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Unveiling The Secrets of Innovative Performance: A Path Analytical Exploration of Authentic Leadership, Task Engagement and Creative Climate

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Authentic leadership, innovative performance, moderated mediation model, task engagement, creative climate

ABSTRACT

This study explores the vital variables impacting creative effectiveness in the ever-changing communication industry. We concentrate on how task engagement, creative climate, and authentic leadership interact and affect innovative performance. It is anticipated that genuine leadership creates an atmosphere at work that inspires employees to give their best at work. Consequently, this increased engagement will result in better inventive performance. Employee data from telecommunication sector was gathered to investigate these links. Descriptive statistics were analyzed using SPSS software and structural equation modelling was made easier with AMOS. The expected results seek to shed light on how employee engagement and leadership styles can be strategically utilized to foster an innovative culture in the telecom sector—a business that is notorious for its persistent need for adaptability. We argue that task engagement and employee invention are positively correlated and that this correlation is amplified when an organization fosters creativity.

In addition to providing insightful information about the role that real leadership plays in encouraging employee creativity, this study gives telecom companies a tactical framework for developing a workforce full of innovative problem-solvers. Businesses in the telecommunication industry can enable their staff to become the engine of ongoing innovation by providing an atmosphere that encourages openness, self-awareness, shared values, and a positive, creative work environment.

INTRODUCTION

Innovative work practices among employees are crucial for establishing an organization's competitive advantage and sustaining sustainable growth (Ahmad et al., 2023; Jin et al.,

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2022; Wen et al., 2021). A highly dynamic corporate climate, growing global rivalry, and customer expectations have made organizations need to innovate to face new problems and issues (Afsar & Umrani, 2020). Long et al. (2020) state that a creative climate can result in new goods and services and altered socioeconomic structures and business models. According to Lasisi et al. (2020), employees are the main forces behind innovation and creativity and will give the company a long-term competitive edge.

The relationship between innovative work behavior and authentic leadership has its theoretical foundation in social exchange theory (Zahra et al., 2017). The social exchange hypothesis holds that a leader's justice, trust, and fairness toward followers can greatly enhance an individual's psychological experience and increase the sense of purpose that employees derive from their work (Benevene et al., 2018). Employees who receive this treatment grow to have a strong feeling of accountability and will actively invest time in more creative projects for the company. Thus, the influence mechanism between innovative work behavior by employees and authentic leadership is explained in this study using the social exchange theory. An increasing number of studies have demonstrated the profound influence of moral leadership on workers' attitudes and actions at work.

To close the current study gap, creative climate, and task engagement are postulated as key reasons explaining the positive association between authentic leadership and workers' innovative performance, drawing on the social learning theory of Bandura et al. (1977) and social exchange theory (Blau, 1964). Edmondson (1999) described psychological safety as the "interpersonal risk-taking shared belief that the team is safe." According to social learning theory, moral leaders can affect followers' behavior by setting an example through role modeling, and followers can pick up on and emulate leaders' actions at work (Brown et al., 2005). Workers who have high psychological safety feel free to voice their opinions and are open to receiving new ideas and proposals (Ahmad et al., 2023), which encourages creative thinking. Innovative concepts and creative behaviors are more likely to be introduced to the workplace by employees who exhibit higher levels of job engagement, devotion, and absorption (Kong & Li, 2018; H. Li et al., 2019). This trade relationship can be explained by the reciprocity principle emphasized by social exchange theory. The social exchange idea states that when leaders treat their staff members fairly, compassionately, and respectfully, they will be more engaged at work and more inclined to come up with creative solutions as a token of gratitude when faced with challenging assignments. Therefore, through mediation pathways, including task engagement, authentic leadership also indirectly promotes the

innovative work behaviors of employees. Therefore, this study aims to investigate how task engagement relates to the impact of authentic leadership on creative behavior among employees. Our investigation has improved our knowledge of the possible pathways by which innovative work behaviors among employees are influenced by authentic leadership.

Furthermore, other variables, such as Creative Climate provide person's receptivity to new experiences, may influence the beneficial effects of employee task engagement on innovative performance in a company. According to earlier studies, employees who have a high degree of openness to experience in a creative climate are more likely to be active in their search for new knowledge and information at work (McCrae & Costa, 1997), to be confident in their ideas (Madrid et al., 2014a), and to have higher levels of creativity (Xu et al., 2021; Zhang et al., 2020). Given the degree of work engagement, employees more receptive to new experiences tend to display innovative performances more frequently than those less open to new experiences.

Therefore, this study had four goals in mind. To support our reliance on social exchange theory to explain the effect of authentic leadership on employees' innovative performance, we first looked at how authentic leadership affects employees' innovative performance. Second, we examined the relationships that impacts innovative behavior and moral leadership among staff members. Whether task engagement had a mediation role in this connection will be determined. Third, we examined how creative climate affected the relationship between employees' innovative performance and task engagement. Lastly, we explored the possibility of the relationship between innovative performance and authentic leadership through moderation by creative climate. The results of this study may also offer some managerial suggestions to help organizations realize how critical it is to concentrate on advancing managers' moral leadership.

Authentic Leadership and the Innovative Performance

Authentic leadership is an effective approach since it has certain characteristics that set it apart from other leadership philosophies (Baron, 2016; Walumbwa et al., 2010). Authentic leaders foster a trusting environment in their workforce by being truthful and supportive (Lux et al., 2023). With these qualities, real leaders may influence their staff members' attitudes and actions at work in a good way (Walumbwa et al., 2010).

Positive organizational climates foster innovative performance because authentic leaders are receptive to differing viewpoints and suggestions from their team members. They prefer to foster a more constructive environment rather than impose punishment for mistakes (Toor &

Ofori, 2008). Employees are unafraid to express their creative personalities and behave creatively in a pleasant work environment (Yang, 2020). According to research, employees cannot demonstrate innovative performances in an organization without a supportive climate (Akgunduz et al., 2018).

Authentic leadership is considered a critical factor that influences innovative performance when it comes to leading change (Tsai et al., 2015), supporting employees (Kalay et al., 2020), and delivering the organizational information flow (Volmer et al., 2012). According to prior research, an authentic leader fosters innovative performance by acting constructively toward them and by creating an organizational climate that supports their creativity (Banks et al., 2016; F. Li et al., 2014; Zhou et al., 2014; Zubair & Kamal, 2015). The following theory has been formulated and will be investigated by current literature.

Studying authentic leadership is not simple. Previous studies have demonstrated that true leaders' perceptions of themselves and those of their subordinates differ (Luco & Luco, 2014). This discovery raises an intriguing paradox because it contradicts the authenticity theory, which holds that followers will perceive leaders as authentic if they are self-aware, know their "true selves," and behave accordingly (Ladkin & Taylor, 2010). However, "on a practical level, followers' perceptions of a leader's authenticity are as important to consider as are the actual thoughts and actions of the leader being perceived" (Pittinsky, 2005), even though managers' inner states are not always easy for observers to discern.

H1. *Authentic leadership has a positive and significant impact on innovative performance.*

Task Engagement and Innovative Performance

It is also hypothesized in the model that inventive conduct and task engagement are positively correlated. It is suggested that because engaged employees frequently feel good, make their jobs and personal resources, and can inspire others to feel the same way; they are more creative and productive (Bakker & Demerouti, 2008). Since implementing innovations requires significant work, employees must be committed to their work to go above and beyond and generate fresh concepts that will benefit the company. Employees must also be passionate, tenacious, and fully engaged in the work to turn an idea into reality (Schaufeli et *al*., 2002). A high level of work involvement could be crucial for implementing creative ideas and exploring unorthodox options (Schaufeli & Bakker, 2004). In support of these theoretical assumptions, the evidence in the literature revealed that task engagement is positively related to a positive effect at work (Laguna et *al*., 2017; Salanova & Schaufeli, 2008), to innovative

work behavior (De Spiegelaere et *al*., 2016), and innovativeness (Gorgievski et *al*., 2010; Konermann, 2012).

There is evidence that work involvement plays a moderating role. According to Agarwal and colleagues (Agarwal et al., 2012), a favorable correlation has been shown between employees' innovative performance and the quality of their social exchanges with supervisors, affecting their work engagement. This outcome is in line with research showing that, via the mediating role of job engagement, leadership is positively correlated with creativity in a study involving physicians and nurses (Gomes et al., 2015).

"A positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption" is how Schaufeli and Bakker (2004) define work engagement. A great degree of energy, perseverance, mental toughness, and a readiness to work hard are referred to as vigor; a sense of significance, excitement, pride, and inspiration at work are referred to as dedication; and being completely absorbed in one's work is referred to as absorption (Schaufeli & Bakker, 2004). It is defined as the degree to which a person is involved in a job position in terms of physical, cognitive, and emotional energy (Rich et al., 2017), and it also indicates a good mental state associated with work (Demirtas et al., 2015b). Christian et al. (2011) similarly describe work. When studying the communal investment of personal energy into work experience or professional performance, task engagement, a long-lasting mental state, is often discussed. Employee motivation and favorable feelings about the company are boosted by job engagement, meaning motivated workers are more invested in the company, more excited about their work, and more inclined to concentrate on reaching personal and group objectives (X. Liu et al., 2023). Empirical evidence suggests that higher levels of task engagement are linked to improved employee performance, organizational citizenship behavior, and organizational commitment (Oluwatayo & Adetoro, 2020). As a result, it might have a big bearing on how inventively employees behave.

While social exchange theory offers a valuable framework for understanding how authentic leadership affects employee innovation behavior, more research is necessary to understand the internal mechanisms underlying this theory's influence fully. Social exchange theory is based on reciprocal norms and proposes that individuals initiate and sustain exchange connections with others to obtain reciprocates (Muthusamy & White, 2005). However, since there is no way to ensure that the social exchange would result in an equal return, interpersonal trust is necessary for social exchange relationships to develop (Muthusamy & White, 2005). As previously noted, workers regard authentic leaders as fair, honest, and

trustworthy (Brown et al., 2005; Hernández et al., 2019; Shafique et al., 2020). Additionally, moral leaders boost their followers' self-assurance in their skills and encourage them to participate in decision-making and creating and show followers greater faith (Naeem et al., 2020). Previous research found that developing trusting connections between managers and employees is key to fostering task engagement (Engelbrecht et al., 2017). According to the social exchange hypothesis, employees should expect positive attitudes and behaviors in return from their leaders when they perceive them to be moral and reliable. Put another way, moral leaders model accountability, integrity, justice, and reliability for their teams, which inspires workers to put in extra effort at their jobs.

Because giving fosters flexible thinking, which can inspire creative solutions and motivate their execution (Madrid et al., 2014b; Montani et al., 2020), innovative performance is a distinct and distinctive performance type that engaged employees are more likely to display (Kwon & Kim, 2020). Additionally, committed workers are prepared to spend extra time and effort connecting disparate information sources and grasping a problem from multiple angles (Montani et al., 2020). Lastly, employees must put in much labor to implement an innovative idea because it is intrinsically difficult to innovate at work (Afsar et al., 2020). Engaged employees are deeply focused on their tasks, have high energy and mental resilience, and willingly put in significant effort. They are also defined by a sense of significance, enthusiasm, motivation, pride, and challenge in the piece of work (Kim & Park, 2017). The reciprocity norm in the social exchange process explains why employees feel favored by their leader and want to repay the favor by putting in more effort (Kalyar et al., 2020). Employees are, therefore, more engaged at work and are more likely to show inventive behavior when faced with challenging tasks because of receiving fair, considerate, and respectful treatment from their superiors. As a result, the study highlights how job engagement moderates the relationship between authentic leadership and inventive behavior among employees.

H2. *Task Engagement mediates the relationship between Authentic leadership and innovative performance.*

Creative climate moderates the relationship between Authentic Leadership and Innovative performance.

According to recent studies, human-related traits like creativity and leadership encourage inventive behavior in hotel staff (Tajeddini & Martin, 2020). Previous studies also indicate that investments in human resource techniques stimulate creative behavior (Ottenbacher,

2007). Successful service organizations like JetBlue, Starbucks, and Singapore Airlines are prime examples of how ideas are developed and executed (Lages & Piercy, 2012).

Innovation (such as concept execution) and creativity (such as idea generation) are intrinsically linked (Pirola-Merlo & Mann, 2004). Creativity seems a useful tool for encouraging innovation in the workplace among managerial and non-managerial staff members. After the debate, it can be concluded that a climate for creativity mediates the effect of SEL on management innovation and inventive behavior. Additionally, one of the instruments that could spur management innovation is the inventive conduct of employees.

According to current research, authentic leadership helps businesses create an environment encouraging innovation (Brownell, 2010). Authentic leadership offers the tools required for innovative behavior and management in such an environment. Therefore, an environment that fosters creativity encourages inventive behavior in staff members and awakens managers' capacity for innovation. A mediator between SEL and managerial innovation and inventive behavior is the climate for creativity. We also argue in this study that creative behavior on the part of employees fosters creative management.

H3. *Creative climate moderates the relationship between authentic leadership and innovative performance.*

Creative Climate moderates the relationship between Task engagement and innovative performance.

Organizational climate is one of the organizational elements that influence innovation. According to some research, fostering creativity requires creating an environment at work that is psychologically safe, encourages risk-taking, and inspires individuals to take initiative (Parzefall et al., 2008). It has also been underlined that in order to encourage employees' creative work behaviors, an organization's climate must include specific elements, like team cohesion, supervisor support, and autonomy (Martins & Terblanche, 2003; Sönmez & Yıldırım, 2019). According to empirical research, individuals who work in an atmosphere that supports creativity are more likely to be receptive to new ideas and proactive in searching for creative opportunities (Kheng & Mahmood, 2012; Yu et al., 2018). Nevertheless, our understanding of the climate as a multi-level phenomenon is limited by the small body of research on innovation climate that has come together to paint a more accurate picture of the climate's involvement at many levels (Afsar & Umrani, 2020). When their business cultivates a climate that stimulates creativity and risk-taking, employees feel empowered and view their triumphs as the result of their own free decision to get involved in innovative activities (Afsar et al.,

2020). Sometimes contextual factors—such as the promotion of creativity—can operate as a moderating factor, lessening or adversely affecting the impact of transformational leadership on employees' creative work practices. Based on their examination of 93 teams and their leaders worldwide, Si and Wei (2012) found that transformational leadership has a relatively large effect on creative performance when the climate of employee empowerment is low and vice versa. Thus, the present study posits the subsequent hypothesis, bolstered by theoretical rationales and prior literature reviews:

H4. *Creative climate moderates the relationship between task engagement and innovative performance.*

METHODOLOGY

The study sampling frame comprises the regional offices of cellular companies, namely Jazz, Ufone, Zong, Telenor and the regional office of the landline phone company PTCL. The data was collected through Questionnaire in hard form. There are two parts to the questionnaire. The first section of the questionnaire focuses mostly on the required demographic questions. The scale of research variables was discussed in Section 2. 500 respondents were contacted for data collection; however, only 393 complete surveys in all respects were considered. Respondents' anonymity was ensured throughout the data-gathering process so they could provide accurate information. The participants completed the questionnaire using a 5-point Likert scale, "(1) disagree to (5) strongly agree (5)," except for the items about the demographic factors. Established scales were used in this study. The survey was divided into four sections. Five items in the first section were designed to ascertain the participants' demographic details. The authentic leadership scale was used in the second instance to gauge the authentic leadership style.

Measures:

Authentic Leadership: Authentic leadership was measured with the 16 items scale of Authentic Leadership Questionnaire (ALQ) (Walumbwa et al, 2008).

Innovative Performance: innovative performance was assessed with the 10 items scale of De Jong and Den Hartog (2010).

Task Engagement: Task engagement scale was rated with Employee Engagement 18 items Scale developed by Rich et al. (2010) based on Kahn's (1990) conceptualization.

Creative Climate: creative climate was assessed with the 12 items scale of Mini Creative Climate Questionnaire Ekvall, G. (1996).

ANALYSIS

There are two parts to the questionnaire. The first section of the questionnaire focuses mostly on the required demographic questions. The scale of research variables was discussed in Section 2. The data's relevance was determined using statistical tests, such as regression, correlation, mean, and reliability. First, we used a simple linear regression to examine the relationship between two variables. The multiple regression approach was then used for further investigation. The independent and dependent variables of the study are correlated using multiple linear regression analysis. The primary analyses of the data set are based on structural equations modeling. Structural equations models (SEM) have been carried out in a number of academic disciplines to substantiate theory. This approach involves developing measurement models to define latent variables and then establishing relationships or structural equations among the latent variables. Confirmatory factor analysis (CFA) was used to check the goodness of the measurement scales.

The AMOS-18 program was used to conduct a CFA to evaluate the construct validity of the variables in the study. Descriptive statistical analyses were used in the study to ascertain the participants' demographic details. The Pearson correlation coefficient was used to figure out the relationship between the variables. The intermediary hypotheses were tested using the causal stages technique suggested by Baron and Kenny (1986).

Sample Characteristics

In the demographic questionnaire, respondents were asked about their personal information like Gender, Age, Income, and qualification. Below are their responses.

Table 1: Demographics

Variable	Frequency	Percent
Gender		
Male	256	65.1%
Female	137	34.9%
Age		
18 to 25 years	76	19.3%
26 to 33	101	25.7%
34 to 41	114	29.0%
42 to 49	67	17.0%
50 and above	35	8.9%

Designation		
Internee	45	11.5%
Staff	124	31.6%
Middle Manager	146	37.2%
Top Level Manager	75	19.1%
Executive Level	3	0.8%
Time spent with leadership		
Less than 1 year	75	19.1%
1 to 5 years	56	14.2%
6 to 11 years	81	20.6%
12 to 17 years	121	30.8%
18 years or greater	60	15.3%
R & D Tenure		
Less than 1 year	73	18.6%
1 to 5 years	60	15.3%
6 to 11 years	85	21.6%
12 to 17 years	117	29.8%
18 years or greater	58	14.8%

Male contributors have a significantly higher response rate than female contributors. Among 393 respondents, 256 male respondents (65.1%) contributed to the study, higher than 137 female respondents (34.9%). There are five age categories among the respondents. The contributions of responders aged 18 to 25 years account for 19.3 percent of the total. Respondents in the age groups 26 to 33 years were 25.7 percent, from age group 34 to 41 were 29%, from 42 to 49 were 17%, and the respondents aged 50 years or more were 8.9 percent. Among the 393 respondents, 11.5 percent were internees, 31.6 percent were staff members, 37.2 percent were middle-level managers, 19.1 per cent were top-level managers, and 0.8 percent were working at the executive level in the organization. Also, 19.1 percent of the respondents had spent less than 1 year with their leadership, 14.2 percent spent 1 to 5 years with their leadership, 20.6 percent spent 6 to 1 year with their leadership, 30.8 percent have been working from 12 to 17 years, and 15.3 percent have been working from 18years or more with their leadership. Similarly, it can be seen in the table above that 18.6 percent of the respondents have less than 1-year tenure of R&D, 15.2 percent have 1 to 5 years, 21.6 percent

have 6 to 11 years, 29.8 percent have 12 to 17 years, and 14.8 percent have 18 years or greater R&D tenure.

Direct Relationship

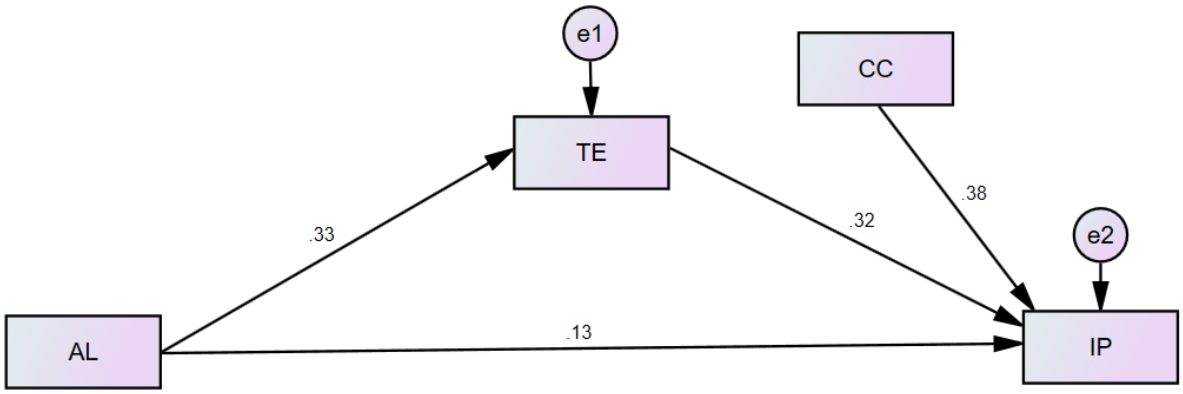

Table 2: Regression Weight

IV		DV	Estimate	C.R.	P
AL	→	IP	.128	2.840	0.000
AL	→	TE	.329	6.896	0.000
TE	→	IP	.321	7.124	0.000
CC	→	IP	.378	8.867	0.000

In Table 2, the analysis was carried out using the maximum likelihood approach, which is the software's default function. The results demonstrate that AL has a positive and substantial impact on IP (b=0.128, p=0.000), with an estimated value of 0.12 indicating that an increase in AL by one unit will result in a 12% rise in IP. The results of AL on TE are also represented in Table 2. The results demonstrate that AL has a positive and substantial impact on TE (b=0.329, p=0.000), with an estimated value of 0.32 indicating that an increase in AL by one unit will result in a 32% rise in TE. The results of AL on TE are shown in Table 2. Also, the results show that TE has a positive and substantial impact on IP (b=0.321, p=0.000), with an estimated value of 0.32, indicating that an increase in TE by one unit will result in a 32% rise in IP. The results of TW on IP are shown in the table. Similarly, it can be seen in Table 2 that CC has a positive and substantial impact on IP (b=0.378, p=0.000), with an estimated value of 0.37, indicating that an increase in CC by one unit will result in a 37% rise in IP.

Mediation Analysis

The table 3 below shows the results of mediation analysis using AMOS software. AL is the independent variable, TE is a mediator, and IP is the dependent variable.

Table 3: Mediation Analysis

IV		DV	Estimate	C.R.	P
AL	→	TE	.329	6.896	0.000
TE	→	IP	.321	7.124	0.000
CC	→	IP	.378	8.867	0.000
AL	→	IP	.128	2.840	0.000

AL has a large and favourable impact on TE (coefficient =.329, p 0.000), whereas TE has a considerable impact on IP (coefficient =.321, p 0.000), according to the findings. CC also has favorable impact on IP (coefficient =.378, p 0.000). AL directly affects IP (coefficient =.128, p0.000). As a result, the influence of AL on IP in the presence of TE was increased. As a result, we can conclude that our findings support the mediation of TE between AL and IP.

Moderation Analysis

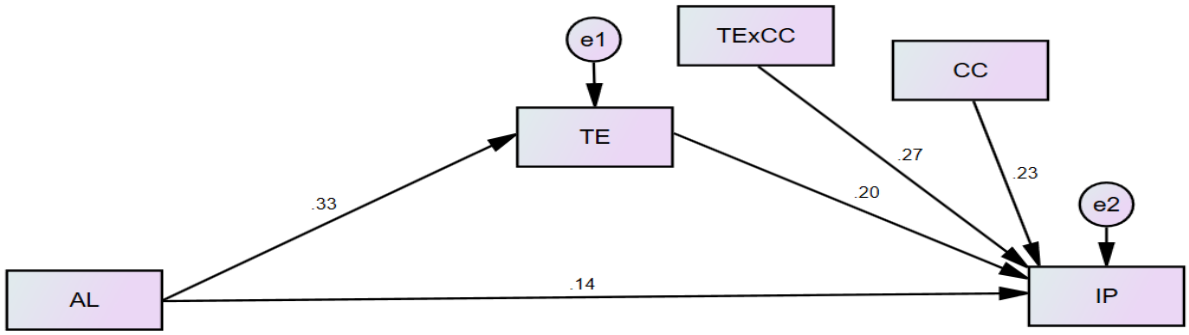

Table 4: Moderation Analysis

IV		DV	Estimate	C.R.	P
AL	→	TE	.329	6.896	0.000
TE	→	IP	.205	4.303	0.000
CC	→	IP	.233	5.174	0.000
AL	→	IP	.144	3.026	0.000
TExCC	→	IP	.265	5.896	0.000

In the results of the moderation analysis given in Table 4, CC is used as the moderator of the study, AL is the independent variable, and IP is a dependent variable to test the moderation effect. AL has a substantial impact on TE (coefficient =.329, p=0.000), TE has a considerable impact on IP (coefficient =.205, p=0.000), CC has a substantial impact on IP (coefficient =.233, p=0.000), AL has a considerable impact on IP (coefficient =.144, p=0.000) and the moderating effect (TEx CC) has a moderate impact on IP (coefficient =.265, p=0.000),

according to the findings. As a result of the findings, we may deduce that the study moderator has moderation as the impact of AL on IP is increased from the direct link.

DISCUSSION AND CONCLUSION

Discussion

The research's conclusions point to important potential additions to the body of knowledge and organizational ramifications. It is the first study to examine and evaluate the mediating role of task engagement on the relationship between innovative performance and authentic leadership. The only mediating variables found in recent studies between innovative performance and authentic leadership were hope and positive effect. We can infer a relationship between the variables based on their significant coefficient values. The findings demonstrate that inventive performance is highly predicted by authentic leadership. Rego et al. (2012) have proposed similar findings in literature. Because they feel so much more involved and empowered in their leadership, workers are more creative when they work for authentic leaders. Research has demonstrated a robust positive correlation between authentic leadership and task engagement. This suggests that an authentic leader can foster a unique sense of connection and involvement among their team members. According to Giallonardo et al. (2010), there is a correlation between employees' level of engagement at work and their leaders' genuineness.

Results that support the premise that task engagement has a positive, substantial relationship with innovative performance also support the idea that more involved employees will be more creative. It makes sense that a person would be more involved in their work and produce more fruitful outcomes. Because the respondents in Bakker et al.'s research with high levels of task engagement demonstrated a wide range of coping mechanisms for dealing with challenges and problems at work, the researchers established a strong correlation between engagement and innovative performance. Additionally, task engagement is a mediator between innovative performance and authentic leadership, suggesting that more engaged workers who value their work as a significant aspect of their lives are inclined to be more creative when working with authentic leaders.

A psychologically empowered employee experiences internal motivation because he understands the value of his task, is confident in his abilities to complete it, has some degree of control over his immediate workspace, can introduce and regulate activities carried out by himself. The employee feels empowered and given a boost by all these magnitudes. As a

result, he is more creative when completing various duties and can come up with fresh ideas frequently.

Conclusion

This research yielded numerous contributions to literature. First, we have developed and tested a model that considers the mediating role of task engagement and moderating role of creative climate with the effect of authentic leadership on innovative performance. These findings should be considered by managers and leaders who want to see their staff members exhibit a positive outlook and desired outcomes. Several training programs to maximize innovative performance must be devised to enhance authenticity in managers and leaders. Moreover, the findings demonstrated that task engagement and creative climate are noteworthy mediator and moderator respectively in the relationships between authentic leadership and innovative performance. Genuine leaders can raise their team members' creativity by affecting their levels of engagement at work. The results clearly show that employees who work under authentic leaders have high levels of task engagement and if given creative climate, their innovative performance is improved. As a result, firms should consider and implement various HR initiatives to increase employee task engagement and to provide such an environment which is creative.

Theoretical and Managerial Implications

According to Rego et al. (Citation 2012) and Malik et al. (Citation 2016), additional empirical study is required to identify how genuine leadership affects innovative performance. This study is the first to examine and experimentally examine the mediating role of task engagement in the relationship between innovative performance and authentic leadership. The study's findings validated all theories positing that task engagement under authentic leadership positively impacts employees' performance. Since our research shows that team leaders' authenticity and employees' creative behaviour are related, managers and organizations can benefit from understanding how to foster innovative performance among employees through authentic leadership. To comprehend how his strengths and shortcomings affect his followers and subordinates, a leader must be aware of these aspects of himself.

Limitations and future directions

This work has some limitations. First, the convenience sampling technique used in this study involves selecting a readily available and convenient sample. Certain groups may be left out of the sample in this procedure. Future research should consider re-estimating the same model using a random sample technique to represent the population under investigation

accurately. Second, the scope of our study is limited to employees in the development sector, raising questions about the generalizability of our conclusions. Subsequent research endeavors may gauge the applicability of this model by utilizing staff samples from diverse cultural and industry backgrounds. In various other project-related domains, the same research ought to be done. The same model might also be investigated in nations other than Pakistan to support these findings.

REFERENCES

Afsar, B., Al-Ghazali, B. M., Cheema, S., & Javed, F. (2020). Cultural intelligence and innovative work behaviour: the role of work engagement and interpersonal trust. *European Journal of Innovation Management*, *24*(4), 1082–1109. https://doi.org/10.1108/EJIM-01-2020-0008/FULL/XML

Afsar, B., & Umrani, W. A. (2020). Transformational leadership and innovative work behavior: The role of motivation to learn, task complexity and innovation climate. *European Journal of Innovation Management*, *23*(3), 402–428. https://doi.org/10.1108/EJIM-12-2018-0257/FULL/XML

Agarwal, U. A., Datta, S., Blake-Beard, S., & Bhargava, S. (2012). Linking LMX, innovative work behavior and turnover intentions: The mediating role of work engagement. *Career Development International*, *17*(3), 208–230. https://doi.org/10.1108/13620431211241063/FULL/XML

Ahmad, I., Gao, Y., Su, F., & Khan, M. K. (2023). Linking ethical leadership to followers' innovative work behavior in Pakistan: the vital roles of psychological safety and proactive personality. *European Journal of Innovation Management*, *26*(3), 755–772. https://doi.org/10.1108/EJIM-11-2020-0464/FULL/XML

Ahmad, I., & Umrani, W. A. (2019). The impact of ethical leadership style on job satisfaction: Mediating role of perception of Green HRM and psychological safety. *Leadership and Organization Development Journal*, *40*(5), 534–547. https://doi.org/10.1108/LODJ-12-2018-0461/FULL/XML

Akgunduz, Y., Alkan, C., & Gök, Ö. A. (2018). Perceived organizational support, employee creativity and proactive personality: The mediating effect of meaning of work. *Journal of Hospitality and Tourism Management*, *34*, 105–114. https://doi.org/10.1016/J.JHTM.2018.01.004

Azanza Martinez De Luco, G., & Azanza Martinez De Luco, G. (2014). Antecedents and consequences of authentic leadership (antecedentes y consecuencias del liderazgo auténtico). *Antecedents and Consequences of Authentic Leadership (Antecedentes y Consecuencias Del Liderazgo Auténtico)*.

Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, *13*(3), 209–223. https://doi.org/10.1108/13620430810870476/FULL/XML

Bandura, A., & Walters, R. H. (1977). *Social learning theory* (Vol. 1). Prentice Hall: Englewood Cliffs.

Banks, G. C., McCauley, K. D., Gardner, W. L., & Guler, C. E. (2016). A meta-analytic review of authentic and transformational leadership: A test for redundancy. *Leadership Quarterly*, *27*(4), 634–652. https://doi.org/10.1016/J.LEAQUA.2016.02.006

Baron, L. (2016). Authentic leadership and mindfulness development through action learning. *Journal of Managerial Psychology*, *31*(1), 296–311. https://doi.org/10.1108/JMP-04-2014-0135

Benevene, P., Dal Corso, L., De Carlo, A., Falco, A., Carluccio, F., & Vecina, M. L. (2018). Ethical leadership as antecedent of job satisfaction, affective organizational commitment and intention to stay among volunteers of non-profit organizations. *Frontiers in Psychology*, *9*(NOV), 423971. https://doi.org/10.3389/FPSYG.2018.02069/BIBTEX

Blau, P. M. (1964). Justice in Social Exchange. *Sociological Inquiry*, *34*(2), 193–206. https://doi.org/10.1111/J.1475-682X.1964.TB00583.X

Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, *97*(2), 117–134. https://doi.org/10.1016/J.OBHDP.2005.03.002

Brownell, J. (2010). Leadership in the Service of Hospitality. *Http://Dx.Doi.Org/10.1177/1938965510368651*, *51*(3), 363–378. https://doi.org/10.1177/1938965510368651

Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). WORK ENGAGEMENT: A QUANTITATIVE REVIEW AND TEST OF ITS RELATIONS WITH TASK AND CONTEXTUAL PERFORMANCE. *Personnel Psychology*, *64*(1), 89–136. https://doi.org/10.1111/J.1744-6570.2010.01203.X

De Spiegelaere, S., Van Gyes, G., & Van Hootegem, G. (2016). Not All Autonomy is the Same. Different Dimensions of Job Autonomy and Their Relation to Work Engagement & Innovative Work Behavior. *Human Factors and Ergonomics in Manufacturing & Service Industries*, *26*(4), 515–527. https://doi.org/10.1002/HFM.20666

Demirtas, O., Hannah, S. T., Gok, K., Arslan, A., & Capar, N. (2015a). The Moderated Influence of Ethical Leadership, Via Meaningful Work, on Followers' Engagement, Organizational Identification, and Envy. *Journal of Business Ethics 2015 145:1*, *145*(1), 183–199. https://doi.org/10.1007/S10551-015-2907-7

Edmondson, A. (1999). Psychological Safety and Learning Behavior in Work Teams. *Https://Doi.Org/10.2307/2666999*, *44*(2), 350–383. https://doi.org/10.2307/2666999b

Engelbrecht, A. S., Heine, G., & Mahembe, B. (2017). Integrity, ethical leadership, trust and work engagement. *Leadership and Organization Development Journal*, *38*(3), 368–379. https://doi.org/10.1108/LODJ-11-2015-0237/FULL/XML

Gomes, C., Curral, L., & Caetano, A. (2015). THE MEDIATING EFFECT OF WORK ENGAGEMENT ON THE RELATIONSHIP BETWEEN SELF-LEADERSHIP AND INDIVIDUAL INNOVATION. *Https://Doi.Org/10.1142/S1363919615500097*, *19*(1). https://doi.org/10.1142/S1363919615500097

Gorgievski, M. J., Bakker, A. B., & Schaufeli, W. B. (2010). Work engagement and workaholism: comparing the self-employed and salaried employees. *The Journal of Positive Psychology*, *5*(1), 83–96. https://doi.org/10.1080/17439760903509606

Hernández, B., Gutiérrez-Pérez, J., Medler, S. H., Jianguo, D., Aamir, M., Khan, S., Ali, M., Saleem, S., & Usman, M. (2019). Interrelations Between Ethical Leadership, Green Psychological Climate, and Organizational Environmental Citizenship Behavior: A Moderated Mediation Model. *Frontiers in Psychology | Www.Frontiersin.Org*, *1*. https://doi.org/10.3389/fpsyg.2019.01977

Jin, X., Qing, C., & Jin, S. (2022). Ethical Leadership and Innovative Behavior: Mediating Role of Voice Behavior and Moderated Mediation Role of Psychological Safety. *Sustainability 2022, Vol. 14, Page 5125*, *14*(9), 5125. https://doi.org/10.3390/SU14095125

Kalay, E., Brender-Ilan, Y., & Kantor, J. (2020). Authentic leadership outcomes in detail-oriented occupations: Commitment, role-stress, and intentions to leave. *Journal of Management & Organization*, *26*(5), 832–849. https://doi.org/10.1017/JMO.2018.8

Kalyar, M. N., Usta, A., & Shafique, I. (2020). When ethical leadership and LMX are more

effective in prompting creativity: The moderating role of psychological capital. *Baltic Journal of Management*, *15*(1), 61–80. https://doi.org/10.1108/BJM-02-2019-0042/FULL/XML

Kheng, Y. K., & Mahmood, R. (2012). THE RELATIONSHIP BETWEEN PRO-INNOVATION ORGANIZATIONAL CLIMATE AND INNOVATIVE WORK BEHAVIOR: A STUDY AMONG THE KNOWLEDGE WORKERS OF THE KNOWLEDGE INTENSIVE BUSINESS SERVICES IN MALAYSIA. *Journal of Technology and Operations Management*, *7*(2), 13–37.

Kim, W., & Park, J. (2017). Examining Structural Relationships between Work Engagement, Organizational Procedural Justice, Knowledge Sharing, and Innovative Work Behavior for Sustainable Organizations. *Sustainability 2017, Vol. 9, Page 205*, *9*(2), 205. https://doi.org/10.3390/SU9020205

Konermann, J. (2012). *Teachers' work engagement: A deeper understanding of the role of job and personal resources in relationship to work engagement, its antecedents, and its outcomes*. https://doi.org/10.3990/1.9789036533027

Kong, Y., & Li, M. (2018). Proactive personality and innovative behavior: The mediating roles of job-related affect and work engagement. *Social Behavior and Personality*, *46*(3), 431–446. https://doi.org/10.2224/SBP.6618

Kwon, K., & Kim, T. (2020). An integrative literature review of employee engagement and innovative behavior: Revisiting the JD-R model. *Human Resource Management Review*, *30*(2), 100704. https://doi.org/10.1016/J.HRMR.2019.100704

Ladkin, D., & Taylor, S. S. (2010). Enacting the 'true self': Towards a theory of embodied authentic leadership. *The Leadership Quarterly*, *21*(1), 64–74. https://doi.org/10.1016/J.LEAQUA.2009.10.005

Lages, C. R., & Piercy, N. F. (2012). Key Drivers of Frontline Employee Generation of Ideas for Customer Service Improvement. *Http://Dx.Doi.Org/10.1177/1094670511436005*, *15*(2), 215–230. https://doi.org/10.1177/1094670511436005

Laguna, M., Razmus, W., & Żaliński, A. (2017). Dynamic relationships between personal resources and work engagement in entrepreneurs. *Journal of Occupational and Organizational Psychology*, *90*(2), 248–269. https://doi.org/10.1111/JOOP.12170

Lasisi, T. T., Eluwole, K. K., Ozturen, A., & Avci, T. (2020). Explanatory investigation of the moderating role of employee proactivity on the causal relationship between innovation-based human resource management and employee satisfaction. *Journal of Public Affairs*, *20*(2), e2051. https://doi.org/10.1002/PA.2051

Li, F., Yu, K. F., Yang, J., Qi, Z., & Fu, J. H. ying. (2014). Authentic leadership, traditionality, and interactional justice in the Chinese context. *Management and Organization Review*, *10*(2), 249–273. https://doi.org/10.1111/MORE.12027

Li, H., Sajjad, N., Wang, Q., Ali, A. M., Khaqan, Z., & Amina, S. (2019). Influence of Transformational Leadership on Employees' Innovative Work Behavior in Sustainable Organizations: Test of Mediation and Moderation Processes. *Sustainability 2019, Vol. 11, Page 1594*, *11*(6), 1594. https://doi.org/10.3390/SU11061594

Liu, X., Huang, Y., Kim, J., & Na, S. (2023). How Ethical Leadership Cultivates Innovative Work Behaviors in Employees? Psychological Safety, Work Engagement and Openness to Experience. *Sustainability (Switzerland)*, *15*(4), 3452. https://doi.org/10.3390/SU15043452/S1

Long, T. B., Blok, V., Dorrestijn, S., & Macnaghten, P. (2020). The design and testing of a tool for developing responsible innovation in start-up enterprises. *Journal of Responsible Innovation*, *7*(1), 45–75. https://doi.org/10.1080/23299460.2019.1608785

Lux, A. A., Grover, S. L., & Teo, S. T. (2023). Reframing commitment in authentic leadership: Untangling relationship-outcome processes. *Journal of Management &*

Organization, *29*(1), 103–121. https://doi.org/10.1017/jmo.2019.78

Madrid, H. P., Patterson, M. G., Birdi, K. S., Leiva, P. I., & Kausel, E. E. (2014a). The role of weekly high-activated positive mood, context, and personality in innovative work behavior: A multilevel and interactional model. *Journal of Organizational Behavior*, *35*(2), 234–256. https://doi.org/10.1002/JOB.1867

Madrid, H. P., Patterson, M. G., Birdi, K. S., Leiva, P. I., & Kausel, E. E. (2014b). The role of weekly high-activated positive mood, context, and personality in innovative work behavior: A multilevel and interactional model. *Journal of Organizational Behavior*, *35*(2), 234–256. https://doi.org/10.1002/JOB.1867

Martins, E. C., & Terblanche, F. (2003). Building organisational culture that stimulates creativity and innovation. *European Journal of Innovation Management*, *6*(1), 64–74. https://doi.org/10.1108/14601060310456337/FULL/XML

McCrae, R. R., & Costa, P. T. (1997). Conceptions and Correlates of Openness to Experience. *Handbook of Personality Psychology*, 825–847. https://doi.org/10.1016/B978-012134645-4/50032-9

Mo, S., Ling, C. D., & Xie, X. Y. (2019). The Curvilinear Relationship Between Ethical Leadership and Team Creativity: The Moderating Role of Team Faultlines. *Journal of Business Ethics*, *154*(1), 229–242. https://doi.org/10.1007/S10551-016-3430-1/METRICS

Montani, F., Vandenberghe, C., Khedhaouria, A., & Courcy, F. (2020). Examining the inverted U-shaped relationship between workload and innovative work behavior: The role of work engagement and mindfulness. *Human Relations*, *73*(1), 59–93. https://doi.org/10.1177/0018726718819055/ASSET/IMAGES/LARGE/10.1177_0018726718819055-FIG2.JPEG

Muthusamy, S. K., & White, M. A. (2005). Learning and Knowledge Transfer in Strategic Alliances: A Social Exchange View. *Http://Dx.Doi.Org/10.1177/0170840605050874*, *26*(3), 415–441. https://doi.org/10.1177/0170840605050874

Naeem, R. M., Weng, Q., Hameed, Z., & Rasheed, M. I. (2020). Ethical leadership and work engagement: A moderated mediation model. *Ethics & Behavior*, *30*(1), 63–82. https://doi.org/10.1080/10508422.2019.1604232

Oluwatayo, A. A., & Adetoro, O. (2020). Influence of Employee Attributes, Work Context and Human Resource Management Practices on Employee Job Engagement. *Global Journal of Flexible Systems Management*, *21*(4), 295–308. https://doi.org/10.1007/S40171-020-00249-3/METRICS

Ottenbacher, M. C. (2007). Innovation Management in the Hospitality Industry: Different Strategies for Achieving Success. *Http://Dx.Doi.Org/10.1177/1096348007302352*, *31*(4), 431–454. https://doi.org/10.1177/1096348007302352

Pirola-Merlo, A., & Mann, L. (2004). The relationship between individual creativity and team creativity: Aggregating across people and time. *Journal of Organizational Behavior*, *25*(2), 235–257. https://doi.org/10.1002/JOB.240

Qing, M., Asif, M., Hussain, A., & Jameel, A. (2019). Exploring the impact of ethical leadership on job satisfaction and organizational commitment in public sector organizations: the mediating role of psychological empowerment. *Review of Managerial Science 2019 14:6*, *14*(6), 1405–1432. https://doi.org/10.1007/S11846-019-00340-9

Rich, B. L., Lepine, J. A., & Crawford, E. R. (2017). Job Engagement: Antecedents and Effects on Job Performance. *Https://Doi.Org/10.5465/Amj.2010.51468988*, *53*(3), 617–635. https://doi.org/10.5465/AMJ.2010.51468988

Salanova, M., & Schaufeli, W. B. (2008). A cross-national study of work engagement as a mediator between job resources and proactive behaviour. *The International Journal of*

Human Resource Management, *19*(1), 116–131. https://doi.org/10.1080/09585190701763982

Schaufeli, W. B., & Bakker, A. B. (2004a). Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. *Journal of Organizational Behavior*, *25*(3), 293–315. https://doi.org/10.1002/JOB.248

Schaufeli, W. B., & Bakker, A. B. (2004b). Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. *Journal of Organizational Behavior*, *25*(3), 293–315. https://doi.org/10.1002/JOB.248

Schaufeli, W. B., Salanova, M., Bakker, A. B., & Gonzales-Roma, V. (2002). The Measurement of Engagement and Burnout : A two sample confirmatory Factor Analytic Approach. *Journal of Happiness Studies*, *3*(1), 71–92. https://doi.org/10.1023/A:1015630930326/METRICS

Shafique, I., Ahmad, B., & Kalyar, M. N. (2020). How ethical leadership influences creativity and organizational innovation: Examining the underlying mechanisms. *European Journal of Innovation Management*, *23*(1), 114–133. https://doi.org/10.1108/EJIM-12-2018-0269/FULL/XML

Si, S., & Wei, F. (2012). Transformational and transactional leaderships, empowerment climate, and innovation performance: A multilevel analysis in the Chinese context. *European Journal of Work and Organizational Psychology*, *21*(2), 299–320. https://doi.org/10.1080/1359432X.2011.570445

Sönmez, B., & Yıldırım, A. (2019). The mediating role of autonomy in the effect of pro-innovation climate and supervisor supportiveness on innovative behavior of nurses. *European Journal of Innovation Management*, *22*(1), 41–58. https://doi.org/10.1108/EJIM-05-2018-0088

Stoffers, J., van der Heijden, B., & Schrijver, I. (2019). Towards a Sustainable Model of Innovative Work Behaviors' Enhancement: The Mediating Role of Employability. *Sustainability 2020, Vol. 12, Page 159*, *12*(1), 159. https://doi.org/10.3390/SU12010159

Tajeddini, K., & Martin, E. (2020). The importance of human-related factors on service innovation and performance. *International Journal of Hospitality Management*, *85*, 102431. https://doi.org/10.1016/J.IJHM.2019.102431

Toor, S. ur R., & Ofori, G. (2008). Leadership for future construction industry: Agenda for authentic leadership. *International Journal of Project Management*, *26*(6), 620–630. https://doi.org/10.1016/J.IJPROMAN.2007.09.010

Tsai, C. Y., Horng, J. S., Liu, C. H., & Hu, D. C. (2015). Work environment and atmosphere: The role of organizational support in the creativity performance of tourism and hospitality organizations. *International Journal of Hospitality Management*, *46*, 26–35. https://doi.org/10.1016/J.IJHM.2015.01.009

Tu, Y., Lu, X., Choi, J. N., & Guo, W. (2019). Ethical Leadership and Team-Level Creativity: Mediation of Psychological Safety Climate and Moderation of Supervisor Support for Creativity. *Journal of Business Ethics*, *159*(2), 551–565. https://doi.org/10.1007/S10551-018-3839-9/METRICS

Volmer, J., Spurk, D., & Niessen, C. (2012). Leader-member exchange (LMX), job autonomy, and creative work involvement. *Leadership Quarterly*, *23*(3), 456–465. https://doi.org/10.1016/J.LEAQUA.2011.10.005

Walumbwa, F. O., Wang, P., Wang, H., Schaubroeck, J., & Avolio, B. J. (2010). Retracted: Psychological processes linking authentic leadership to follower behaviors. *Leadership Quarterly*, *21*(5), 901–914. https://doi.org/10.1016/J.LEAQUA.2010.07.015

Wen, Q., Wu, Y., & Long, J. (2021). Influence of Ethical Leadership on Employees' Innovative Behavior: The Role of Organization-Based Self-Esteem and Flexible Human Resource Management. *Sustainability 2021, Vol. 13, Page 1359*, *13*(3), 1359.

https://doi.org/10.3390/SU13031359

Xu, X., Xia, M., Zhao, J., & Pang, W. (2021). Be real, open, and creative: How openness to experience and to change mediate the authenticity-creativity association. *Thinking Skills and Creativity*, *41*, 100857. https://doi.org/10.1016/J.TSC.2021.100857

Yang, J. (2020). Leveraging leader-leader exchange to enrich the effect of leader-member exchange on team innovation. *Journal of Management and Organization*, *26*(4), 555–570. https://doi.org/10.1017/JMO.2017.54

Yidong, T., & Xinxin, L. (2013). How Ethical Leadership Influence Employees' Innovative Work Behavior: A Perspective of Intrinsic Motivation. *Journal of Business Ethics*, *116*(2), 441–455. https://doi.org/10.1007/S10551-012-1455-7/METRICS

Yu, M. C., Zheng, X. T., Wang, G. G., Dai, Y., & Yan, B. (2018). When does motivation to learn reduce innovative behavior? An examination of mediated-moderation model. *Baltic Journal of Management*, *13*(4), 564–581. https://doi.org/10.1108/BJM-09-2017-0279/FULL/XML

Zhang, W., Xu, F., & Sun, B. (2020). Openness to experience, job characteristics, and employee creativity: An interactionist perspective. *Social Behavior and Personality*, *48*(4). https://doi.org/10.2224/SBP.9047

Zhou, J., Ma, Y., Cheng, W., & Xia, B. (2014). Mediating role of employee emotions in the relationship between authentic leadership and employee innovation. *Social Behavior and Personality*, *42*(8), 1267–1278. https://doi.org/10.2224/SBP.2014.42.8.1267

Zubair, A., & Kamal, A. (2015). Authentic Leadership and Creativity: Mediating Role of Work-Related Flow and Psychological Capital. *Journal of Behavioural Sciences*, *25*(1).