for middle and functional management levels of information technology companies in Pakistan. They serve as an initial guide for practitioners aiming to implant innovation in their employees' work behaviors. The provided insights can assist practitioners in assessing the extent of various sub- elements of employee creativity and job autonomy, enhancing their understanding of how these factors contribute to positive outcomes in innovative work behavior. The study concludes that innovative work behavior and perceived authentic leadership are significantly influenced by employee creativity, job autonomy and creative work behavior individually and jointly, as well as by the negative and positive interactions between these two factors. These elements may be thought of as essential contributors to the qualifications of innovative work behavior.

REFRENCES

AISDL. (2020). Relationship between extroversion and employees' innovative behavior and moderating effect of organizational innovative climate. https://doi.org/10.31219/osf.io/4jkcw

Alheet, A. F., Adwan, A. A., Areiqat, A. Y., Zamil, A. M., & Saleh, M. A. (2021). The effect of leadership styles on employees' innovative work behavior. Management Science Letters, 239-246. https://doi.org/10.5267/j.msl.2020.8.010

Alvesson, M., & Einola, K. (2019). Warning for excessive positivity: Perceived authentic leadership and other traps in leadership studies. The Leadership Quarterly, 30(4), 383-395. https://doi.org/10.1016/j.leaqua.2019.04.001

Amabile, T. M. (1988). A model of creativity and innovation in organizations. Research in organizational behavior, 10, 123-167.

Amabile, T. M. (1996). Creativity in context: Update to the social psychology of creativity. Westview Press.

Ardhi, R. (2019). Perceived authentic leadership and organizational trust in improving company performance with innovative behavior as intervening: Case study of BCA KCU Yogyakarta, Indonesia. International Journal of Innovative Research and Development, 8(9). https://doi.org/10.24940/ijird/2019/v8/i9/sep19037

Avolio, B. J., & Gardner, W. L. (2005). Perceived authentic leadership development: Getting to the root of positive forms of leadership. The Leadership Quarterly, 16(3), 315-338.

Alarauhio, J., Räisänen, T., Toikkanen, J., & Tumelius, R. (2022). Shaping the north through multimodal and intermedial interaction. Springer Nature.

Arpatech. (2019, August 14). Contribution of IT sector in the growth of Pakistan. B2B Technology Partner for Web, Mobile & Outsourcing | Arpatech. https://WWW.arpatech.com/blog/contribution-sector-growth-pakistan-since-partition/amp

Bagheri, A., Akbari, M., & Artang, A. (2020). How does entrepreneurial leadership affect innovation work behavior? The mediating role of individual and team creativity self-efficacy. European Journal of Innovation Management, 25(1), 1-18. https://doi.org/10.1108/ejim-07-2020-0281

Bai, Y., Wang, Z., Alam, M., Gul, F., & Wang, Y. (2022). The impact of Perceived authentic leadership on innovative work behavior: mediating roles of proactive personality and employee engagement. Frontiers in Psychology, 13.

Bibi, S., Khan, A., Qian, H., Garavelli, A. C., Natalicchio, A., & Capolupo, P. (2020). Innovative climate, a determinant of competitiveness and business performance in Chinese law firms: The role of firm size and age. Sustainability, 12(12),4948. https://doi.org/10.3390/su12124948

Carmeli, A., Brueller, N. N., & Dutton, J. E. (2009). Learning behaviors in the workplace: The role of high-quality interpersonal relationships and psychological safety. Systems Research and Behavioral Science, 26(1), 81-98.

Chen, Y., & Hou, L. (2020). Perceived authentic leadership and employee creativity: The mediating role of psychological capital and the moderating role of job insecurity. Frontiers in Psychology, 11, 1415.

Chen, L., Wadei, K. A., Bai, S., & Liu, J. (2020). Participative leadership and employee creativity: A sequential mediation model of psychological safety and creative process engagement. Leadership & Organization Development Journal, 41(6), 741- 759. https://doi.org/10.1108/lodj-07-2019-0319

Ćulibrk, J., Delić, M., Mitrović, S., & Ćulibrk, D. (2018). Job satisfaction, organizational commitment and job involvement: The mediating role of job involvement. Frontiers in psychology, 9, 132.s

Chaubey, A., Sahoo, C. K., & Khatri, N. (2019). Relationship of transformational leadership with employee creativity and organizational innovation: A study of mediating and moderating influences. Journal of Strategy and Management, 12(1), 61-82.

Dai, Q., Dai, Y., Zhang, C., Meng, Z., Chen, Z., & Hu, S. (2022). The influence of personal motivation and innovative climate on innovative behavior: Evidence from University students in China. Psychology Research and Behavior Management, 15, 2343-2355. https://doi.org/10.2147/prbm.s381494

El-Said, H. (2019). The relationship between job involvement, creativity and innovative behavior among employees in the telecommunications sector in Egypt. Journal of Business and Retail Management Research, 13(1), 119-130

Evalina, R. T. U., Darmawan, D. S., VIP Paramarta, U. I., Bakri, R., & Farida, D. M. Effect of Organizational Learning on the Hard Skills, Soft Skills and Innovation of Employees: Evidence from Information Technology Industries.

Falih Bannay, D., Jabbar Hadi, M., & Abdullah Amanah, A. (2020). The impact of inclusive leadership behaviors on innovative workplace behavior with an emphasis on the mediating role of work engagement. Problems and Perspectives in Management, 18(3), 479-491. https://doi.org/10.21511/ppm.18(3).2020.39

Farh, J. L., Hackett, R. D., & Liang, J. (2007). Individual-level cultural values as moderators of perceived organizational support-employee outcome relationships in China: Comparing the effects of power distance and traditionality. Academy of Management Journal, 50(3), 715-729.

Foss, N. J., & Saebi, T. (2016). Fifteen years of research on business model innovation. Journal of Management, 43(1), 200-227. https://doi.org/10.1177/0149206316675927

Gong, Y., Huang, J.-C., & Farh, J.-L. (2013). Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self-efficacy. Academy of Management Journal, 56(3), 788-808.

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. Organizational behavior and human performance, 16(2), 250-279.

Hj Musneh, S. N., Ambad, S. @., & Mohd Roslin, R. (2021). The effect of innovative work behavior on the performance of service sector SMEs in Sabah. Journal of International Business, Economics and Entrepreneurship, 6(1), 20 https://doi.org/10.24191/jibe.v6i1.14204

Hussein, A. M. (2021). The effect of leadership soft skills on knowledge sharing, analytical research in al Fallujah University. Revista Gestão Inovação e Tecnologias, 11(3), 340-354. https://doi.org/10.47059/revistageintec.v11i3.1942

Hayward, P. (2013). Book review: Immunity to change by Robert Kegan and Lisa Lahey. Journal of Contemporary Issues in Business and Government, 19(1), 81. https://doi.org/10.7790/cibg.v19i1.10

Hutagalung, P. (2020). Makalah tentang bola Voli Patrick Hutagalung X MIA 6. https://doi.org/10.31219/osf.io/m7t3u

Imran, M. K., Ilyas, M., Aslam, U., & Fatima, T. (2018). Knowledge processes and firm performance: The mediating effect of employee creativity. Journal of Organizational Change Management, 31(3), 512-531. https://doi.org/10.1108/jocm-10-2016-0202

Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behavior. Journal of Occupational and Organizational Psychology, 73(3), 287-302.

Kanungo, R. N. (1982). Measurement of job and work involvement. Journal of Applied Psychology, 67(3), 341-349.

Khan, M. A., Ismail, F. B., Hussain, A., & Alghazali, B. (2020). The interplay of leadership styles, innovative work behavior, organizational culture, and organizational citizenship behavior. 10(1),215824401989826 .https://doi.org/10.1177/2158244019898264

Li, J., Sun, Y., Hu, J., Zhang, J., & Sun, L. (2020). How Perceived authentic leadership impacts innovative work behavior: The mediating role of psychological capital and the moderating role of psychological safety. Frontiers in Psychology, 11, 1774.

Liu, D., Jiang, K., Shalley, C. E., Keem, S., & Zhou, J. (2010). Motivational mechanisms of employee creativity: A meta-analytic examination and theoretical extension of the creativity literature. Organizational Behavior and Human Decision Processes, 111(1), 1- 18.

Liu, S., & Lu, L. (2019). The impact of Perceived authentic leadership on employees' innovative work behavior: The role of job involvement and job autonomy. Journal of Business Research, 102, 1-11

Lee, W. R., Choi, S. B., & Kang, S. (2021). How leaders' positive feedback influences employees' innovative behavior: The mediating role of voice behavior and job autonomy. Sustainability, 13(4), 1901. https://doi.org/10.3390/su13041901

Larregue, J. (2022). Sociology as a cognitive science. Socio-logos, (16). https://doi.org/10.4000/socio-logos.5229

Lee, W. R., Choi, S. B., & Kang, S. (2021). How leaders' positive feedback influences employees' innovative behavior: The mediating role of voice behavior and job autonomy. Sustainability, 13(4), 1901. https://doi.org/10.3390/su13041901

Lee, A., Legood, A., Hughes, D., Tian, A. W., Newman, A., & Knight, C. (2020). Leadership, creativity and innovation: a meta-analytic review. European Journal of Work and Organizational Psychology, 29(1), 1-35.

Majed, S. (2019). The role of leadership soft skills in promoting the learning entrepreneurship. Journal of Process Management. New Technologies, 7(1), 31-

48. https://doi.org/10.5937/jouproman7-20122

Majed, S. (2019). The role of leadership soft skills in promoting the learning entrepreneurship. Journal of Process Management. New Technologies, 7(1), 31-

48. https://doi.org/10.5937/jouproman7-20122

Marques, J. (2012). Understanding the strength of gentleness: Soft-skilled leadership on the rise. Journal of Business Ethics, 116(1), 163-171. https://doi.org/10.1007/s10551-012-1471-7

Miao, R., & Cao, Y. (2019). High-performance work system, work well-being, and employee creativity: Cross-level moderating role of transformational leadership. International Journal of Environmental Research and Public Health, 16(9),1640. https://doi.org/10.3390/ijerph16091640

Nasifoglu Elidemir, S., Ozturen, A., & Bayighomog, S. W. (2020). Innovative behaviors, employee creativity, and sustainable competitive advantage: A moderated mediation. Sustainability, 12(8), 3295. https://doi.org/10.3390/su12083295

Novitasari, D., Cahya Kumoro, D. F., Yuwono, T., & Asbari, M. (2020). Perceived authentic leadership and innovation: What is the role of psychological capital? International Journal of Science and Management Studies (IJSMS), 27- 42. https://doi.org/10.51386/25815946/ijsms-v3i5p103

Novitasari, D., Cahya Kumoro, D. F., Yuwono, T., & Asbari, M. (2020). Perceived authentic leadership and innovation: What is the role of psychological capital? International Journal of Science and Management Studies (IJSMS), 27- 42. https://doi.org/10.51386/25815946/ijsms-v3i5p103

Novitasari, D., Siswanto, E., Purwanto, A., & Fahmi, K. (2020). Authentic leadership and innovation: what is the role of psychological capital? International Journal of Social and Management Studies, 1(1), 1-21.

Ogbeibu, S., Senadjki, A., & Gaskin, J. (2019). The moderating effect of benevolence on the impact of organisational culture on employee creativity. Journal of Business Research, 90, 334-346. https://doi.org/10.1016/j.jbusres.2018.05.032

Qiu, S., Alizadeh, A., Dooley, L. M., & Zhang, R. (2019). The effects of Perceived authentic leadership on trust in leaders, organizational citizenship behavior, and service quality in the Chinese hospitality industry. Journal of Hospitality and Tourism Management, 40, 77-87. https://doi.org/10.1016/j.jhtm.2019.06.004

Rahman Khattak, S., Saleem, Z., & Khan, H. (2017). Relationship between goal orientation and employee creativity: A mediating role of creative self-efficacy. International

Journal of Organizational Leadership, 6(4), 434-443. https://doi.org/10.33844/ijol.2017.60338

Rehman, I. U. (2022). The Impact of Perceived authentic leadership on Employee Creativity in project-based Organizations (PBOs) of Pakistan: The Mediating Role of Positive Affect (Master's thesis, COMSATS University Islamabad, Lahore Campus).

Sardar, S. (2021). The influence of job involvement on innovative work behavior and employee creativity: A systematic review. Journal of Innovation & Knowledge, 6(2), 93-101. https://doi.org/10.1016/j.jik.2020.11.005

Sarker, M. A., & Al-Bluwi, T. S. (2021). The role of soft skills for innovation at the SME sector in Malaysia. Journal of Management Research, 13(3) 35.https://doi.org/10.5296/jmr.v13i3.18839

Sarker, M. A., & Al-Bluwi, T. S. (2021). The role of soft skills for innovation at the SME sector in Malaysia. Journal of Management Research, 13(3), 35. https://doi.org/10.5296/jmr.v13i3.18839

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. Academy of Management Journal, 37(3), 580-607.

Shafi, M., Zoya, Lei, Z., Song, X., & Sarker, M. N. (2020). The effects of transformational leadership on employee creativity: Moderating role of intrinsic motivation. Asia Pacific Management Review, 25(3), 166-176. https://doi.org/10.1016/j.apmrv.2019.12.002

Shah, D., & Syed, A. (2019). Framework for SME sector development in Pakistan. Islamabad: Planning Commission of Pakistan, 1(1), 21-23.

Shakil, R. M., Memon, M. A., & Ting, H. (2021). Inclusive leadership and innovative work behavior: The mediating role of job autonomy. Quality & Quantity. https://doi.org/10.1007/s11135-021-01102-0

Shin, S. J., & Zhou, J. (2013). Transformational leadership, conservation, and creativity: Evidence from Korea. Academy of Management Journal, 56(4), 1053-1071.

Shafi, M., Zoya, Lei, Z., Song, X., & Sarker, M. N. (2020). The effects of transformational leadership on employee creativity: Moderating role of intrinsic motivation. Asia Pacific Management Review, 25(3), 166-176 https://doi.org/10.1016/j.apmrv.2019.12.002

Shafi, M., Zoya, Lei, Z., Song, X., & Sarker, M. N. (2020). The effects of transformational leadership on employee creativity: Moderating role of intrinsic motivation. Asia Pacific Management Review, 25(3), 166-176 https://doi.org/10.1016/j.apmrv.2019.12.002

Shafi, M., Zoya, Lei, Z., Song, X., & Sarker, M. N. (2020). The effects of transformational leadership on employee creativity: Moderating role of intrinsic motivation. Asia Pacific Management Review, 25(3), 166-176. https://doi.org/10.1016/j.apmrv.2019.12.002

Shakil, R. M., Memon, M. A., & Ting, H. (2021). Inclusive leadership and innovative work behavior: the mediating role of job autonomy. Quality & quantity, 1-15.

Siregar, Z. M. E., Sujana, F. R., Pranowo, A. S., & Supriadi, Y. N. (2021). Job autonomy and innovative work behavior of marketing employees in the automotive industry in Indonesia: The mediating role of organizational commitment. Calitatea, 22(180), 97-102.

Usher, E., & Ford, C. J. (2022). Social cognitive theory and personal agency. Social Cognitive Theory and Personal Agency. https://doi.org/10.4324/9781138609877-ree48-1

Voydanoff, P. (2004). The effects of work demands and resources on work- to- family conflict and facilitation. Journal of Marriage and family, 66(2), 398-412.

Waheed, A., Miao, X., Waheed, S., Ahmad, N., & Majeed, A. (2019). How new HRM practices, organizational innovation, and innovative climate affect the innovation performance in the IT industry: A moderated-mediation analysis. Sustainability, 11(3), 621. https://doi.org/10.3390/su11030621

Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Perceived authentic leadership: Development and validation of a theory-based measure. Journal of Management, 34(1), 89-126.

Wei, H., Ma, C., & Zhao, Y. (2019). How Perceived authentic leadership affects employee creativity and innovative behavior: Evidence from Chinese telecommunications firms. Frontiers in Psychology, 10, 2469.

Wei, L., & Wu, J. (2018). The impact of Perceived authentic leadership on innovative behavior: Evidence from China. Sustainability, 10(11), 4176.

Wirawan, H., Jufri, M., & Saman, A. (2020). The effect of Perceived authentic leadership and psychological capital on work engagement: The mediating role of job satisfaction. Leadership & Organization Development Journal, 41(8), 1139-1154. https://doi.org/10.1108/lodj-10-2019-0433

Wirawan, H., Jufri, M., & Saman, A. (2020). The effect of Perceived authentic leadership and psychological capital on work engagement: The mediating role of job satisfaction.

Leadership & Organization Development Journal, 41(8), 1139- 1154. https://doi.org/10.1108/lodj-10-2019-0433

Yücel, İ., Karabay, M. E., & Karabay, O. (2019). The effect of employee creativity on innovative work behavior: The moderating role of job involvement. Journal of Human Resources Management Research, 2019, 1-18.

Zhang, J., Song, L. J., Ni, D., & Zheng, X. (2020). Follower mindfulness and well-being: The mediating role of perceived authentic leadership and the moderating role of leader mindfulness. Frontiers in Psychology, 11. https://doi.org/10.3389/fpsyg.2020.00879

Appendices
Questionnaire

Dear Respondent,

I am student of MSBA at NUML University, Rawalpindi. I am conducting research on "Measure the impact of Perceived authentic leadership style on innovative work behavior: the dual mediated moderation analysis" You are requested to voluntarily participate and fill the survey to the best of your knowledge and information. Your responses will be kept confidential and resulting data will be summarized on a general basis and not on an individual basis.

Please read the instructions carefully and answer all the questions. There are no "tricky" questions, so please answer each item as conveniently and as honestly as possible. It is important that all the questions be answered. Your identity will remain confidential, thus more fair feedback is solicited. The responses will be evaluated on Likert Scale, ranging from 1-5, and consume around eight minutes of your good-self, accordingly. I once again thank you for your assistance and cooperation.

Demographics (Part A)

Please, put a tick mark in the space provided or fill according to the specific instructions given.

Please, put a tick mark in the space provided or fill according to the specific instructions given.

1. Personal Details

Gender

a) Male b) Female

Age

a) 25-35 b) 36-45 c) 46-55 d) 56-Above

Work Status

a) Full- time b) Part-time

Education

a) Intermediate b) Graduation c) Masters d) Doctorate

Management Level

a) Middle Level b) Functional level

Time with organization (years)

a) 3 years b) 3-6 c) 6-9 d) 9-12 e) 13-Above

Part B

Kindly tick the appropriate response against each item. You are requested to be honest in answering the item as per Likert scale interval

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	**2**	**3**	**4**	**5**

Innovative Work Behavior: (Dependent Variable)

	Items	Strongly Disagree	Agree	Neutral	Disagree	Strongly Agree
1	I here often initiate support for innovative ideas	1	2	3	4	5
2	I here often try to persuade other staff to support innovative ideas	1	2	3	4	5

3	I often make key persons within the organization feel excited with innovative ideas	1	2	3	4	5
4	I here often contribute to the implementation of new ideas	1	2	3	4	5
5	I here regularly introduce innovative ideas in work practice systematically.	1	2	3	4	5
6	I am always trying to develop something new	1	2	3	4	5

Perceived authentic leadership: (Independent Variable)

	Items	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
1	My Supervisor seeks feedback to improve interactions with others.	1	2	3	4	5
2	My supervisor accurately describes how others view his or her capabilities	1	2	3	4	5
3	My supervisor says exactly what he or she means	1	2	3	4	5
4	My supervisor is willing to admit mistakes when they are made.	1	2	3	4	5
5	My supervisor demonstrates beliefs that are consistent with actions.	1	2	3	4	5
6	My supervisor makes decisions based on his/her core beliefs.	1	2	3	4	5
7	My Supervisor solicits views that challenge his or her deeply held positions.	1	2	3	4	5

8	My Supervisor listens carefully to different points of view before coming to conclusions.	1	2	3	4	5

Employee Creativity: (Mediator)

	Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I demonstrated originality in my work	1	2	3	4	5
2	I took risks in terms of producing new ideas in doing job.	1	2	3	4	5
3	I found new uses for existing methods or equipment's	1	2	3	4	5
4	I solved problems that had caused difficulty for others	1	2	3	4	5
5	I tried out new ideas and approach to solve problems	1	2	3	4	5
6	I identified opportunities for new products/processes.	1	2	3	4	5
7	I generated novel, but operable work-related ideas.	1	2	3	4	5

Job Autonomy: (Moderator)

	Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I have the freedom to decide what I do on my job	1	2	3	4	5
2	t is basically my own responsibility to decide how my job gets done.	1	2	3	4	5

3	I have a lot of say about what happens on my job.	1	2	3	4	5