

Transformational Leadership Impact on Employee Innovative Behavior in SMES: An Exploratory Factor Analysis

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Abstract

The present study investigates the pivotal function of transformational leadership in cultivating inventive conduct among employees in small and medium-sized firms (SMEs) in Pakistan. This study intends to examine the impact of transformational leadership on employee creativity, given that creative work behavior is a major factor in determining a business's ability to survive and gain a competitive edge. The fact that many SMEs fail despite having an excess of resources is a testament to the need for excellent leadership for organizational survival. This study examines the dimensions of transformational leadership, employee innovative behavior, and SME success using exploratory factor analysis (EFA) on data gathered from 103 respondents. The data were deemed suitable for factor analysis using Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO) values exceeding the permissible level for each construct. The results of the investigation showed that innovative behavior on the part of employees is greatly impacted by transformational leadership, and this improves SME performance. The results show that transformational leadership is essential for fostering overall organizational performance in addition to having a direct impact on staff innovation.

Keywords: Transformational Leadership, Employee Innovative Behavior, SMES Performance, Exploratory Factor Analysis

Introduction

Organizational performance is a critical indicator for reaching goals and objectives for both large and small enterprises, in developed and developing economies (Rehman et al., 2019). These comprise various elements, including non-financial ones like return on investment, profitability, and revenue growth, as well as financial ones like market competitiveness, customer happiness, and staff engagement and satisfaction (Alatailat et al., 2019). According to Ogochukwu et al., (2022), it also comprises operational efficiency measures like productivity and cost-effectiveness. Nevertheless, for businesses to succeed in the rapidly changing modern economic world, they must search for creative solutions. Companies are

looking for new and creative ways to improve their operations. Innovation has been the focus of these initiatives (Guerrero-Villegas et al., 2018). It is believed that SMEs must prioritize innovative work behavior in order to compete successfully and produce greater financial returns. Small and medium-sized businesses (SMEs) need a certain set of abilities because of their highly dynamic nature in order to lead, grow, and compete in their industry, throughout their sector (Pasha et al., 2022).

Employee knowledge is also crucial for firms to develop and obtain a competitive advantage. A lot of firms depend on their employees to provide them with an advantage in the competitive marketplace. Organizations view employees as critical to expanding their potential for innovation, making them the primary focus of examination from an individual perspective. Employee creativity has a major impact on organizational innovation and competitive advantage, according to Tang & Werner (2017). In a similar vein, studies show that specific protocols are necessary to encourage creative activity in workers. Developing new, useful ideas into improved goods, services, or procedures is an example of an innovative work practice (Sengupta et al., 2023). Furthermore Empathy, creativity, and a flatter organizational structure are promoted by agile and design thinking, which pushes staff members to reach their full potential by providing them with opportunities (Munir et al., 2024).

Small and medium-sized enterprises (SMEs), which are inherently dynamic, face a unique set of challenges and opportunities in this regard. SMEs are the backbone of Pakistan's economy, significantly contributing to employment generation, economic growth, and the overall development of supply chains within the manufacturing and services sectors (Kumar et al., 2022; Amir et al., 2020). Given their substantial impact, it is imperative for SMEs to foster innovation among employees to remain competitive and ensure sustainable growth. However, this requires a robust understanding of the factors that drive employee innovation, particularly in resource-constrained environments.

Employers greatly rely on the innovative behavior of their staff to adjust to shifting circumstances (Majid et al., 2020). Therefore, innovative work behavior (IWB) among its members is crucial for all types of firms to maintain a competitive edge and secure their long-term survival (Negassi et al., 2019). This also holds true for small and medium-sized enterprises (SMEs), whose capacity for profitable operation greatly relies on the innovative thinking of their staff members (Raymond & St-Pierre, 2010; Tariq et al., 2024).

Leadership plays a pivotal role in shaping organizational culture and influencing employee behaviors. Specifically, transformational leadership (TL), characterized by vision, inspiration, and the ability to motivate employees to exceed expectations, has shown promise in promoting innovative work behavior (Cortes & Herrmann, 2020; Mahmood & Iqbal, 2021). Leaders who adopt a transformational style can create an environment that encourages employees to think creatively, collaborate effectively, and develop innovative solutions to complex problems. This leadership approach is especially crucial for SMEs, where leaders often have direct and influential relationships with their workforce.

Despite the recognized importance of innovation for SME success, there is a notable gap in research focusing on the mechanisms through which transformational leadership influences

employee innovative behavior. Existing studies have primarily examined general leadership impacts on organizational performance but have not sufficiently explored the specific role of leadership in fostering innovation within SMEs, particularly in the context of developing economies like Pakistan (Knezović & Drkić, 2021). Addressing this gap is essential to understand how SMEs can leverage leadership practices to boost employee creativity and, by extension, organizational performance.

Most of the studies carried out to date are considerably too constrained and ignore a number of crucial elements in employee innovative behavior (Sanders et al., 2018). Therefore, this study focused on innovative employee behavior in accordance with transformational leadership. Transformational leadership (TL) is one element that might have an impact on employee innovation behavior and SMEs performance. When workers observe their pioneers functioning in a particular way, they are inspired to build on each other's ideas and skills to come up with creative solutions to problems (H. Khan et al., 2020). The most popular approaches in social science and business nowadays are transformational leadership philosophies (Mouazen & Hernández-Lara, 2023).

The present study seeks to fill this gap by investigating the impact of transformational leadership on employee innovative behavior and its subsequent effect on SME performance in Pakistan. This research is significant for several reasons. First, it provides empirical insights that can guide SME leaders in adopting leadership practices that promote innovation, thereby enhancing organizational competitiveness. Second, the findings will be valuable for policymakers and business managers who aim to strengthen the SME sector's contribution to economic growth. Finally, the study adds to the academic literature by offering a comprehensive understanding of the relationship between leadership and innovation in the context of emerging markets.

Literature Review

The research currently accessible on SMEs provides strong evidence about SMEs' contributions to economic growth, large job potential, and income production (Rasheed & Siddiqui, 2019). As a result, given this underlying background, researchers are paying particular attention to the noteworthy contributions provided by SMEs to the growth of economies (Rasheed & Siddiqui, 2019). Apart from their noteworthy impact on established and emerging countries, small and medium-sized enterprises (SMEs) nonetheless have a concurrently high failure rate. In their first several years of operation, many recently founded SMEs failed (Ullah, 2019). Furthermore, business organizations face new challenges due to the rapid advancement of technology and the knowledge economy (Kulakli & Mahony, 2014), which puts pressure on them to reinvent their business operations (Negassi et al., 2019).

In the SME sector, workers are the most important resource for ensuring a range of services that are essential to the expansion of the economy (Raut, 2020). They are able to achieve significant growth, competitive performance, and an enduring reputation for their businesses (Ferreira & Franco, 2020). These days, all SMEs prioritize innovation, which is challenging to accomplish without knowledgeable and experienced staff. Previous research has shown that workers participate significantly in most firm-based innovative activities by processing ideas as they arise and converting them into creative outputs (Blanchard, 2020; Chang & Eberhardt, 2020; Duradoni & Di Fabio, 2019) to gain an advantage over competitors (Rastrollo-

Horrillo & Rivero Diaz, 2019). To get a competitive edge, SMEs should consider how to invest in staff development to support their innovative behavior (Rastrollo-Horrillo & Rivero Diaz, 2019). Innovative behavior, taken as a single construct, refers to an employee's behavioral patterns that are focused on developing and implementing new ideas, adopting new technologies, and improving environmental processes to achieve the firm's desired objectives and improve performance to attain substantial growth in competitive markets (Chang & Eberhardt, 2020).

Since "employee innovation" refers to how staff members solve problems or come up with new ideas, organizations stand to gain from their innovative behaviors (Elidemir et al., 2020). Creativity and innovation are considered to be the hallmarks of modern business and are considered necessary for an organization to succeed in the current economic environment (Kwon & Kim, 2020). There is an increasing interest in this field of study because of the growing significance of innovation and innovative behaviors brought about by globalization, shifting economic conditions, and more rivalry among demands (Akram et al., 2020).

As stress has been demonstrated to reduce people's propensity to innovate, Bani-Melhem et al. (2018) identified three elements that contribute to employee inventive behavior: workplace happiness, peer support, and a stress-free work environment. Nonetheless, the primary drivers of innovative behaviors are employees' contentment, well-being, positive outlooks, and pleasant sentiments (Salas-Vallina et al., 2017). The key idea is that genuinely happy individuals are more likely to display behaviors and attitudes that improve organizational results (Bani-Melhem et al., 2018; Collings et al., 2015).

Transformational leadership has drawn a lot of attention since it has been repeatedly shown to be a significant antecedent that influences employees' inventive behavior in a wide range of external situations. (Zhou & Velamuri, 2018) According to Al Khajeh (2018), transformative leaders are those who motivate their team members to prioritize the requirements of the business over their own. Through higher learning, self-initiative, information sharing, and idea development—all of which promote innovation—employees are inspired, empowered, and motivated by transformational leadership (Molodchik et al., 2021; Sawsan J. Al-Husseini, 2016).

A study on Pakistan's FMCG by Kalsoom et al. (2018) found a positive correlation between performance and transformative leadership. Sustainable innovation is greatly influenced by transformational leadership, and the performance of small and medium-sized businesses is greatly impacted by sustainable innovation (M. A. Khan et al., 2020). Because they are prepared to take on additional challenges, transformational leaders foster creativity and innovation in those under their direction (M. Mahmood et al., 2019; Ribeiro et al., 2018). Scholars (Corsi & Prencipe, 2018; Cortes & Herrmann, 2021) have found a connection between innovation in SMEs and leadership practices. According to much of the literature, leaders can encourage organizational innovation by implementing transformational leadership (TL), which is a specific behavioral pattern (Jiang & Chen, 2018).

Exploratory Factor Analysis

Three factors needed to be addressed in order to determine whether the data were suitable for factor analysis. The Kaiser-Meyer-Olkin (KMO) Sampling Adequacy Check was one of the

three variables, along with sample size and correlation matrix factorability. According to Hair et al. (2014), sample sizes ought to be limited to 100 or more.

EFA used Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin test. The significance of measuring constructs was shown by Bartlett's Sphericity test, whereas the KMO test was used to gauge sample adequacy. According to Baistaman et al. (2020) and Rahlin et al. (2019), factorability is present in the dataset if the KMO value is greater than 0.5 and the Bartlett's Test of Sphericity P-value < 0.05 produces statistically significant findings.

Principal component analysis (PCA) using the Varimax rotation method was then used to identify underlying variables. PCA, sometimes known as the first phase in exploratory factor analysis, is a widely used method for factor extraction. Since each component and subgroup of factors takes the maximum amount of variation from the overall variance of a construct, the factor model must apply the factor rotation approach to complete the PCA process (Mishra et al., 2017).

The validity of each item is assessed using its factor loadings; factor loading values vary from 0.0 to 1.0; however, an item should be deleted if its factor loading value is less than 0.6 (Al-Khamaiseh et al., 2020). According to Bani-Melhem et al. (2018) and Ehido et al. (2020), this indicates that each item and component of the construct should measure at least 60% of the corresponding construct.

Research Methodology

This study conducted a pilot study of small and medium businesses in Pakistan. It is physically and financially unfeasible to conduct an exhaustive survey of all small and medium-sized enterprises (SMEs) throughout Pakistan's districts and in the manufa

This study conducted a pilot study of small and medium businesses in Pakistan. It is physically and financially unfeasible to conduct an exhaustive survey of all small and medium-sized enterprises (SMEs) throughout Pakistan's districts and in the manufacturing, trading, and service sectors. As a result, this study applied the stratified sample technique (Mubarik et al., 2020) with a focus on SMEs situated in the Punjab province. Punjab was chosen since it is home to over 65% of Pakistan's SMEs. The population sampled from the aforementioned demographic consists of the three districts in Punjab known as Pakistan's "golden triangle." cturing, trading, and service sectors. As a result, this study applied the stratified sample technique (Mubarik et al., 2020) with a focus on SMEs situated in the Punjab province. Punjab was chosen since it is home to over 65% of Pakistan's SMEs. The population sampled from the aforementioned demographic consists of the three districts in Punjab known as Pakistan's "golden triangle."

The SMEs in these districts were chosen due to their significant export and GDP contributions. The primary industries in these districts that contribute significantly to GDP and exports include leather, sports goods, steel, wood, and furniture, as well as a few others. These industries are incorporated into the sampling frame for this study. By ensuring that the sample is concentrated in economically significant regions, this approach offers pertinent insights into the role that SMEs play in these important areas. A single member of a Pakistani SME organization functions as the sampling element and is regarded as the analytical unit.

For this investigation, the survey method is employed. Utilizing questionnaires can help you contact a large number of participants from the targeted group across a wide geographic area. Interval measurements based on a Likert scale are used to gauge respondents' responses, with scores designating how much they agree or disagree. Every item is ranked from strongly disagree to strongly agree on a seven-point Likert scale. Employers received printed or online versions of the questionnaire. This made it possible to include a larger number of respondents. 120 questionnaires were distributed; 109 filled-out questionnaires were received by the respondents, whereas 6 questionnaires were eliminated due to being incomplete. Hence, 103 questionnaires were considered suitable for EFA analysis.

Results

IBM SPSS was utilized in this investigation to do exploratory factor analysis (EFA) for the constructs. The KMO and Barlett's Sphericity test results in this study met the criteria for exploratory factor analysis. The KMO value should be greater than 0.50 and have a p-value less than 0.05 (Awang et al., 2016; Hoque et al., 2018). For the employee innovative behavior dimension, KMO and Bartlett's score was .912 as given in Table 1.

Table 1

The KMO and Barlett's Sphericity Test for Employee Innovative Behavior

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.912
Bartlett's Test of Sphericity	Approx. Chi-Square	445.588
	Df	21
	Sig.	.000

Whereas for transformational leadership KMO and Bartlett's score was .950 as shown in Table 2

Table 2

The KMO and Barlett's Sphericity Test for Transformational Leadership

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.950
Bartlett's Test of Sphericity	Approx. Chi-Square	1092.879
	Df	55
	Sig.	.000

Table 3. depicts the KMO and Bartlett's values for SMEs performance meeting the requirements with a degree of importance of .000.

Table 3

The KMO and Barlett's Sphericity Test for Organizational performance

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.903
Bartlett's Test of Sphericity	Approx. Chi-Square	567.552
	Df	21
	Sig.	.000

Consequently, for every scale item across all constructs, PCA with Varimax rotation was performed. Transformational leadership had eleven elements loaded on it as a component,, as shown in Table 4. As a general rule of thumb, factor loadings are quite good, with values ranging from .824 to .88.

Table 4

Factor Loading Matrix for Transformational Leadership

No.	Items	Component 1
1	TL1	.877
2	TL2	.878
3	TL3	.873
4	TL4	.888
5	TL5	.879
6	TL6	.838
7	TL7	.826
8	TL8	.844
9	TL9	.858
10	TL10	.824
11	TL11	.841

For employee innovative behavior seven items were loaded on a single factor. Items have factor loadings range from .792 to .854 as given in Table 5.

Table 5

Factor Loading Matrix for Employee Innovative Behavior

No.	Items	Component 1
1	EIB1	.797
2	EIB2	.793
3	EIB3	.846
4	EIB4	.845
5	EIB5	.854
6	EIB6	.792
7	EIB7	.823

Furthermore seven items of organizational performance were loaded on component making up one factor with factor loading from range from .825 to .877 as shown in Table 6.

Table 6

Factor Loading Matrix for Organizational Performance

No.	Items	Component 1
1	OP1	.868
2	OP2	.825
3	OP3	.877
4	OP4	.848
5	OP5	.845
6	OP6	.826
7	OP7	.844

The Cronbach's coefficient alpha test was utilized to gauge dependability. Generally speaking, a construct is deemed dependable if it yields a reliability coefficient of 0.70 or higher (Bekele et al., 2024). In this study, every underlying construct has Cronbach's alpha values that are above the cutoff and satisfy the recommended standards. The organizational performance construct had a cronbach alpha of.934, whereas the cronbach alpha for transformational leadership was.964, and the cronbach alpha for mediating variable employee innovative behavior was.920. An appropriate percentage of cumulative variation was demonstrated by the analysis to assess the constructs. For every transformational leadership component with an eigenvalue greater than 1, a single factor was identified, which accounts for 73.489% of the variation overall. Seemingly, the total variance explained for employee innovative behavior is 67.550%, and for organizational performance, the total variance explained is 71.873%.

Conclusion

The findings from the EFA demonstrate that the constructs of transformational leadership, employee innovative behavior, and SME performance are well-defined and robustly measured. The high KMO values and significant Bartlett's tests suggest that the data are suitable for factor analysis. The strong factor loadings and high variance explained by each construct indicate that the items used are effective in capturing the underlying dimensions of these constructs. Additionally, the high reliability scores suggest that the measures are consistent and dependable.

The results of this study provide substantial evidence that transformational leadership plays a pivotal role in fostering employee innovative behavior, which in turn significantly contributes to the overall performance of SMEs in Pakistan. Although the study provides valuable insights, there are some limitations. The sample size of 103 respondents, while sufficient for EFA, may limit the generalizability of the findings to the broader population of SMEs in Pakistan. Future studies could benefit from a larger sample size to enhance the representativeness and robustness of the results. The study is conducted within the cultural context of Pakistan, which may influence the perception and impact of transformational leadership. Cultural factors could play a significant role in shaping leadership behaviors and employee responses, so caution should be taken when generalizing the findings to other

cultural contexts. Comparative studies across different cultural settings would be useful to explore the role of culture in these dynamics.

References

- Akram, T., Lei, S., Haider, M. J., & Hussain, S. T. (2020). The impact of organizational justice on employee innovative work behavior: Mediating role of knowledge sharing. *Journal of Innovation and Knowledge*, 5(2), 117–129. <https://doi.org/10.1016/j.jik.2019.10.001>
- Al-Khamaiseh, Z., Halim, B. B. A., Afthanorhan, A., & Alqahtani, A. H. (2020). Exploring and developing items measuring situational leadership II (SLII). *Development*, 3, D4.
- Al Khajeh, E. H. (2018). Impact of leadership styles on organizational performance. *Journal of Human Resources Management Research*, 2018(2018), 1–10.
- Alatailat, M., Elrehail, H., & Emeagwali, O. L. (2019). High performance work practices, organizational performance and strategic thinking: A moderation perspective. *International Journal of Organizational Analysis*, 27(3), 370–395.
- Amir, S., Ali, M., & Ahmad, F. (2020). Evolution of SMEs in Pakistan and key challenges that hampers their expansion. *International Journal of Social Sciences & Humanities (IJSSH)*, 5(2), 23–40.
- Awang, Z., Afthanorhan, A., & Mamat, M. (2016). The Likert scale analysis using parametric based Structural Equation Modeling (SEM). *Computational Methods in Social Sciences*, 4(1), 13.
- Baistaman, J., Awang, Z., Afthanorhan, A., & Rahim, M. Z. A. (2020). Developing and validating the measurement model for financial literacy construct using confirmatory factor analysis. *Humanities and Social Science Review*, 8(2), 413–422.
- Bani-Melhem, S., Zeffane, R., & Albaity, M. (2018). Determinants of employees' innovative behavior. *International Journal of Contemporary Hospitality Management*, 30(3), 1601–1620. <https://doi.org/10.1108/IJCHM-02-2017-0079>
- Bekele, B. T., Berhe, T. T., Wotango, B. Y., Workneh, W. M., & Wendwessen, N. (2024). Validation study of the Amharic version Safety Attitudes Questionnaire (SAQ) in public hospitals of Addis Ababa, Ethiopia: a cross-sectional study. *BMC Health Services Research*, 24(1), 366.
- Blanchard, K. (2020). Innovation and strategy: Does it make a difference! A linear study of micro & SMEs. *International Journal of Innovation Studies*, 4(4), 105–115.
- Chang, C., & Eberhardt, K. (2020). A regional approach to attracting and retaining employees: a chance for small and medium-sized hotels? In *The Routledge Companion to International Hospitality Management* (pp. 401–422). Routledge.
- Collings, D. G., Scullion, H., & Vaiman, V. (2015). Talent management: Progress and prospects. *Human Resource Management Review*, 25(3), 233–235. <https://doi.org/10.1016/j.hrmr.2015.04.005>
- Corsi, C., & Prencipe, A. (2018). Internal funding, debt and external equity: Which of these effectively improve the growth of university spin-offs? *International Journal of Entrepreneurial Venturing*, 10(6), 638–662. <https://doi.org/10.1504/IJEV.2018.095315>
- Cortes, A. F., & Herrmann, P. (2021). Strategic leadership of innovation: a framework for future research. *International Journal of Management Reviews*, 23(2), 224–243.
- Cortes, A. F., & Herrmann, P. O. L. (2020). CEO transformational leadership and SME innovation: The mediating role of social capital and employee participation. *International Journal of Innovation Management*, 24(03), 2050024.
- Duradoni, M., & Di Fabio, A. (2019). Intrapreneurial self-capital and sustainable innovative

- behavior within organizations. *Sustainability*, 11(2), 322.
- Ehido, A., Awang, Z., Halim, B. A., & Ibeabuchi, C. (2020). Establishing valid and reliable measures for organizational commitment and job performance: An exploratory factor analysis. *International Journal of Social Sciences Perspectives*, 7(2), 58–70.
- Elidemir, S. N., Ozturen, A., & Bayighomog, S. W. (2020). Innovative behaviors, employee creativity, and sustainable competitive advantage: A moderated mediation. *Sustainability (Switzerland)*, 12(8). <https://doi.org/10.3390/SU12083295>
- Ferreira, A., & Franco, M. (2020). The influence of strategic alliances on human capital development: A study applied to technology-based SMEs. *EuroMed Journal of Business*, 15(1), 65–85.
- Guerrero-Villegas, J., Sierra-García, L., & Palacios-Florencio, B. (2018). The role of sustainable development and innovation on firm performance. *Corporate Social Responsibility and Environmental Management*, 25(6), 1350–1362.
- Hoque, A., Awang, Z., Muda, H., & Salleh, F. (2018). Ramification of crowdfunding on Bangladeshi entrepreneur's self-efficacy. *Accounting*, 4(4), 129–138.
- Jiang, Y., & Chen, C. C. (2018). Integrating Knowledge Activities for Team Innovation: Effects of Transformational Leadership. *Journal of Management*, 44(5), 1819–1847. <https://doi.org/10.1177/0149206316628641>
- Kalsoom, Z., Khan, M. A., & Zubair, D. S. S. (2018). Impact of transactional leadership and transformational leadership on employee performance: A case of FMCG industry of Pakistan. *Industrial Engineering Letters*, 8(3), 23–30.
- Khan, H., Rehmat, M., Butt, T. H., Farooqi, S., & Asim, J. (2020). Impact of transformational leadership on work performance, burnout and social loafing: a mediation model. *Future Business Journal*, 6(1), 1–13. <https://doi.org/10.1186/s43093-020-00043-8>
- Khan, M. A., Ismail, F. B., Hussain, A., & Alghazali, B. (2020). The Interplay of Leadership Styles, Innovative Work Behavior, Organizational Culture, and Organizational Citizenship Behavior. *SAGE Open*, 10(1). <https://doi.org/10.1177/2158244019898264>
- Knezović, E., & Drkić, A. (2021). Innovative work behavior in SMEs: the role of transformational leadership. *Employee Relations*, 43(2), 398–415. <https://doi.org/10.1108/ER-03-2020-0124>
- Kulakli, A., & Mahony, S. (2014). Knowledge creation and sharing with Web 2.0 tools for teaching and learning roles in so-called University 2.0. *Procedia-Social and Behavioral Sciences*, 150, 648–657.
- Kumar, L., Ramakanth, D., Akhila, K., & Gaikwad, K. K. (2022). Edible films and coatings for food packaging applications: a review. *Environmental Chemistry Letters*, 20(1), 875–900. <https://doi.org/10.1007/s10311-021-01339-z>
- 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>
- Mahmood, M., Uddin, M. A., & Fan, L. (2019). The influence of transformational leadership on employees' creative process engagement: A multi-level analysis. *Management Decision*, 57(3), 741–764.
- Mahmood, S., & Iqbal, S. M. J. (2021). How Leadership styles facilitate Innovative Behavior and Firm Performance: Examining the role of Change Management & Trust. *Journal of the Research Society of Pakistan*, 58(3), 256.
- Majid, A., Yasir, M., Yasir, M., & Javed, A. (2020). Nexus of institutional pressures, environmentally friendly business strategies, and environmental performance.

- Corporate Social Responsibility and Environmental Management*, 27(2), 706–716.
- Mishra, S. P., Sarkar, U., Taraphder, S., Datta, S., Swain, D., Saikhom, R., Panda, S., & Laishram, M. (2017). Multivariate statistical data analysis-principal component analysis (PCA). *International Journal of Livestock Research*, 7(5), 60–78.
- Molodchik, M., Jardon, C., & Yachmeneva, E. (2021). Multilevel analysis of knowledge sources for product innovation in Russian SMEs. *Eurasian Business Review*, 11(2), 247–266.
- Mouazen, A. M., & Hernández-Lara, A. B. (2023). Visualising the quality and the evolution of transactional and transformation leadership research: a 16-year bibliometric review. *Total Quality Management & Business Excellence*, 34(1–2), 148–182.
- Mubarik, M. S., Devadason, E. S., & Govindaraju, C. (2020). Human capital and export performance of small and medium enterprises in Pakistan. *International Journal of Social Economics*, 47(5), 643–662. <https://doi.org/10.1108/IJSE-03-2019-0198>
- Munir, S., Syed, B., Barakbah, F., Asfiah, S., Salleh, M., Zaino, A. B., & Athirah, S. N. (2024). *Factor Influencing Staff Retention among Generation Z in the Banking Industry*. 14(10), 131–139. <https://doi.org/10.6007/IJARBS/v14-i10/22973>
- Negassi, S., Lhuillery, S., Sattin, J.-F., Hung, T.-Y., & Pratlong, F. (2019). Does the relationship between innovation and competition vary across industries? Comparison of public and private research enterprises. *Economics of Innovation and New Technology*, 28(5), 465–482.
- Ogochukwu, O. E., Amah, E., & Okocha, B. F. (2022). Management by Objective and Organizational Productivity: A Literature Review. *South Asian Res J Bus Manag*, 4(3), 99–113.
- Palalic, R., Ramadani, V., & Dana, L. P. (2017). Entrepreneurship in Bosnia and Herzegovina: focus on gender. *European Business Review*, 29(4), 476–496.
- Pasha, A. T., Kamran, M., Chishti, S. Z., & Ali, M. H. (2022). Fostering innovative work behaviour in SMEs exploring ecopreneurship perspective. *IRASD Journal of Management*, 4(2), 423–433.
- Petković, S., & Sorak, S. (2019). Effects of the establishment of entrepreneurial orientation on the performances of small and medium enterprises in transition countries: Empirical evidences from Bosnia and Herzegovina. *Zagreb International Review of Economics & Business*, 22(SCI), 37–67.
- Rahlin, N. A., Awang, Z., Afthanorhan, A., & Aimran, N. (2019). Antecedents and consequences of employee safety climate in the small manufacturing enterprises: Translation, validation and application of the generic safety climate questionnaire. *International Journal of Innovation, Creativity and Change*, 7(10), 307–328.
- Rasheed, R., & Siddiqui, S. H. (2019). Attitude for inclusive finance: influence of owner-managers' and firms' characteristics on SMEs financial decision making. *Journal of Economic and Administrative Sciences*, 35(3), 158–171.
- Rastrollo-Horrillo, M.-A., & Rivero Diaz, M. (2019). Destination social capital and innovation in SMEs tourism firms: an empirical analysis in an adverse socio-economic context. *Journal of Sustainable Tourism*, 27(10), 1572–1590.
- Raut, N. K. (2020). *A review of the economic impacts of the COVID-19 pandemic and economic policies in Nepal*.
- Raymond, L., & St-Pierre, J. (2010). R&D as a determinant of innovation in manufacturing SMEs: An attempt at empirical clarification. *Technovation*, 30(1), 48–56.
- Rehman, S. U., Bhatti, A., Mohamed, R., & Ayoup, H. (2019). The moderating role of trust and commitment between consumer purchase intention and online shopping behavior in

- the context of Pakistan. *Journal of Global Entrepreneurship Research*, 9(1), 1–25.
- Ribeiro, N., Yücel, İ., & Gomes, D. (2018). How transformational leadership predicts employees' affective commitment and performance. *International Journal of Productivity and Performance Management*, 67(9), 1901–1917.
- Salas-Vallina, A., López-Cabrales, Á., Alegre, J., & Fernández, R. (2017). On the road to happiness at work (HAW): Transformational leadership and organizational learning capability as drivers of HAW in a healthcare context. *Personnel Review*, 46(2), 314–338. <https://doi.org/10.1108/PR-06-2015-0186>
- Sanders, K., Jorgensen, F., Shipton, H., Van Rossenberg, Y., Cunha, R., Li, X., Rodrigues, R., Wong, S. I., & Dysvik, A. (2018). Performance-based rewards and innovative behaviors. *Human Resource Management*, 57(6), 1455–1468. <https://doi.org/10.1002/hrm.21918>
- Sawsan J. Al-Husseini, T. A. D. (2016). The effects of transformational leadership on process innovation through knowledge sharing. *International Journal of Economics and Management Engineering*, 10(8), 2752–2759., 10(8), 2731–2738.
- Sengupta, S., Bajaj, B., Singh, A., Sharma, S., Patel, P., & Prikshat, V. (2023). Innovative work behavior driving Indian startups go global – the role of authentic leadership and readiness for change. *Journal of Organizational Change Management*, 36(1), 162–179. <https://doi.org/10.1108/JOCM-05-2022-0156>
- Tang, M., & Werner, C. H. (2017). An interdisciplinary and intercultural approach to creativity and innovation: Evaluation of the EMCI ERASMUS intensive program. *Thinking Skills and Creativity*, 24, 268–278. <https://doi.org/10.1016/j.tsc.2017.04.001>
- Tariq, A., Sumbal, M. S. U. K., Dabic, M., Raziq, M. M., & Torkkeli, M. (2024). Interlinking networking capabilities, knowledge worker productivity, and digital innovation: a critical nexus for sustainable performance in small and medium enterprises. *Journal of Knowledge Management*.
- Ullah, S. (2019). *The effect of entrepreneurial ecosystems on performance of SMEs in low middle income countries with a particular focus on Pakistan*. Lancaster University (United Kingdom).
- Zhou, W., & Velamuri, V. K. (2018). Key contextual success factors for employee innovative behavior: A study in a foreign manufacturing subsidiary in China. *Cogent Business and Management*, 5(1). <https://doi.org/10.1080/23311975.2018.1471770>