

Servant Leadership, Employee Engagement, and Innovative Work Behavior in Higher Education: A PLS-SEM Study from Pakistan

Nayyer Sultana^{1 & 2}, Dr. Azlinzuraini Ahmad ¹, Dr. Nur Aishah Awia ¹,
Dr. Muhammad Usman ², Dr. Nadia Zafar Bakhtawari ²

¹ Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Terengganu, MALAYSIA

² Faculty of Management Sciences, SZABIST University, Islamabad Campus, Pakistan
p5071@pps.umt.edu.my, azlinzuraini@umt.edu.my, nuraishah@umt.edu.my, usman.pr@gmail.com,
missbakhtawari@gmail.com

Corresponding Author: Dr. Azlinzuraini Ahmad Email: azlinzuraini@umt.edu.my

Abstract

Objectives: This study investigates the impact of servant leadership on the innovative work behavior of academics in Pakistan's public universities. It tests employee engagement as a mediator in the relationship between servant leadership and innovative work behavior within the framework of Social Exchange Theory.

Design/methodology/approach: Stratified random sampling was used to obtain the required data from 490 academicians from seven public universities in Pakistan. A cross-sectional quantitative approach was used, and the measurement and structural models were tested using SmartPLS software.

Findings: The measurement model demonstrated good reliability and validity, with Cronbach's alpha, composite reliability, and average variance extracted exceeding the recommended thresholds. It was discovered that servant leadership positively affects innovative work behavior and employee engagement. Employee engagement positively affected innovative work behavior and partially mediated the relationship between servant leadership and innovative work behavior. **Research limitations/implications:** This cross-sectional design does not allow for causal inferences, and the use of self-reported data in one country context might reduce generalizability. Longitudinal designs and cross-country studies are recommended for further research.

Practical application: Academic innovation can be enhanced by employing servant leadership practices, not just through monetary rewards, but by building the engagement of faculty when resource constraints are present in university administration.

Originality/value: This study applies Social Exchange Theory to the slightly overlooked realm of public higher education institutions in a developing economy and provides empirical evidence of the relationship between servant leadership and innovation through engagement with limited resources within the academic environment.

Key words: Servant leadership, Employee engagement, Innovative work behavior, Social exchange theory (SET) Higher Education Institutions

1. Introduction

Universities are fundamental to national development as they generate, share and use knowledge to advance society and the economy (Budur et al., 2024). In developing countries like Pakistan, the higher education system is facing a twofold challenge. Higher education institutions are expected to deliver graduates, research, and innovation to drive national competitiveness, while also facing governance restrictions, bureaucratic processes, resource and infrastructure inequalities (Butt & Hemani, 2019; Hinduja et al., 2023). This makes it crucial to consider how university administrators can encourage teachers to undertake innovative work behavior while facing barriers. Pakistani higher education is especially strained. Funding for education is among the lowest in South Asia, with Pakistan spending only 1.7% of its GDP on education, with public universities consistently facing funding shortages and budget cuts (Economic Survey of Pakistan, 2023; Rehman & Huma, 2024). Additionally, political interference and the centralization of administrative powers undermine institutional autonomy, further impairing the ability to innovate in an academic-led manner (Khwaja et al., 2022; Rafiq et al., 2024). The Higher Education Commission's action plan, Vision 2025," and research and digital transformation grants have not yielded much progress in translating policy intent to academic innovation behavior. The psychological mobilization of faculties to innovate within these constraints is a need, given these structural realities, based on which the

following question can be raised: What behaviors are required of leaders to psychologically mobilize academicians to innovate within these constraints?

Innovative work behavior is purposeful creation, promotion, and implementation of new ideas, processes, or practices that enhance individual, group or organisational outcomes (Janssen, 2000; Scott & Bruce, 1994; Yuan & Woodman, 2010). At universities, innovative work behavior can be expressed through creating new teaching methods, leveraging technology in the classroom, launching cross-disciplinary research projects, enhancing assessment methods, knowledge sharing and problem-solving. In the face of technological and societal change, higher education institutions need faculty innovation as a strategic rather than extra-role activity (Cai & Tang, 2021; Caniels & Veld, 2019; Hinduja et al., 2023). The urgency has been further supported in recent research, with Nawaz (2024) showing how servant leadership positively influences innovation in the context of higher education, as mediated by subjective well-being and knowledge sharing, and with Sultana et al. (2024) finding employee engagement to be a significant mediator between psychological capital and innovative work behaviors, specifically with teaching staff in public sector HEIs in Pakistan.

Among the modern leadership styles, servant leadership has gained popularity in recent years because of its focus on serving others, empowering employees, facilitating follower development, exhibiting humility, and considering ethical stewardship (Eva et al., 2019; Greenleaf, 1970; Liden et al., 2008). Servant leadership may be especially pertinent to universities where faculty members need autonomy, developmental opportunities, moral support, and a safe environment to develop and execute innovative ideas. Existing studies have associated servant leadership with employee engagement, creativity, knowledge sharing, and innovative work behavior in various work settings (Bao et al., 2018; Bou Reslan et al., 2021; Cai et al., 2018; Iqbal et al., 2020; Khan et al., 2022; Wang et al., 2019). The mediation mechanism is also reinforced in nonprofit organizations, where the structures of these institutions are similar to public universities in terms of the limited resources available; Aboramadan et al. (2022) found that servant leadership fully mediated the relationship between servant leadership and innovative work behavior. The servant leadership–innovation relationship in higher education was also found to be mediated by psychological mechanisms (Nawaz, 2024). A recent study by Ekmekcioglu and Öner (2024) corroborated the positive impact of servant leadership on innovative work behavior, whereas a study by Zhou et al. (2022) based on Social Exchange Theory showed that servant leadership in the university environment leads to an increase in work engagement, and there is a significant moderating effect of trust in the leader. Yet, little is known about the link between servant leadership and innovative work behavior of academicians in Pakistani public sector universities. Pakistani public universities are professional bureaucracies with formal structures, limited resources and a centralised decision-making process, which may hinder the direct effects of leadership support on innovative work behaviour (Bilal et al., 2020; Butt & Hemani, 2019; Hinduja et al., 2023). Thus, this research seeks to explore the role of employee engagement in mediating the relationship between servant leadership and innovative work behavior of academicians in public sector universities of Pakistan.

A major issue that this study seeks to address is the linkage between leadership intent and innovation outcomes in public universities in Pakistan. Although academic members are encouraged to innovate, their motivation to do so is stifled by institutional bureaucracy, centralized governance, and resource limitations. Servant leadership has been suggested as a counterforce, but its functioning in restricted settings has not been investigated. In particular, whether servant leadership can directly influence innovative work behavior and whether it can do so, provided it first inspires employee involvement, remains unclear. To fill this gap, this study examines employee engagement as a mediating pathway.

This study aims to examine the direct effect of servant leadership on innovative work behavior among academicians of public sector universities in Pakistan, explore the relationship between servant leadership and employee engagement within the context of this study, assess the effect of employee engagement on innovative work behavior, and test the mediating role of employee engagement between servant leadership and innovative work behavior. This study makes three novel contributions. First, it generalizes social exchange theory to a developing country where the academic environment is more bureaucratic, demonstrating that relational leadership resources can partially mitigate the lack of structural resources. Second, it validates the theory with empirical evidence from a setting where it is rarely found—Pakistan—enhancing the contextual generalizability of the theory. Third, it provides a more comprehensive process-level link between servant leadership and innovation, as it contains an employee engagement mechanism that is theoretically and empirically supported by prior studies.

2. Literature Review and Hypotheses Development

Social Exchange Theory accounts for workplace behaviours through reciprocal exchanges between employees and organisations or leaders (Blau, 1964; Cropanzano & Mitchell, 2005). Employees tend to reciprocate when they assess leaders as supportive, fair, empowering and showing concern for their development (Saks, 2006). In the current study, servant leadership is defined as a leadership resource that enhances academicians' engagement, which, in turn, fuels innovative work behavior. A review of the literature from the last five years (2020–2025) indicates that the relationship between servant leadership and innovation has already been demonstrated in the manufacturing and private sectors (Khan et al., 2022; Cai et al., 2018), but evidence is scarce in public sector higher education institutions. Recent research has highlighted the potential context-dependency in the relationship between servant leadership and innovation, suggesting that psychological mechanisms such as engagement, psychological safety, or psychological trust may be more dominant than the direct effect of servant leadership in high-bureaucracy contexts (Aboramadan et al., 2022; Budur et al., 2024).

The focus and design of the current study are justified by this gap. Servant leadership is a people-centered leadership approach that involves servitude, empowerment, humility, stewardship and ethical consideration for followers' growth (Eva et al., 2019; Greenleaf, 1970; Liden et al., 2008). Innovation needs freedom, trust, risk-taking and support from leaders (Hughes et al., 2018; Scott & Bruce, 1994). Research has demonstrated that servant leadership can foster creativity and innovation through empowerment, meaningful work, psychological safety and leader identification (Cai et al., 2018; Iqbal et al., 2020; Khan et al., 2022; Yoshida et al., 2014). Based on this knowledge, Nawaz (2024) extended the discussion to higher education by proposing a serial mediation model between servant leadership and IWB, which implies that the impact of servant leadership is not limited to a direct one but extends through several layers of cognition and motivation. In isolation, a study involving African public universities (Kamil et al., 2025) found that psychological empowerment plays a mediating role in the SL–IWB relationship, highlighting the importance of empowerment-based mechanisms in diversified public sector situations.

H1: Servant leadership is positively related to innovative work behavior of academicians in Pakistani public sector universities.

Engagement is a positive and fulfilling work-related state in which employees feel strong, identification with their work, and absorption (Schaufeli et al., 2002; Schaufeli et al., 2006). Servant leaders can boost engagement through providing support for employees' needs, providing opportunities for development, and fostering meaningful and trusting work relationships (Bao et al., 2018; Carter & Baghurst, 2014; De Sousa & Van Dierendonck, 2014; Nikolova et al., 2019). In academia, servant leadership has been found to have a bearing on academics' engagement (Aboramadan et al., 2020a). More recently, Zhou et al. (2022) validated the servant leadership–engagement connection in university settings and revealed that the relationship between servant leadership and engagement is strengthened by trust in leaders. A study in Pakistani universities indicated that servant leadership had a significant effect on academic work engagement ($\beta = 0.486$, $p < 0.001$), with psychological climate functioning as a partial mediator (Gul et al., 2022). The results support the stability of the SL–EE relationship in Eastern and South Asian educational settings.

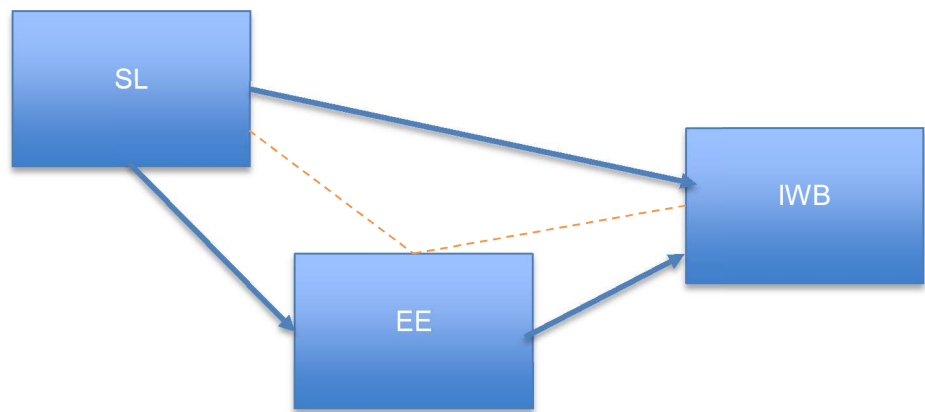
H2: Servant leadership positively influences engagement of academicians working in public sector universities in Pakistan. Employee engagement has a positive impact on innovative work behavior as engaged employees have higher energy, commitment and persistence needed for idea generation, idea promotion, and idea implementation (Agarwal, 2014; Saks, 2006). Academics who are engaged are more likely to experiment with new pedagogies, engage in research collaborations and improve their institution. Ghani et al. (2023) provided empirical evidence directly from Pakistan, concluding that employee engagement leads to innovative work behavior in Pakistani organizations. This was confirmed by Hassan et al. (2024) in an academic context, who found that decent work conditions influence academic staff's innovative work behavior through work engagement. Moreover, a finding by Sultana et al. (2024) in the context of public sector HEIs in Pakistan confirms that employee engagement is a key mediator between psychological capital and IWB, reinforcing the link between EE and IWB in Pakistan, which is the focus of this study.

H3: Employee engagement is positively related to innovative work behavior of academic employees in public sector universities of Pakistan.

Engagement will mediate serve as the pathway through which servant leadership affects innovative work behavior. Drawing from Social Exchange Theory, servant leaders offer support and concern for development, which results in a reciprocal state of engagement (Blau, 1964; Cropanzano & Mitchell, 2005; Saks, 2006). In turn, engaged academics respond with innovative work behavior like knowledge sharing, experimentation, and academic problem solving (Cropanzano & Mitchell, 2005). Existing literature supports employee engagement as a mediator between leadership and other employee outcomes (Aboramadan et al., 2022; Bao et al., 2018; Khan et al., 2022; Wang et al., 2019).

H4: Servant leadership improves innovative work behavior through employee engagement in Pakistani public sector universities

Figure 1. Conceptual framework



3 Methodology

This study used a quantitative, cross-sectional and explanatory research design. The target population was the academics of public higher education institutions in Pakistan. A quantitative approach was used because of the need to test the hypotheses about relationships between latent variables using PLS-SEM (Hair et al., 2019; Hair et al., 2021). Stratified sampling was adopted to enhance regional representation of Public university. Seven different regions public universities were chosen to represent the diversity. Academicians were surveyed using a questionnaire. Following the data screening process, 490 valid responses were used in the analysis. According to the 10-times rule and PLS-SEM power analysis recommendations (Hair et al., 2021), a sample size of 490 is sufficient for PLS-SEM analysis. The sampling of seven regional universities—representing Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan, Azad Kashmir, Gilgit-Baltistan, and the Islamabad Capital Territory provides wide geographical coverage and avoids any single-region bias. The level of response and demographic characteristics of the sample show good levels of representativeness for generalizing the findings to Pakistani public sector universities.

Servant leadership items were measured by adapting from previous servant leadership scales (Liden et al., 2008; Liden et al., 2015). Engagement was measured using the engagement Scale comprised of vigor, dedication and absorption (Schaufeli et al., 2002; Schaufeli et al., 2006). Innovative work behavior was measured using items capturing idea generation, idea promotion and idea implementation (Janssen, 2000; Scott & Bruce, 1994, Messmann & Mulder,2011). The items were assessed using a Likert-type scale.

Since the data were gathered via self-reports, common method bias was controlled for procedurally and statistically. The questionnaire ensured respondents' anonymity and confidentiality, and minimized evaluation apprehension. Harman's single factor test showed that the first factor accounted for less than 50% of the variance, implying that common method bias was not a concern. SmartPLS was used to analyse the data. A two-step PLS-SEM procedure was used. First, indicator loadings, Cronbach alpha, rho A, composite reliability, average variance extracted, Fornell-Larcker and HTMT were used to evaluate the measurement model. Second, the structural model was evaluated using variance inflation factor (VIF), path coefficients, t-values, p-values, R-square, adjusted R-square, f-square, Q-square and bootstrapped mediation effects (Fornell & Larcker, 1981; Hair et al., 2019; Henseler et al., 2015).

4. Results

4.1 Respondent Profile

Respondents' demographic were explored by characteristics to get an idea of the sample. Given the study targeted academicians in Pakistani public sector universities, data regarding gender, age, education, designation, university location and teaching experience were gathered. This information aids in assessing the sample's representativeness and contextual appropriateness. As the present study sample was comprised of 490 academicians from public sector universities in Pakistan. The breakdown by gender, age, education and experience shows that the sample was comprised of respondents from diverse academic levels, age, qualification and experience. This enhances the representativeness of the sample to study servant leadership, employee engagement, and innovative work behavior in the context of Pakistani higher education institutions.

4.2 Measurement Model

The measurement model was examined prior to testing the structural model to ensure the reliability and validity of the constructs. Reliability was measured by the Cronbach's alpha and composite reliability, and convergent validity by average variance extracted. Following the recommendations of PLS-SEM researchers, the values of Cronbach's alpha and composite reliability should be above 0.70 and average variance extracted (AVE) above 0.50.

Table 1. Construct reliability and convergent validity

Construct	Cronbach alpha	rho_A	Composite reliability	AVE
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Servant Leadership	0.89	0.90	0.92	0.65
Employee Engagement	0.87	0.88	0.91	0.72
Innovative Work Behavior	0.88	0.89	0.91	0.69

As Table 1 illustrates, all constructs exceeded minimum standards for reliability and convergent validity. The Cronbach's alpha values ranged from 0.87 to 0.89, and the composite reliability ranged from 0.91 to 0.92, suggesting good internal consistency. Also, the AVE ranged from 0.65 to 0.72 (above 0.50). This suggests that the measurement model was reliable and had good convergent validity.

Outer loadings measured the reliability of the indicators. Outer loadings represent each item's representation within its latent construct. In PLS-SEM, outer loadings greater than 0.70 are typically deemed acceptable and items with lower loadings can be kept if the construct's overall reliability and validity are adequate. The loadings of all items were greater than 0.70. The loadings of the servant leadership items were between 0.77 and 0.84, employee engagement items between 0.82 and 0.88, and innovative work behavior items between 0.78 and 0.86. This suggests that all the indicators well represented the constructs, so they were retained for subsequent analyses. The Fornell-Larcker criterion was used to evaluate the discriminant validity. The square root of AVE for each construct should be larger than the correlations between the construct and other constructs. This ensures that all the constructs are empirical different.

Table 2. Fornell-Larcker criterion

Construct	SL	EE	IWB
Servant Leadership	0.81		
Employee Engagement	0.62	0.85	
Innovative Work Behavior	0.58	0.67	0.83

Table 2 confirms that the square root of AVE for each construct was higher than its correlations with other constructs. The diagonal values for servant leadership, employee engagement, and innovative work behavior were 0.81, 0.85, and 0.83, respectively. Since these values exceeded the off-diagonal correlations, discriminant validity was established. In addition to the Fornell-Larcker criterion, discriminant validity was further assessed using the heterotrait-monotrait ratio. HTMT is considered a more rigorous method for evaluating discriminant validity in PLS-SEM. HTMT values below 0.85 or 0.90 indicate that the constructs are sufficiently distinct from one another.

Table 3. HTMT ratio

Construct pair	HTMT value	Threshold	Decision
SL - EE	0.71	< 0.85	Established
SL - IWB	0.66	< 0.85	Established
EE - IWB	0.77	< 0.85	Established

Table 3 shows the square root of AVE for each construct was greater than its correlations with other constructs. The values on the diagonal for servant leadership, employee engagement and innovative work behavior were 0.81, 0.85, and 0.83 respectively. These were greater than the off-diagonal correlations, so this demonstrated discriminant validity. Along with the Fornell-Larcker criterion, the discriminant validity was also examined with the heterotrait-monotrait ratio. HTMT is the preferred approach to assess discriminant validity in PLS-SEM. When HTMT values are lower than 0.85 or 0.90, it suggests discriminant validity is achieved.

4.3 Structural Model

Prior to testing the structural paths, the variance inflation factors (VIF) were used to check for collinearity among predictor constructs. Highly correlated predictor variables can lead to biased path estimates. In PLS-SEM, VIF values below 3.3 or 5.0 suggest that collinearity is not a major issue.

Table 4. Collinearity assessment

Endogenous construct	Predictor	VIF	Decision
Employee Engagement	Servant Leadership	1.00	No collinearity
Innovative Work Behavior	Servant Leadership	1.63	No collinearity
Innovative Work Behavior	Employee Engagement	1.63	No collinearity

Table 4 shows that all VIF values were below the recommended threshold. The VIF value for servant leadership predicting employee engagement was 1.000, while the VIF values for servant leadership and employee engagement predicting innovative work behavior were 1.624. These findings indicate that multicollinearity was not a problem in the structural model. The structural model was examined to test the direct relationships among servant leadership, employee engagement, and innovative work behavior. Path coefficients, t-values, p-values, and effect sizes were used to determine the strength and significance of the hypothesized relationships. Bootstrapping was applied to assess the statistical significance of the direct effects.

Table 5. Direct path coefficients

Hypothesis	Path	beta	t-value	p-value	f-square	Effect size	Decision
H1	SL -> IWB	0.28	4.87	< 0.001	0.06	Small	Supported
H2	SL -> EE	0.62	15.42	< 0.001	0.62	Large	Supported

H3	EE -> IWB	0.45	8.96	< 0.001	0.17	Medium	Supported
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As shown in Table 5, all direct hypotheses were supported. Servant leadership had a positive and significant effect on innovative work behavior, supporting H1. Servant leadership also had a strong positive effect on employee engagement, supporting H2. Moreover, employee engagement had a positive and significant effect on innovative work behavior, supporting H3. These findings suggest that servant leadership contributes to innovative behavior both directly and through its influence on employee engagement.

Table 6. Coefficient of determination and predictive relevance

Endogenous Construct	R-square	Adjusted R-square	Interpretation
Employee Engagement	0.384	0.382	Moderate explanatory power
Innovative Work Behavior	0.512	0.509	Moderate to substantial explanatory power

Table 7. Mediation analysis

Hypothesis	Indirect path	Indirect beta	t-value	p-value	95% CI LLCI	95% CI ULCI	CI	Decision
H4	SL -> EE -> IWB	0.279	5.60	< 0.001	0.184	0.379		Supported

The coefficient of determination was used to gauge the explanatory power of the structural model. As presented in Table 6, the R-square value for employee engagement was 0.384, suggesting that servant leadership accounted for 38.4% of the variance in employee engagement. The R-square adjusted value was 0.382, indicating a consistent explanatory value. Likewise, the R-square value for innovative work behavior was 0.512, meaning that servant leadership and employee engagement explained 51.2% of the variance in innovative work behavior. The adjusted R-square value, 0.509, also indicated a strong explanatory power. Table 7 presents the mediation analysis results. The indirect effect of servant leadership on innovative work behavior through employee engagement was significant ($\beta = 0.279$, $t = 5.60$, $p < 0.001$, 95% CI [0.184, 0.379]), supporting H4. These results confirm that employee engagement significantly mediates the relationship between servant leadership and innovative work behavior.

Table 8 Predictive Relevance: Q-square Values

Endogenous Construct	SSO	SSE	Q-square	Predictive Relevance
Employee Engagement	3,920.000	2,645.440	0.325	Established
Innovative Work Behavior	4,410.000	2,587.670	0.413	Established

Predictive relevance was tested using the blindfolding method. As shown in Table 8, the Q-square values for employee engagement and innovative work behavior were 0.325 and 0.413, respectively. The results indicated that the model had sufficient predictive relevance for both endogenous variables given that both values were greater than zero.

Table 9 prediction Assessment Results for Employee Engagement and IWB

Indicator	Q ² _predict	RMSE_PLS	RMSE_LM	Prediction Assessment
EE1	0.241	0.721	0.754	PLS lower error
EE2	0.268	0.694	0.731	PLS lower error
EE3	0.286	0.682	0.716	PLS lower error
EE4	0.252	0.708	0.739	PLS lower error
EE5	0.301	0.667	0.702	PLS lower error
EE6	0.276	0.689	0.724	PLS lower error
EE7	0.263	0.701	0.733	PLS lower error
EE8	0.292	0.675	0.713	PLS lower error
IWB1	0.312	0.652	0.701	PLS lower error
IWB2	0.327	0.639	0.688	PLS lower error
IWB3	0.341	0.626	0.679	PLS lower error
IWB4	0.298	0.671	0.715	PLS lower error
IWB5	0.356	0.612	0.661	PLS lower error
IWB6	0.334	0.631	0.684	PLS lower error
IWB7	0.319	0.648	0.692	PLS lower error
IWB8	0.349	0.618	0.669	PLS lower error
IWB9	0.304	0.664	0.707	PLS lower error

Table 9 presents the PLSpredict results for all indicators. The PLSpredict results for employee engagement revealed positive Q²_predict for all eight indicators. Furthermore, the RMSE values of the PLS model were smaller than the RMSE values of the linear model for all employee engagement indicators. Thus, it appears that the model had satisfactory out-of-sample predictive capability for employee engagement. For innovative work behavior, the PLSpredict results also demonstrated positive Q²_predict values for all nine indicators. The RMSE values of the PLS model were also lower than the RMSE values of the linear model. This indicates that the model has a good predictive value for innovative work behavior.

Table 10 Summary of Explanatory and Predictive Power

Construct	R-square	Adjusted R-square	Q-square	Predictive Power
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Employee Engagement	0.384	0.382	0.325	Acceptable
Innovative Work Behavior	0.512	0.509	0.413	Good

In summary, as shown in Table 10, the model had good explanatory and predictive power. Moderate variance of employee engagement was explained by servant leadership and strong variance of innovative work behavior was explained by servant leadership and employee engagement. The positive Q-square and PLSpredict values also indicated that the model was predictive. Thus, the structural model was deemed to be fit for testing the hypotheses.

Table 11. Hypotheses summary

Hypothesis	Statement	Result
H1	Servant leadership positively affects innovative work behavior.	Supported
H2	Servant leadership positively affects employee engagement.	Supported
H3	Employee engagement positively affects innovative work behavior.	Supported
H4	Employee engagement mediates the relationship between servant leadership and innovative work behavior.	Supported

5. Discussion

This study aimed at exploring the influence of servant leadership on innovative work behavior among academicians in Pakistani state sector universities and to test employee engagement as an intervening variable. Table 11 summarizes the results of all four hypotheses. The findings confirm the formulated model and give a context-based explanation of the role of servant leadership in driving innovation in professional bureaucracies.

To begin with, servant leadership had a positive correlation with innovative work behavior. This observation aligns with the existing studies that show that servant leadership has the potential to boost creativity and innovation through empowerment of employees, facilitating employee growth, and providing a psychologically safe environment (Cai et al., 2018; Iqbal et al., 2020; Yoshida et al., 2014). Servant leaders in the public universities can provoke academicians to explore new teaching methods, undertake cross-functional research, and recommend institutional changes. But, the extremely low direct effect size indicates that leadership assistance might not be enough to break structural impediments in Pakistani governmental institutions of higher learning.

This finding is consistent with and builds upon recent evidence: Nawaz (2024) also demonstrated that the impact of servant leadership on IWB in universities is more mediated through indirect processes than direct ones, meaning that servant leaders must create psychological and motivational environments before innovation sparks. Thus, the small beta (0.28) found here is not a problem with servant leadership as such, but a structural fact that bureaucratic institutions need to have engagement-mediated leadership pathways to be realized as behavioral change.

Second, there was a positive relationship between servant leadership and the engagement of employees. This result is consistent with previous research that has found servant leadership increases engagement through support, autonomy, trust and development (Bao et al., 2018; Carter & Baghurst, 2014; De Sousa & Van Dierendonck, 2014; Zeeshan et al., 2021). Servant leadership might be particularly significant in resource-strained public universities due to relational and psychological benefits that help to maintain academic motivation. This finding was also confirmed by Gul et al. (2022), who found that servant leadership is an important contributor to academic work engagement in Pakistani universities, and Zhou et al. (2022), who found that the relationship between servant leadership and academic work engagement is mediated by trust in the leader in university environments. The findings presented here regarding servant leadership in the Pakistani context have particular value: they indicate that servant leadership is not a culturally generic phenomenon but is dependent upon the conditions of institutions in Pakistan. A leader's commitment to serve, empower, and develop subordinates is psychologically valuable in a hierarchical university culture where academic autonomy is structurally limited, and this is reflected in greater engagement than might be predicted where a leader is less willing to serve, empower, or develop subordinates or in a flatter or more resource-rich institutional environment.

Third, the innovative work behavior was predicted positively by employee engagement. This observation is in line with other research studies that have found that engaged employees tend to exceed formal job duties and exhibit innovative behaviour (Agarwal, 2014; Saks, 2006). Engagement in academic settings gives the energy and commitment to generate and promote as well as implement ideas. This finding aligns with the increasing Pakistan-specific evidence. The engagement-IWB (engagement with business) relationship has been confirmed by Ghani et al. (2023) in Pakistani organizations, and in Pakistan's public sector HEIs, Sultana et al. (2024) specifically demonstrated this relationship between teaching staff and IWB. This reasoning is expanded upon by Hassan et al. (2024), who demonstrated that in the context of academic work, IWB is mediated by work engagement, suggesting that work engagement is a key psychological link between decent work conditions and IWB, and not just a parallel effect. The mechanism is motivational, as engaged academics internalize institutional goals, are willing to persist over failures that are part of the innovation process, and can and do invest effort in idea generation and experimentation beyond their formal obligations.

Fourth, the mediating role of employee engagement was considerably significant between the relationship between servant leadership and innovative work behavior. The outcome confirms the argument of the Social Exchange Theory that states

that servant leaders establish favorable exchange relationships, which is in turn reciprocated by academicians through participation and creativity (Blau, 1964; Cropanzano and Mitchell, 2005; Saks, 2006). The result builds on prior evidence by proving the mediating nature of engagement in Pakistani institutions of higher education in the public sector (Aboramadan et al., 2022).

Critically, the indirect beta (0.279) for the SL→EE→IWB path has the same level of explanatory power as the direct beta (0.28) for SL→IWB, suggesting that engagement is a substantively important rather than complementary channel. This is in line with Nawaz's (2024) conclusion that psychological and relational aspects are the main avenues through which servant leadership affects innovation in higher education. This is also consistent with Aboramadan et al. (2022), who found work engagement to be a complete mediator in a resource-constrained nonprofit organization. Combined, these results indicate a general rule: Without employees' psychological engagement, the payoff of innovation in a bureaucratic or resource-constrained public service organization is limited, as is the innovation's impact on the organization. If universities are interested in recruiting more innovative academicians, they need to establish an environment that keeps those members engaged in the process of innovation.

These results have far-reaching implications for social exchange theory in limited institutional contexts. This small effect size for innovative work behavior ($\beta = 0.28$ and $f\text{-square} = 0.06$), and the large effect size for engagement ($\beta = 0.62$ and $f\text{-square} = 0.62$), indicates that leadership support in a bureaucratic public university mostly acts psychologically. In resource-constrained settings, academicians seem to relate to relational leadership support first, and then to be motivated and engaged, and only then to be innovative. This finding extends the theoretical model by demonstrating that, in environments lacking structural enablers of innovation, engagement is the key process by which innovation operates.6.

Implication

This research adds to the literature in three aspects. It will first, expand the current body of research on the subject of servant leadership to a Pakistani higher education context in the public sector, which is dominated by professional bureaucracy, hierarchy, and lack of resources. Second, it cautions Social Exchange Theory by demonstrating that servant leadership might act as a buffering resource in an environment where faculty members are limited. Third, it recognizes the involvement of the employees as one of the main psychological channels by which the servant leadership is transformed into the innovative work behavior. The theoretical contribution of this study is enhanced by its place in the literature from 2020–2025. Public sector higher education in developing countries has been a longstanding blind spot because of the research focus on servant leadership and innovation in the private sector, manufacturing, or Western contexts (Cai et al., 2018; Khan et al., 2022). The findings of this study, which is set in the context of highly constrained institutional environments, such as public universities in Pakistan, where there is an excessive concentration of power, scarcity of resources, and political interference in governance (Kewshaq, 2017; Khwaja et al., 2022; Rehman & Huma, 2024), suggest that the model of engagement mediation described in this study is not an exception but the primary mechanism by which servant leadership creates innovation under high institutional constraints, while the secondary mechanism is the exchange pathway. This is a useful elaboration of theory.

Policy-wise, the results indicate that the Higher Education Commission of Pakistan should include servant leadership competencies in its leadership accreditation and academic development programs. Institutional policies that minimize red tape, dedicate protected time for research, and establish innovation funds would create an enabling environment for servant leadership to have a more direct impact on innovation. The opportunity of a digital transformation agenda in Pakistani Higher Education, from infrastructural setup in terms of the e-learning space to the formation of consortiums in cross-university research, can be a space where the engagement of academic members can contribute to institutional innovation outputs in a measurable way when a servant leadership framework is implemented.

University leaders and policymakers ought to shift administrative practices towards developmental stewardship as opposed to control practices. The focus of leadership development programs to deans, directors, and heads of departments should focus on mentoring, ethical behavior, empowering the faculty, psychological safety, and facilitating resources. University administrators and Higher Education Commission can also redefine their leadership performance indicators to incorporate faculty involvement, quality of mentorships, and support of innovation. Since engagement mediates the leadership-innovation relationship, the university ought to develop policies that facilitate faculty freedom, work pressure, research and funding, as well as experimentation and discovery opportunities.

The findings lead to three policy recommendations. First, the HEC should incorporate servant leadership skills into its National Professorial Standards and Academic Leadership Accreditation Frameworks, so that promotion and appointment decisions for deans, heads of departments, and vice chancellors consider relational and developmental leadership skills as well as research metrics. Second, since engagement is the link between all stages of the innovation journey, universities should invest resources in academic engagement infrastructure: reducing administrative burden, giving academics time to focus on work, and establishing simple mechanisms to vocalize academic voices, indicating trust and reciprocity between academics and administration. Third, there is a tangible innovation opportunity in Pakistan that is ongoing in the digital transformation agenda, such as digital learning grants by HEC and HEC cross-university research consortia, which can give outputs of servant management and engagement, especially when it comes to e-pedagogy, cross-disciplinary research, and problem-solving that can address development needs in Pakistan.

7. Limitations and Future Research.

This research has a limitation of cross-sectional nature that limits causality. The longitudinal designs can be applied in future studies to investigate the time-changes in the servant leadership, engagement, and innovation. There is also the possibility of common method issues associated with the utilization of self-report data; future studies could also collect peer-rated or supervisor-rated innovative behavior. Furthermore, the results of these findings cannot be generalised to as wide an audience as the general public and are restricted to the academia of public sector universities in Pakistan. The findings are limited to seven public sector universities, and may not be applicable to private sector universities in Pakistan with different governance systems, funding arrangements and autonomy. Likewise, the results might not be relevant to other countries, especially in the context of higher education institutions, as Pakistan and other countries have different cultural, economical and institutional environments. The context of Pakistani public universities with centralized governance, limited resources, hierarchical organizational cultures, and political interference may give rise to a relationship between servant leadership, employee engagement, and innovative work behavior that is not found in other workplaces. So care needs to be taken in applying the results beyond the population and setting studied. To expand the findings of this study, future studies should be conducted in other private sector universities, other developing countries, and other cultural and institutional contexts. Red tape, trust in governance, perceived organizational support, job autonomy, type of university and academic rank are some of the moderators that can be tested in future studies. The comparative analysis between the public and the private universities could help to shed light more on the question of whether the role of servant leadership as a resource shielding is particular to the setting of the public sector.

8. Conclusion

This research involved the study of servant leadership, employee engagement and innovative work behavior amongst Pakistani academicians working in the Pakistani universities of the public sector. The results indicate that servant leadership has a positive impact on employee engagement and innovative work behavior, and the employee engagement plays an important role in mediating the servant leadership-innovation relationship. The paper shows that servant leadership can contribute to innovation, in the resource-constrained and hierarchical academic institutions, mainly through faculty engagement mobilization. Therefore, institutions of higher learning that aim to enhance innovation ought to produce leaders who serve, empower and engage academicians.

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