
Title: The Impact of different leadership styles on Employees' Productivity in the telecom sector of Pakistan: A Structural Equation Modeling Approach

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Abstract:

The purpose of the study is to investigate the impact of various leadership styles, including autocratic, democratic, laissez-faire, transactional, and transformational, on the employees' productivity in the telecom sector of Pakistan. The data was collected through a structured questionnaire on a random sampling basis. For the analysis, the study employed equation modelling using SmartPLS 4.8.8 for hypotheses testing. The findings report the positive impact of democratic, laissez-faire, and transformational leadership styles on employees' productivity. The results suggested that in the telecom sector of Pakistan, the employees prefer flexible leadership styles for optimum productivity. However, in contrast, the study did not report any impact of autocratic and transactional leadership styles on employees' productivity. In the case of transactional leadership, the results are quite surprising that the incentive-based leadership style still does not prefer the telecom sector employees in Khyber Pakhtunkhwa (KP). The study offers several theoretical and practical implications for various stakeholders, such as academia, regulatory bodies, industrial practitioners, top telecom sector management and developing countries' regulatory bodies to improve their employees' productivity.

Keywords: Leadership styles, employees' productivity, structural equation modelling, telecom sector of Pakistan

Introduction:

A leader is one of the essential elements responsible for the organization's success and failure (Iriani et al., 2023). A leader is a person who has followership, inspire others, and provide guidance and motivation to subordinates in challenging and difficult time (Imroni et al., 2022). In the modern world, businesses have become complex and challenging due to globalization; hence the role of the leader has got even more importance (Benmira & Agboola, 2021). Similarly, leadership is the process of influencing others' behaviour in such a way as to achieve the desired goals and create a culture of teamwork and synergy (Iriani et al., 2023). In present times, the leaders have to handle many issues

within the organization, such as workforce diversity, digitalization, the economic crisis in the market and lack of resources. The leader must understand the leadership styles used in different circumstances to address these issues. In the same way, the role of the leader is even more essential during any disaster or unusual circumstances, such as Covid-19; it was observed that organizations with effective leadership performed well compared to those with weak leadership (Putri & Muhdiyanto, 2018). Long-term goals can be set and accomplished only with exceptional leadership (Dastane, 2020).

Human resource management is a complex phenomenon that significantly affects any organization's overall success. The number of technologies and infrastructures will not be helpful without the support of human resources (Sulantara et al., 2022). Thus, human resources performance is vital to determine the success of the company's actions. In accomplishing employee goals, suitable human resource capability is needed to inspire employees to achieve the required goals. Therefore, leadership is most important to encourage and motivate human resources, which ultimately helps to improve productivity and efficiency. The leaders have a responsibility to create such an environment for the workforce along with motivation which can lead towards accomplishing goals and objectives (Putri & Muhdiyanto, 2018). Dastane (2020) found that transformational, Laissez- Faire and democratic leadership styles positively and significantly influence employee work performance. Outstanding financial results, high market share, customer loyalty, quality products engineering, innovation and creativity are only possible with a charismatic leader who may create a flexible work environment for the employees.

The telecommunication sector in Pakistan has shown remarkable growth over the last decade due to the use of smartphones and internet connectivity at affordable rates. As Pakistan is the fifth largest populous country in the world, the use of smartphones is increasing rapidly. The government has further stimulated financial technology and inclusion (State Bank of Pakistan, 2022). Apart from the growth and expansion, many telecom sector challenges must be addressed. Still, a significant chunk of Pakistan does not use telecom services for different reasons; therefore, effective leadership is required to transform and expand the telecom sector (Hussain et al., 2020). The worldwide telecom industry has contributed much to the economic development of countries such as China and India. However, Pakistan still needs to extend and expand this sector to all regions and areas. Therefore, an effective leadership style is essential for the flourishing of this sector, which can improve GDP and other economic indicators.

Moreover, with the introduction of 3G, 4G and 5G services, this sector is expected to grow more in the upcoming time; hence, making it dynamic is never possible without effective leadership. There are many types of research done previously on leadership and work performance. Still, there is a lack of such studies based on different leadership styles, such as autocratic, democratic, *laissez faire*, transactional, and transformational leadership, specifically in the telecom sector. In this regard, the present study is essential to know how leadership styles influence the worker's performance in the telecom industry.

Hence, the objectives of the current study are to examine the impact of different leadership styles on employees' productivity in the telecom industry.

The present study is essential for numerous stakeholders. Firstly, individuals and researchers must know the importance of leadership and applying different styles in different situations and organizations. The researchers can conduct the same topic in another sector or industry, which is also essential. Secondly, the present work is significant for regulators to understand the use and role of leadership styles in various circumstances. Thirdly, the current research is important for an organization's workforce, as it may enable them to recognize how a leader may influence them. Fourthly, this study has been conducted in an emerging industry such as telecom, where limited studies are available; hence, it is a contextual contribution of the study. Moreover, the study has used structural modelling equations by using SmartPLS for examining numerous leadership styles is a methodological contribution.

1. Literature review and hypotheses development

2.1 Situational theory

Over the last few decades, people related to the area of management sciences have been searching for the best leadership style; however, much research has been conducted in the area and has found no evidence of a single leadership in different (Lou et al., 1997). As per the situational theory, a successful leader is a person who can adjust himself to the need and requirements of the situation (Lou et al., 1997). The situational theory of leadership recommends no particular leadership style is good. Instead, it depends upon the nature of the situation, the problem, the group of people, and other factors (Thompson & Glasø, 2015). The situational theory is appropriate as the present study concerns different leadership styles and its impact on employees' productivity.

2.2 Worker's productivity

Any organization's main goal is to improve its workforce's work performance to stay and survive in a highly competitive atmosphere. The work performance of workforce can determine the organization's success; hence it is an important criterion to measure the organization's financial and non-financial performance (Anyango, 2015). The employee's productivity can be determined of the output has been increased and the input remain the same, or the input is reduced while the output is enhanced. Hence, the Performance is closely connected to the duties and responsibilities of employees, where many elements influence their performance and productivity (Irwan et al., 2020). One of the factors influencing the performance is the leadership style of a leader within the organization.

2.3 Leadership and leadership style

Leadership is vital in influencing subordinates to accomplish tasks and objectives (Jamali et al., 2022). Leadership has been the most influential activity to motivate others and keep an interpersonal relationship with them; hence, goal attainment becomes easy for the organization. In the same way, leadership style refers to the leader's different behaviours revealed during the organisation's management process, such as planning, organizing, and controlling (Rehman, 2017).

2.4 Autocratic leadership

Autocratic leadership is the authority and power where the leader dictates the subordinates without taking input from them (Putra et al., 2021). This kind of leader has a status quo personality and does not believe in the empowerment of the subordinates, instead always try to control them with power. Autocratic leadership negatively affects employees' performance (Dastane, 2020). Putra et al. (2021) explained that authoritarian leadership might be helpful in the short run, but in the long run, it is never useful and can negatively affect productivity.

H1 Autocratic leadership has an insignificant impact on employees' productivity

2.5 Democratic leadership

Democratic leadership is also known as participative leadership, where the leader strongly believes in subordinates' participation while developing plans and strategies (Dastane, 2020). Under this kind of leadership, all team members are treated equally, with an opportunity to contribute creatively and innovatively. The democratic leadership style motivates the subordinates; therefore, it is always helpful for the organization and enhances employee productivity (Putra et al., 2021).

H2 Democratic leadership has a positive and significant impact on employees' productivity

2.6 Laissez-faire leadership

Laissez-faire leaders authorize the subordinates to manage their activities according to their technique and make decisions by themselves (Jamali et al., 2022). The laissez-faire style of leadership has a positive impact on the worker's productivity. In laissez-faire leadership, the leader must trust and confidence in the subordinates to perform better (Baig et al., 2021).

H3 Laissez-faire leadership has a positive and significant impact on employees' productivity

2.7 Transactional leadership

Transactional leadership is a carrot-and-stick model which beliefs in reward and punishment. Under transaction leadership, the employees with better performance will have reward; however, they may be punished for a negative performance (Makambe & Joy Motlatsi Moeng, 2020). Transactional leadership negatively affects employee performance (Jamali et al., 2022). However, many studies found positive effect of transactional leadership on employee performance (Rehman et al., 2018; Makambe & Joy, 2020).

H4 Transactional leadership has a positive and significant impact on employees' productivity

2.8 Transformational leadership

Transformational leadership is an approach where the leader motivates and inspires the employees to bring new ideas and innovation, enabling the organization to transform its system and reshape their plans (Putri & Muhdiyanto, 2018). It is recommended that different organization follow transformational leadership as it improves the productivity of the employees within the organization (Hussain et al., 2020). Transformational leadership may be observed in a true spirit essential to achieve long-term objectives by stimulating and motivating employees to improve productivity (Rehman et al., 2018).

H5 Transformational leadership has a positive and significant impact on employees' productivity

2. Research methods

The present study has been conducted on leadership styles; hence, it is quantitative to test the proposed hypotheses (Bell & Bryman, 2007). Similarly, the deductive approach has been followed in the present study. The study population was all the employees working in the Telecom sector in Pakistan, while the sample size determined by GPower software was 250. However, the returned and usable questionnaires were 167, and the response rate was 66.8%. The data was collected through convenience sampling, and an adopted questionnaire was used (Rehman et al., 2018). The collected data was analyzed through SmartPLS 4.8.8 software, where two essential techniques were applied, such as measurement assessment and structural model (J Hair et al., 2014).

Table 1: Demographic Statistics

		Count	Column N %
Gender	Male	162	97.0%
	Female	5	3.0%
Education	Bachelor	37	22.2%
	Masters	95	56.8%
	M.Phil.	22	13.2%
	Ph.D. or Above	13	7.8%
Age	18-25	50	29.9%
	26-30	36	21.6%
	31-40	78	46.7%
	41-50	3	1.8%

Table 1 highlights the detail of the demographic. Of the 167 respondents, 97.0% are male, while only 3.0% are female. The female ratio is lower, as reported in several studies, that female representation in Pakistani workplaces is lower in those industries where the duty hours are long, the job is technical and male-oriented. Furthermore, the education section reports the bachelor, master's, M.Phil. and PhD levels of qualification of the respondents. The section is dominated by the master's degree holders, with the

highest percentage of 56.8%. The last section reports the age of the respondents; the highest age section is from 31 to 40 years, with 46.7%.

3. Findings

The present study used two techniques used in previous literature to test the proposed hypotheses: measurement and structural models (J Hair et al., 2014). The measurement model is further classified into convergent validity and discriminant validity. The convergent validity determines the correlation between the constructs and includes factor loadings, composite reliability and average variance extracted (Joseph Hair et al., 2010). The benchmarks suggested by previous literature for factor loadings and composite reliability is 0.70 or below, while AVA should be less than 0.5. Table 2 indicates that all the values of the mentioned constructs meet the required criteria; hence the measurement model is appropriate for further analysis. Similarly, VIF has been determined, showing multicollinearity between the constructs and should be less than 5. The above table shows that the values of all constructs are less than 5 hence, there is no issue of multicollinearity in the model.

Table 2: Measurement Model of the Study

	C.A	C.R (rho_a)	CR (rho_c)	AVE	VIF
Autocratic LS	0.758	0.989	0.828	0.715	
Aut2	0.998				1.592
Aut3	0.660				1.592
Democratic LS	0.872	0.909	0.910	0.717	
Dem2	0.922				3.313
Dem3	0.817				2.546
Dem4	0.857				2.459
Dem5	0.785				2.428
Laissez-faire LS	0.783	0.842	0.860	0.611	
Lasz1	0.882				2.819
Lasz3	0.896				2.549
Lasz5	0.680				1.579
Lasz6	0.633				1.291
Transactional LS	0.857	0.888	0.896	0.634	
Trnl1	0.833				2.43
Trnl2	0.821				1.834
Trnl3	0.669				1.523
Trnl5	0.855				3.013
Trnl6	0.791				2.023
Transformational LS	0.725	0.735	0.830	0.552	
Trns1	0.664				1.566
Trns2	0.669				1.409
Trns5	0.799				2.852
Trns6	0.825				2.643
Employees Productivity	0.861	0.878	0.895	0.589	
Empp1	0.830				3.068
Empp3	0.620				3.826

Empp5	0.745	3.429
Empp6	0.832	2.3
Empp7	0.811	1.994
Empp8	0.745	2.843

The discriminant validity of the study was tested using the Fornell-Larcker Criterion and Heterotrait-Monotrait Ratio (HTMT) as suggested by the authors (J Hair et al., 2014; Kline, 2015). The values in Tables 3 and 4 are above the threshold and hence achieve the discriminant validity of the constructs.

Table 3: Discriminant Validity (HTMT)

	1	2	3	4	5	6
Autocratic LS						
Democratic LS	0.366					
Employees Productivity	0.352	0.666				
Laissez-faire LS	0.360	0.659	0.840			
Transactional LS	0.294	0.454	0.696	0.574		
Transformational LS	0.365	0.496	0.677	0.475	0.646	-

Table 4: Discriminant Validity (Fornell-Larcker Criterion)

	1	2	3	4	5	6
Autocratic LS	0.846					
Democratic LS	-0.133	0.847				
Employees Productivity	0.330	0.599	0.767			
Laissez-faire LS	0.302	0.577	0.741	0.782		
Transactional LS	0.255	0.451	0.640	0.500	0.796	
Transformational LS	0.123	0.382	0.560	0.369	0.523	0.743

The results are also shown in the measurement model conceptual framework (see Figure 1).

Autocratic LS

Figure 1: Conceptual Framework of the Study

To test the hypotheses, the study applied the structural model approach of SmartPLS. The structural model reports coefficients, p-values, t-values, and lower and upper limits of the confidence intervals (Hair et al., 2014). Table 5 reports the results of the structural model.

Table 5: Structural Model

	S.B	S.E	t-values	p-values	LLCI	ULCI	Decision
Autocratic LS -> Employees Productivity	0.158	0.091	1.902	0.057	-0.016	0.351	Not Supported
Democratic LS -> Employees Productivity	0.234	0.083	2.854	0.004	0.070	0.394	Supported
Laissez-faire LS -> Employees Productivity	0.385	0.120	3.169	0.002	0.133	0.598	Supported
Transactional LS -> Employees Productivity	0.187	0.109	1.750	0.080	-0.015	0.407	Not Supported
Transformational LS -> Employees Productivity	0.208	0.064	3.247	0.001	0.077	0.325	Supported

Table 5 shows that there is no significant positive impact of autocratic leadership on employees' productivity ($\beta = 0.158$, t -value = 1.902, $p > 0.05$) and hence rejects the first hypothesis (H1) of the study.

The results and in contrast to the arguments of the previous authors who found that a manager's autocratic leadership style negatively impacts employees' productivity (Dastane, 2020; Putra et al., 2021).

The results of the second hypothesis of the study report that there is a positive impact of democratic leadership style on employees' productivity ($\beta = 0.234$, t -value = 2.854, $p < 0.05$) and hence support the second hypothesis (H2) of the study. The results align with the previous authors' postulation in support of democratic leadership style and employees' productivity (Putra et al., 2021).

Similarly, the results indicated that there is a positive impact of laissez-faire leadership on employees' productivity ($\beta = 0.385$, t -value = 3.169, $p < 0.05$) and hence support the third hypothesis (H3) of the study. The results are in line with the previous studies that were in support of laissez-faire leadership and employee productivity (Baig et al., 2021).

However, in contrast, the results of the fourth hypothesis (H4) report an insignificant positive impact of transactional leadership on employees' productivity ($\beta = 0.187$, t -value = 1.750, $p > 0.05$); hence the results are not in line with the previous studies (Rehman et al., 2018; Makambe & Joy, 2020).

Finally, the last hypothesis (H5) of the study reports that there is a positive impact of transformational leadership on employees' productivity ($\beta = 0.208$, t -value = 3.247, $p < 0.05$), hence supporting the hypothesis and stance of the previous authors who were in support of it (Hussain et al., 2020).

5. Conclusion and the way forward

The objective of the study was to investigate the impact of various leadership styles, including autocratic, democratic, laissez-faire, transactional, and transformational, on the employees' productivity in the telecom sector of Pakistan. The data was collected through a structured questionnaire on a random sampling basis. For the analysis, the study employed equation modelling using SmartPLS for hypotheses testing. The findings suggested the positive impact of democratic, laissez-faire, and transformational leadership styles on employees' productivity. The results suggested that in the telecom sector of Pakistan, the employees prefer flexible leadership styles for their optimum productivity. However, in contrast, the study did not report any impact of autocratic and transactional leadership styles on employees' productivity. The results align with the above discussion that the employees do not prefer the inflexible and rigid behaviour of the managers for their overall performance. Similarly, in the case of transactional, the results are quite surprising that the incentive-based leadership styles still do not prefer by the telecom sector employees.

The findings of the study offer several implications for the variety of stakeholders. First, the study has theoretical significance to the rarely investigated link between the various leadership styles and employees productivity. Second, the study has methodological significance by using the structural equation modeling approach. Third, the study has practical implications for the telecom stakeholders such as top management and policymakers. Fourth, the study has practical implications for the security

exchange commission of Pakistan (SECP), Pakistan Telecommunication Authority (PTA) and public listed companies (PLCs) to regulate the telecom sector in a country like Pakistan.

Besides the implications and contributions, this study is not free from its limitations. First, the study investigated the direct impact of the various leadership styles on employees' productivity; hence, other variables such as organization culture, employees' behavior, sustainability and green orientation may be tested in the above relationship. Second, the study only collected data in the KP region; hence, it may be extended to multiple regions and countries in the future. Last but not least, some qualitative and quantitative longitudinal studies may be conducted for robust results.

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