

The Impact of Leadership Style on Organizational Performance in the Saudi Manufacturing Sector

تأثير أسلوب القيادة على أداء المؤسسات في قطاع التصنيع السعودي

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Abstract:

Objectives: This study investigates the impact of transformational and transactional leadership styles on organizational performance in the manufacturing sector in Riyadh, Saudi Arabia, within the context of Vision 2030. Despite the growing importance of effective leadership, empirical evidence on its influence on performance metrics in Saudi industrial firms remains limited.

Methods: A quantitative approach was employed, collecting data from 400 employees across various manufacturing companies. The Multifactor Leadership Questionnaire (MLQ) measured leadership styles, while organizational performance was assessed through employee productivity, operational efficiency, goal achievement, and innovation.

Results: Findings indicate that transformational leadership has a strong, positive, and statistically significant effect on organizational performance, whereas transactional leadership also has a positive but weaker influence. Regression analysis confirmed transformational leadership as the strongest predictor across multiple performance dimensions. Descriptive results revealed that transformational leadership is the predominant style among manufacturing managers in Riyadh.

Conclusions: This research contributes to leadership literature by providing evidence from a non-Western, emerging market context. The findings highlight the importance of fostering transformational leadership to enhance performance, support national development strategies, and inform human resource practices, leadership development programs, and organizational policies in Saudi manufacturing.

Keywords: Transformational Leadership; Transactional Leadership; Organizational Performance; Manufacturing Sector in Saudi Arabia.

الملخص:

الأهداف: تستكشف هذه الدراسة تأثير أسلوب القيادة التحويلية وأساليب القيادة التبادلية على أداء المؤسسات في قطاع التصنيع بمدينة الرياض، المملكة العربية السعودية، في سياق رؤية 2030. على الرغم من الأهمية المتزايدة للقيادة الفعالة، إلا أن الأدلة التجريبية المتعلقة بتأثيرها على مؤشرات الأداء في الشركات الصناعية السعودية لا تزال محدودة.

المنهجية: تم استخدام النهج الكمي، حيث تم جمع البيانات من 400 موظف يعملون في مختلف شركات التصنيع. تم قياس أساليب القيادة باستخدام استبيان القيادة متعدد العوامل (MLQ)، بينما تم تقييم أداء المؤسسة من خلال مؤشرات مثل إنتاجية الموظفين، والكفاءة التشغيلية، وتحقيق الأهداف، والابتكار.

النتائج: تشير النتائج إلى أن القيادة التحويلية لها تأثير إيجابي قوي وذو دلالة إحصائية على أداء المؤسسة، في حين أن القيادة التبادلية لها تأثير إيجابي أيضًا ولكن بدرجة أقل. وأكد تحليل الانحدار أن القيادة التحويلية هي أقوى متنبئ عبر مختلف أبعاد الأداء. كما أظهرت النتائج الوصفية أن أسلوب القيادة التحويلية هو الأسلوب السائد بين مديري شركات التصنيع في الرياض. **الخلاصة:** تُسهم هذه الدراسة في إثراء الأدبيات المتعلقة بالقيادة من خلال تقديم أدلة من سياق سوق ناشئ وغير غربي. وتبرز النتائج أهمية تعزيز القيادة التحويلية لتحسين الأداء، ودعم استراتيجيات التنمية الوطنية، وتوجيه ممارسات الموارد البشرية، وبرامج تطوير القيادة، وسياسات المؤسسات في قطاع التصنيع السعودي.

الكلمات المفتاحية: القيادة التحويلية؛ القيادة التبادلية؛ أداء المؤسسات؛ قطاع التصنيع في المملكة العربية السعودية.

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1 Introduction

In today's rapidly changing and competitive business environment, effective leadership is a critical factor in enhancing organizational performance. Recent research indicates that transformational leadership positively influences employee motivation, innovation, and overall organizational outcomes. For example, Baroudi (2022) found that transformational leadership increases job commitment and employee satisfaction in the Saudi telecommunications sector. Similarly, a report by EY (2023) highlighted that 75% of organizational transformation initiatives in Saudi Arabia consider leadership capability as a key success factor.

Transactional leadership, which emphasizes structured tasks, rewards, and penalties, can also positively affect performance by enhancing work engagement. A recent study by Xu Ran (2024) in China demonstrated that transactional leadership improves work performance through increased employee engagement.

In the Saudi context, Als Salman (2025) examined transformational leadership in the telecom industry, showing that it promotes innovation and motivates employees effectively. Despite these insights, limited research has investigated the impact of transformational and transactional leadership on organizational performance in the Saudi manufacturing sector.

This study aims to address this gap by examining how these leadership styles influence organizational performance in Riyadh's manufacturing firms, considering employee demographics and leadership perceptions, while aligning with Saudi Arabia's Vision 2030 objectives.

1.1 Research Problem

In an era marked by rapid globalization, technological advancement, and shifting organizational paradigms, leadership has emerged as a critical determinant of organizational success and sustainability. In particular, transformational and transactional leadership styles have received extensive attention for their roles in shaping employee behavior, influencing organizational culture, and driving overall performance. Despite this global interest, empirical research examining the impact of these leadership styles within the unique sociocultural and economic landscape of Saudi Arabia remains limited and fragmented.

Saudi Arabia's Vision 2030 has catalyzed widespread reforms across public and private sectors, emphasizing innovation, performance enhancement, and human capital development. These national priorities underscore the urgent need for effective leadership capable of navigating organizational complexity and fostering high performance. However, the extent to which transformational and transactional leadership practices are adopted in Saudi organizations, and their relative effectiveness in enhancing employee productivity and organizational performance, has not been sufficiently addressed in current literature.

Moreover, while previous studies (e.g., Bass & Avolio, 1994; Judge & Piccolo, 2004) have established strong links between leadership style and performance outcomes in Western and some Asian contexts, the generalizability of these findings to Middle Eastern settings—especially in the Saudi business environment—requires further exploration. Cultural dynamics, hierarchical organizational structures, and sector-specific challenges in the Kingdom may alter the effectiveness or expression of leadership behaviors.

Therefore, the core problem addressed in this research is the lack of empirical evidence on how transformational and transactional leadership styles influence organizational performance in Saudi Arabia. This study seeks to fill this gap by assessing the prevalence of these leadership styles and examining their impact on key performance indicators such as employee productivity, operational efficiency, goal achievement, and innovation. By doing so, the study aims to contribute to leadership theory, inform managerial practices, and support strategic decision-making in alignment with national development goals.

1.2 Central Research Question

To what extent do transformational and transactional leadership styles influence organizational performance in the manufacturing sector in Saudi Arabia, and which style is more effective in enhancing employee productivity, operational efficiency, goal achievement, and innovation?

1.3 Research Questions

- **Q1.** To what extent does transformational leadership impact organizational performance in the Saudi manufacturing sector?
- **Q2.** Does transactional leadership have a positive impact on organizational performance, and is this impact less significant than that of transformational leadership in the Saudi manufacturing sector?
- **Q3.** What is the nature of the relationship between leadership style and employee productivity in Saudi manufacturing companies?

- **Q4.** Which leadership style is most commonly practiced in the Saudi manufacturing sector, and is transformational leadership the predominant style?

1.4 Research Hypotheses

Based on the research questions, the following hypotheses are proposed:

- H1: Transformational leadership has a positive and significant impact on organizational performance in the Saudi manufacturing sector.
- H2: Transactional leadership has a positive but less significant impact on organizational performance compared to transformational leadership.
- H3: There is a statistically significant relationship between leadership style and employee productivity in Saudi manufacturing companies.
- H4: Transformational leadership is the most commonly practiced leadership style in Saudi.

1.5 Significance of Study

1.5.1 Practical Significance

This study provides valuable insights for managers, policymakers, and human resource practitioners in the Saudi manufacturing sector by highlighting the effectiveness of different leadership styles. Understanding which leadership approach—transformational or transactional—most positively influences organizational performance can help organizations implement targeted leadership development programs, enhance employee productivity, and improve operational efficiency. Moreover, the findings can guide organizational strategies aligned with Saudi Arabia's Vision 2030, fostering innovation, goal achievement, and sustainable growth.

1.5.2 Academic Significance:

From a theoretical perspective, this research contributes to the leadership literature by addressing the gap in empirical studies examining transformational and transactional leadership within the Saudi industrial context. While much of the existing research has focused on Western and some Asian settings, this study provides evidence from a Middle Eastern emerging economy, thereby enriching the understanding of how leadership styles operate under specific cultural, economic, and organizational conditions. Additionally, the study's findings can inform future research on leadership effectiveness, employee engagement, and performance metrics in similar emerging market contexts.

1.6 Research Objectives

Based on the research questions and hypotheses, this study aims to achieve the following objectives:

- To identify the most commonly used leadership style in Saudi manufacturing companies.
- To examine the effect of transformational leadership on organizational performance in the Saudi manufacturing sector.
- To assess the impact of transactional leadership on organizational performance in Saudi manufacturing firms.

To analyze the relationship between leadership style and employee productivity in the Saudi manufacturing context.

1.7 Research Model

The research model of this study illustrates the relationship between leadership styles and organizational performance in the Saudi manufacturing sector. Specifically, the model examines transformational and transactional leadership as independent variables and their impact on organizational performance as the dependent variable, measured through employee productivity, operational efficiency, goal achievement, and innovation. The model is grounded in the Full Range Leadership Theory (FRLT), which provides a theoretical basis for understanding how different leadership behaviors influence organizational outcomes. The framework also considers the contextual factors of Saudi Arabia's manufacturing environment, including cultural norms, hierarchical structures, and the objectives of Vision 2030, which may shape the adoption and effectiveness of leadership styles. By linking leadership behaviors to tangible performance indicators, the research model provides a clear structure for empirical investigation and testing of the study hypotheses.

2 Literature Review and Previous Studies

Leadership is widely recognized as a cornerstone of organizational success, with significant implications for employee performance, innovation, and strategic outcomes. Over the past few decades, considerable attention has been devoted to understanding how leadership styles influence various aspects of organizational behavior and effectiveness. Among the most prominent theories are transformational and transactional leadership, both of which have been extensively studied across diverse cultural and industrial contexts (Bass, 1985; Bass & Riggio, 2006).

2.1 Transformational Leadership and Organizational Performance

Transformational leadership is widely recognized for its capacity to inspire employees, stimulate intellectual engagement, articulate a shared vision, and address individual developmental needs (Bass & Avolio, 1994). Recent scholarship, however, emphasizes that its impact goes beyond these principles, positioning it as a critical driver of organizational performance, particularly in emerging economies.

In the Saudi context, empirical evidence using PLS-SEM analysis demonstrated that transformational leadership significantly enhances organizational performance, mediated by employee innovative behavior and work motivation. This underscores its vital role in boosting competitiveness within the framework of Vision 2030 (Alqatawenh, 2018).

Similarly, research on small and medium-sized manufacturing enterprises in Saudi Arabia revealed that transformational leadership, when coupled with a supportive organizational culture, fosters sustainable performance by improving both employee productivity and job satisfaction (Al-Harthy et al., 2024).

Further evidence from the mining sector in Jeddah confirmed that transformational behaviors—such as fostering psychological ownership, participatory decision-making, and empowerment—were strongly linked to organizational effectiveness (Alharbi, 2023). Moreover, a systematic review in the healthcare sector found that transformational leadership substantially contributes to innovative employee behaviors, which in turn reinforce organizational outcomes, including adaptability and long-term growth (Aldhwaihi et al., 2023). Contemporary evidence highlights that transformational leadership is a decisive force in advancing organizational performance in Saudi Arabia, primarily through its influence on innovation, motivation, and institutional commitment.

2.2 Transactional Leadership and Operational Control

Transactional leadership emphasizes structured task execution, goal clarity, and performance monitoring through contingent rewards and corrective actions. While it may not stimulate creativity to the same extent as transformational leadership, it remains highly effective in ensuring compliance, operational discipline, and short-term performance outcomes. Recent empirical studies provide strong evidence of its contextual relevance. For instance, a study in the Saudi manufacturing sector demonstrated that transactional leadership, when combined with transformational behaviors and supported by a green organizational culture, significantly enhanced both sustainable performance and employee productivity (Alharbi, Mansor, & Leong, 2024). Similarly, research in Saudi higher education institutions highlighted that transactional leadership mechanisms—such as goal alignment and performance monitoring—play a mediating role in strengthening institutional performance, particularly when reinforced by a strong culture of quality (Alshahrani, 2024). Beyond Saudi Arabia, findings from the hospitality and tourism sector indicate that transactional practices contribute positively to organizational agility, especially when mediated by trust and ambidexterity, underscoring their relevance in contexts that demand efficiency alongside adaptability (Asiri, Mahran, & Elseesy, 2023).

Taken together, these results suggest that transactional leadership is not merely a compliance-oriented model but also a pragmatic tool for driving efficiency and organizational control in hierarchical settings. However, its influence on long-term innovation and intrinsic motivation appears limited, which indicates that while transactional practices remain essential for stability, they should be complemented with transformational approaches to foster adaptability and sustained competitive advantage in Saudi organizations.

2.3 Leadership and Employee Productivity

Employee productivity remains one of the most critical indicators of organizational performance, reflecting the efficiency and effectiveness with which employees accomplish their tasks. Recent evidence highlights that transformational leadership significantly enhances productivity by fostering empowerment, intrinsic

motivation, and alignment with organizational objectives. For example, in the Saudi manufacturing sector, Al-Shammari, Alharbi, and Alsubaie (2022) demonstrated that leaders who engaged in intellectual stimulation and individualized consideration achieved higher levels of employee engagement and output, underscoring the strategic role of transformational practices in sustaining performance. Similarly, Alharbi, Mansor, and Leong (2025) reported that transformational leadership indirectly boosted employee innovative performance in Saudi SMEs by encouraging innovative behavior, which ultimately translated into measurable gains in productivity.

Conversely, transactional leadership has shown effectiveness in improving productivity through mechanisms of performance monitoring, compliance, and structured task execution. A recent study in Saudi healthcare organizations found that transactional leadership positively influenced employee satisfaction and operational performance when applied in environments with rigid procedures and accountability systems (Alharbi, Mansor, & Leong, 2023). Nonetheless, its impact tends to be more restricted compared to transformational leadership, as it does not significantly stimulate creativity or adaptability to dynamic market conditions (Xu, Rosli, & Ali, 2024).

These findings suggest that while transactional leadership is valuable for ensuring short-term efficiency and control, transformational leadership is more effective in achieving sustainable productivity gains in Saudi organizations, particularly in sectors where innovation and adaptability are central to competitiveness.

2.4 Leadership Styles and Organizational Outcomes in Saudi Arabia

The Saudi labor market has undergone substantial transformation in recent years, driven by Vision 2030 and national efforts to localize industries and improve managerial competencies. As a result, leadership practices are also evolving. Studies such as Alabdulhadi (2020), Alharthy et al. (2021) suggest that transformational leadership is gaining popularity among modern managers in the private sector, particularly within younger, more educated leadership cohorts. These leaders tend to value employee empowerment, innovation, and long-term strategic thinking—traits strongly aligned with transformational models.

Nevertheless, traditional organizational hierarchies and cultural norms still support the persistence of transactional leadership in many manufacturing companies (Alosaimi & Alshammari, 2021). This duality raises important questions regarding the comparative effectiveness of each style and how they influence key performance indicators such as efficiency, goal achievement, and innovation.

2.5 Conceptual Framework

The conceptual framework of this study is grounded in the Full Range Leadership Theory (FRLT) (Bass & Avolio, 1994), which identifies three primary leadership styles: transformational, transactional, and laissez-faire. This research focuses specifically on transformational and transactional leadership, as they are most relevant for enhancing organizational performance in industrial contexts.

The framework examines the effect of leadership styles (independent variables) on organizational performance (dependent variables), which is operationalized through four key indicators: employee productivity, operational efficiency, goal achievement, and innovation. Transformational leadership is expected to drive higher engagement, creativity, and commitment among employees, whereas transactional leadership is anticipated to promote efficiency, task completion, and compliance with organizational standards.

Contextual factors within the Saudi manufacturing sector, including cultural norms, hierarchical management structures, and strategic objectives aligned with **Vision 2030**, are considered as influencing how leadership behaviors are adopted and perceived. Previous studies support the positive impact of transformational leadership on innovation and overall performance (Wang et al., 2011; Elbaz & Haddoud, 2017), while transactional leadership demonstrates effectiveness in structured, task-oriented environments (Bass, 1990; Berson & Avolio, 2004). Research within Saudi organizations further emphasizes the need for localized studies due to unique social and managerial dynamics (Alshammari et al., 2015; Al-Ghazali, 2020).

This framework provides a structured approach for empirically investigating the relationship between leadership styles and organizational performance, guiding the formulation and testing of the study's hypotheses.

2.6 Ethical Considerations

Ethical integrity represents a cornerstone of this research and significantly strengthens its credibility and academic contribution. The study was conducted in full compliance with internationally recognized ethical guidelines for social science research, including the standards of the American Psychological Association (APA, 2017). Prior to data collection, ethical clearance was formally obtained from the relevant institutional review

board, ensuring that the study design, data collection methods, and analytical procedures aligned with rigorous ethical standards.

Participation was entirely voluntary, and informed consent was secured from all respondents. Participants were provided with clear information regarding the study's purpose, procedures, confidentiality assurances, and their unrestricted right to withdraw at any stage without penalty. This transparency fostered trust and reinforced respect for participants' autonomy and dignity.

Confidentiality and anonymity were strictly maintained. No personally identifiable information was collected, and responses were coded and analyzed only in aggregate form. All data were securely stored and used exclusively for academic purposes. The questionnaire was carefully designed to avoid sensitive or potentially harmful content, thereby minimizing risks of discomfort or distress.

Additionally, the research was free from any conflicts of interest, and no financial or material incentives were offered that could unduly influence participation. Data collection, analysis, and reporting were conducted with utmost objectivity, ensuring that no fabrication, falsification, or misrepresentation occurred.

By adhering to the principles of **respect for persons, beneficence, and justice**, this study not only safeguarded participants' rights but also enhanced the reliability, transparency, and academic integrity of its findings. Such ethical rigor underscores the study's value and positions it as a credible contribution to both scholarly literature and practical applications in leadership and organizational performance.

3 Research Design

This study adopts a quantitative, cross-sectional, and correlational research design aimed at empirically examining the relationship between leadership styles and organizational performance within Saudi Arabia's manufacturing sector. This design enables the researcher to test predefined hypotheses using numerical data, ensuring objectivity, replicability, and generalizability (Creswell, 2014).

The research design is based on Full Range Leadership Theory (Bass & Avolio, 1994) and builds upon empirical studies such as Judge & Piccolo (2004) and Wang et al. (2011), which found significant links between transformational/transactional leadership and organizational outcomes.

3.1 Research Approach

This study employed a quantitative research design, which is particularly suited for examining relationships between variables using statistical methods. The research was conducted using a cross-sectional time frame, wherein data were collected at a single point in time to capture a snapshot of the prevailing leadership styles and organizational performance within Saudi manufacturing companies. The primary purpose of the study was both correlational—to investigate the associations among leadership styles and performance indicators—and explanatory, aiming to determine the extent to which transformational and transactional leadership predict organizational outcomes.

The field-based setting of the research ensures high ecological validity, as data were gathered from actual employees and managers operating within manufacturing firms across Saudi Arabia. This methodological approach aligns with the frameworks adopted in previous empirical research. For instance, Elbaz and Haddoud (2017) implemented a quantitative methodology to explore the influence of leadership dynamics on innovation in Egyptian manufacturing firms. Similarly, Al-Ghazali (2020) employed a quantitative design to investigate leadership practices within Saudi SMEs, further validating the appropriateness of this approach for the regional and sectoral context.

3.2 Population and Sampling Strategy

3.2.1 Target Population

The target population for this study consists of employees and managers working in manufacturing companies located in Riyadh, Saudi Arabia. Riyadh, as the capital and a major industrial hub, hosts a significant concentration of manufacturing firms operating in sectors such as food processing, petrochemicals, construction materials, pharmaceuticals, plastics, and consumer goods. These firms vary in size and structure, making Riyadh an ideal location for exploring diverse leadership styles and their impact on organizational performance.

The population includes individuals at various organizational levels:

- Operational staff (e.g., technicians, production workers).
- Administrative employees.

- Supervisors and team leaders.
- Middle and senior managers.

This diversity allows the study to capture a wide range of perceptions about leadership behavior and performance outcomes within the industrial environment.

3.2.2 Sampling Frame

The study targeted registered manufacturing firms in Riyadh, identified through official sources such as the Saudi Industrial Development Fund (SIDF), the Ministry of Industry and Mineral Resources, and local industrial zones. Eligible firms were required to employ at least 50 staff members, operate in production or assembly, and maintain active HR departments to facilitate participation.

- A **stratified random sampling technique** was employed to ensure representation across job levels (non-managerial, supervisory, managerial), company sizes (small, medium, large), and types of manufacturing (light, medium, heavy industry). From each stratum, participants were randomly selected, thereby enhancing the representativeness and external validity of the sample.

The final sample consisted of **400 full-time employees** drawn from approximately 10–15 firms in adh. This size is consistent with statistical requirements for regression and factor analyses and aligns with prior empirical studies in Middle Eastern manufacturing contexts (e.g., Al-Ghazali, 2020; Elbaz & Haddoud, 2017).

- **Inclusion criteria** required participants to be full-time employees with at least six months of tenure and 18 years or older, while **exclusion criteria** ruled out part-time, temporary, probationary, or non-production staff to ensure data accuracy and relevance.

3.3 Data Collection Instrument

To collect primary data for this study, a structured, self-administered questionnaire will be used as the main data collection instrument. The questionnaire is designed based on well-established and validated scales from prior studies on leadership and organizational performance. It will be distributed to a sample of 400 employees and managers working in manufacturing companies located in Riyadh, Saudi Arabia.

This instrument allows for the quantitative measurement of participants' perceptions of leadership behaviors and organizational outcomes, following approaches adopted by Bass & Avolio (1995), Judge & Piccolo (2004), and Wang et al. (2011) in similar studies.

3.4 Structure of the Questionnaire

The questionnaire will be divided into three main sections:

Section A: Demographic and Organizational Information: This section gathers general background data about the participants to allow subgroup comparisons and contextual interpretation. It includes:

- Age
- Gender
- Educational level
- Job title and department
- Years of experience in the company
- Position level (non-supervisory, supervisory, managerial)
- Company size (number of employees)
- Type of manufacturing activity

Collecting this information is critical for understanding the distribution of responses across organizational hierarchies and company types (see: Al-Ghazali, 2020).

Section B: Leadership Style Measurement:

This section aims to evaluate the leadership styles as perceived by employees or practiced by supervisors within the manufacturing sector. The instrument is adapted from the Multifactor Leadership Questionnaire (MLQ-5X) developed by Bass and Avolio (1995), a globally recognized tool for measuring leadership behaviors and outcomes.

The MLQ-5X distinguishes between two core leadership styles:

1. Transformational Leadership:

Transformational leadership is characterized by a leader's ability to inspire, intellectually stimulate, and individually support followers. This style is operationalized through the following five sub-dimensions:

- Idealized Influence (Attributes and Behaviors): The leader acts as a role model and gains trust and respect.
- Inspirational Motivation: The leader articulates a compelling vision and motivates followers toward shared goals.
- Intellectual Stimulation: The leader encourages creativity and challenges existing assumptions.
- Individualized Consideration: The leader provides personalized support and development opportunities.

Example items:

- *"My leader talks about values and morals that guide our work."*
- *"My leader expresses confidence that goals will be achieved."*
- *"My leader encourages new ways of thinking about problems."*
- *"My leader considers my individual needs and development."*

2. Transactional Leadership:

Transactional leadership focuses on clarifying roles, expectations, and providing rewards or corrective feedback based on performance. It includes the following two sub-dimensions:

- Contingent Reward: The leader sets clear expectations and rewards achievement.
- Management-by-Exception (Active and Passive): The leader intervenes primarily when deviations or mistakes occur.

Example items:

- *"My leader clarifies what is expected and rewards accordingly."*
- *"My leader focuses on correcting mistakes and enforcing rules."*
- *"My leader intervenes only when problems become serious."*

In this study, each sub-dimension is measured using 3 to 4 items, resulting in approximately 20–24 items across both leadership styles. Respondents rate each item on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), indicating the extent to which they perceive each behavior in their supervisor.

The MLQ has demonstrated high internal consistency and construct validity across various cultural and organizational contexts. Notably, studies such as Judge & Piccolo (2004) and Elbaz & Haddoud (2017) have validated the MLQ in both Western and Middle Eastern industrial environments. For instance, Elbaz and Haddoud effectively employed the MLQ in Egyptian manufacturing firms, reinforcing its suitability for use in similar Gulf and Arab manufacturing settings, including Saudi Arabia.

Section C: Organizational Performance Measurement:

This section is designed to assess employee perceptions of their organization's performance across several key dimensions. The performance indicators used in this study are adapted from established frameworks, primarily:

- Kaplan and Norton's (1996) Balanced Scorecard, which offers a comprehensive view of organizational effectiveness, and
- Empirical leadership-performance models proposed by Wang et al. (2011) and Rowold and Heinitz (2007).

These frameworks have been widely used in management research to link leadership behaviors with performance outcomes. For contextual relevance, the indicators are also aligned with previous studies conducted in Saudi Arabia, such as Alshammari et al. (2015) and Alharbi (2016), who operationalized similar constructs to measure organizational outcomes in both public and private sector institutions.

The performance measurement comprises four core dimensions:

1. **Employee Productivity:** This dimension evaluates how effectively staff complete tasks and demonstrate responsibility.

Example item:

- *"Employees complete tasks efficiently and on time."*

2. **Operational Efficiency:** This captures how well the organization utilizes its resources and controls operational costs.

Example item:

- *"The company utilizes resources effectively."*

3. **Goal Achievement:** This focuses on the attainment of strategic targets and clarity of performance objectives.

Example item:

- *"The company regularly achieves its performance targets."*

4. **Innovation and Adaptability:** This assesses the organization's responsiveness to environmental changes and support for innovation.

Example item:

- *"The company adapts quickly to changes in the market."*

Each of these dimensions is measured using 3 to 5 items, rated on a 5-point Likert scale:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly Agree

This format is widely adopted in organizational research for its clarity and suitability in capturing respondent perceptions across attitudinal and behavioral constructs (Saunders et al., 2019). It also facilitates robust statistical analysis, particularly in correlational and regression-based models.

The use of these multidimensional indicators enables a nuanced understanding of how leadership styles—transformational and transactional—correlate with various facets of organizational performance, thereby enhancing the explanatory power and contextual relevance of the study.

3.6 Language and Forma:

To ensure clarity and cultural appropriateness, the questionnaire was provided in both Arabic and English. A **back-translation procedure** was applied to maintain semantic equivalence and conceptual validity across the two versions (Brislin, 1970). This process ensured that the instrument was linguistically accurate, culturally relevant, and fully comprehensible to all participants, thereby supporting the reliability of the collected data.

3.7 Instrument Validity and Adaptation

To ensure the reliability and appropriateness of the measurement instruments within the Saudi industrial context, this study employed rigorous procedures for instrument validation and contextual adaptation.

The Multifactor Leadership Questionnaire (MLQ) and the organizational performance indicators used in this study have demonstrated strong content and construct validity in numerous prior studies, notably in the work of Judge and Piccolo (2004). These instruments are well-established tools for assessing leadership behaviors and organizational performance across various sectors.

In this study, the items were contextually adapted to reflect the specific characteristics of the Saudi manufacturing sector. Adjustments included rewording statements to align with local terminology related to production environments, manufacturing workflows, and hierarchical leadership dynamics typical of industrial organizations in the region.

To enhance content relevance and clarity, a panel of subject-matter experts—including academics specializing in organizational behavior and senior industry professionals—conducted a content validity review. Their evaluation ensured that each item was culturally appropriate, easily interpretable, and contextually relevant. This process aligns with the methodological practices adopted in Al-Ghazali (2020) and Rowold and Heinitz (2007), where expert reviews were used to strengthen instrument validity in applied leadership research.

This dual approach of leveraging validated instruments and contextual expert review ensured that the tool was both psychometrically sound and practically relevant for use in Saudi Arabia's manufacturing environment.

3.8 Pilot Testing

A pilot test was conducted with 30 employees from Riyadh-based manufacturing firms, who were not included in the main sample. The pilot aimed to ensure clarity, cultural appropriateness, and reliability of the questionnaire in both Arabic and English. Minor adjustments were made based on participant feedback, and internal consistency exceeded the acceptable threshold (Cronbach's $\alpha \geq 0.70$), confirming the instrument's reliability for the main study.

3.9 Data Collection Procedure

Data were collected from employees in Riyadh's manufacturing firms using both paper-based and online questionnaires (Arabic and English versions). Participation was voluntary, anonymous, and based on informed consent. The data collection spanned approximately six weeks, and the dual-mode distribution (electronic and

paper) ensured accessibility across different job levels. This approach, consistent with prior studies in similar contexts (e.g., Elbaz & Haddoud, 2017), provided reliable and ethically sound data for analysis.

3.10 Data Analysis Techniques

The collected data were analyzed using IBM SPSS Statistics, following a structured and rigorous procedure to ensure the integrity and validity of the findings. The analysis encompassed several critical stages, including data screening, assumption testing, and reliability analysis.

3.10.1 Data Screening and Cleaning

Prior to conducting any inferential statistical analyses, the dataset underwent a thorough screening and cleaning process. This step is essential to enhance the accuracy, consistency, and reliability of statistical results. Data collected from 400 participants employed in Riyadh-based manufacturing firms were initially imported into SPSS, where they were examined for completeness, consistency, and coding accuracy.

3.10.2 Handling Missing Data

The dataset was examined for missing values, which, if left untreated, can introduce bias and compromise statistical power (Hair et al., 2010). The following procedures were employed:

- Listwise Deletion: Responses missing more than 20% of the items were excluded entirely from the analysis.
- Imputation: For records with minimal missing data, mean substitution or multiple imputation methods were applied in accordance with best practices outlined by Tabachnick and Fidell (2013).

These methods ensured that data retention was maximized while minimizing potential distortions in the analysis.

3.10.3 Detection of Outliers

To prevent distortion of parametric analyses, both univariate and multivariate outliers were systematically identified:

- Univariate Outliers: Detected by computing z-scores for each variable. Any score exceeding ± 3.29 was flagged for review (Field, 2018).
- Multivariate Outliers: Identified using Mahalanobis Distance, with significance evaluated at $p < 0.001$ (Hair et al., 2010). Extreme cases were carefully assessed for legitimacy before potential exclusion.

Identifying and addressing outliers is particularly critical for regression-based and multivariate models, as emphasized by Osborne and Overbay (2004).

3.10.4 Instrument Reliability (Cronbach's Alpha)

The internal consistency of each construct in the questionnaire was assessed using Cronbach's Alpha, a widely accepted reliability metric in social science research. The threshold for acceptable reliability was set at $\alpha \geq 0.70$, as recommended by Nunnally and Bernstein (1994).

Separate reliability analyses were conducted for the following dimensions:

- Transformational Leadership
- Transactional Leadership
- Organizational Performance Subdimensions:
 - Employee Productivity
 - Operational Efficiency
 - Goal Achievement
 - Innovation and Adaptability

The MLQ instrument and performance scales demonstrated strong internal consistency, consistent with prior validation studies (Bass & Avolio, 1995; Rowold & Heinitz, 2007), where alpha coefficients frequently exceeded 0.80 in similar organizational settings.

4 Data Analysis Procedures:

4.1 Respondent Profiles

Table 1 below presents the respondents' demographic and organizational profile from 400 employees working in manufacturing companies in Riyadh. Each variable is described along with scholarly support to demonstrate its potential effect on leadership style and organizational outcomes.

4.1.1 Gender

Out of the 400 respondents, 280 were male (70%) and 120 were female (30%). This gender distribution reflects the historically male-dominated nature of the manufacturing sector in Saudi Arabia, as confirmed by Alshammari et al. (2015), who noted that most technical and supervisory roles in the industrial sector are typically occupied by men. However, the presence of 30% female respondents also highlights the increasing involvement of women in the industrial workforce, a trend aligned with Saudi Arabia's Vision 2030, which encourages greater gender inclusivity in various economic sectors.

4.1.2 Age

The majority of respondents were aged 26–35 (47.5%), followed by those aged 36–45 (30%), 46 and above (12.5%), and 18–25 (10%). This distribution suggests that the workforce is relatively young and dynamic. According to Wang et al. (2011), younger employees tend to be more adaptable to transformational leadership styles, which focus on motivation, innovation, and team development. Meanwhile, older age groups bring experience and stability, which can enhance decision-making and performance under transactional leadership frameworks (Bass & Avolio, 1995).

4.1.3 Educational Level

Half of the respondents (50%) held a Bachelor's degree, followed by Diploma holders (22.5%), Master's or higher (15%), and High School graduates (12.5%). This indicates a well-educated workforce, especially in technical and managerial roles. According to Rowold and Heinitz (2007), education significantly influences how employees perceive and respond to leadership styles. More educated employees are generally more receptive to participative and visionary leaders, especially in knowledge-intensive sectors.

4.1.4 Years of Experience

Respondents' work experience was distributed as follows: 5–10 years (40%), more than 10 years (37.5%), and less than 5 years (22.5%). This shows a healthy mix of mid-career and senior professionals. Experience is a key moderating variable in leadership effectiveness. Hair et al. (2010) emphasized that employees with more experience are likely to value structured leadership and clear performance indicators, while newer employees may seek mentoring and transformational guidance.

4.1.5 Job Position

Among respondents, 220 (55%) were regular staff, 100 (25%) were supervisors, and 80 (20%) were managers. This spread reflects a typical organizational hierarchy within the manufacturing sector. Bass and Avolio (1995) noted that leadership style exerts differing impacts depending on organizational level: while managers often shape the culture, frontline staff are the primary receivers of leadership influence, making them crucial for assessing the overall performance impact.

4.1.6 Department

Participants were drawn from various departments: Production (37.5%), Quality Control (22.5%), Logistics (17.5%), Human Resources (12.5%), and Finance (10%). Kaplan and Norton (1996) emphasized that performance metrics vary by function. For instance, production departments are highly sensitive to directive and task-oriented leadership, while HR departments may respond more favorably to transformational approaches that emphasize employee development.

4.1.7 Company Type / Manufacturing Subsector

The study included employees from five subsectors: Food & Beverage (25%), Construction Materials (22.5%), Plastics (20%), Pharmaceuticals (17.5%), and Electronics (15%). Each subsector has unique leadership and performance dynamics. Elbaz and Haddoud (2017) pointed out that high-tech industries like electronics often

require innovation-driven leadership, while traditional industries like food and beverage may rely more on standardized, process-driven management.

Table 1: Respondent Profiles

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	280	70.0
	Female	120	30.0
Age	18–25	40	10.0
	26–35	190	47.5
	36–45	120	30.0
	46+	50	12.5
Education	High School	50	12.5
	Diploma	90	22.5
	Bachelor's	200	50.0
	Master's+	60	15.0
Experience	<5 years	90	22.5
	5–10 years	160	40.0
	>10 years	150	37.5
Position	Staff	220	55.0
	Supervisors	100	25.0
	Managers	80	20.0
Department	Production	150	37.5
	HR	50	12.5
	Finance	40	10.0
	Quality Control	90	22.5
	Logistics	70	17.5
Company Type	Food & Beverage	100	25.0
	Plastics	80	20.0
	Construction Materials	90	22.5
	Pharmaceuticals	70	17.5
	Electronics	60	15.0

Source: Prepared By the Researcher for this Study.

4.2 Descriptive Statistics

Table 2 below summarizes the descriptive statistics for each item in the questionnaire related to Leadership Style (Transformational and Transactional) and Organizational Performance, based on responses from 400 participants. Each item was measured on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). The mean and standard deviation are presented to provide insight into the general tendencies and variability of responses.

4.2.1 Transformational Leadership

• Talks about values and morals:

The high mean score of 4.02 indicates that participants widely perceive their leaders as ethically grounded and guided by strong values. This reflects the **idealized influence** dimension of transformational leadership, where leaders serve as moral exemplars and inspire trust among followers. Contemporary research supports this observation: for instance, **Alabdulhadi (2020)** found that value-driven leadership in Saudi organizations enhances employee commitment and ethical behavior, while **Als Salman (2025)** demonstrated that leaders who emphasize ethical standards in the Saudi telecom sector foster greater organizational loyalty and trust. These findings confirm that embedding ethical principles into leadership practices is essential for cultivating a motivated and principled workforce in Saudi manufacturing firms.

• Expresses confidence in achieving goals:

The mean score of 4.10 indicates that employees strongly perceive their leaders as instilling confidence, optimism, and motivation to achieve organizational objectives. This reflects the **inspirational motivation** component of transformational leadership, where leaders articulate a compelling vision and foster commitment to shared goals. Recent empirical evidence supports this link: **Alharbi, Dato Mansor, & Leong (2025)** found that transformational leaders in Saudi manufacturing SMEs significantly enhance employees' goal orientation and proactive behavior through inspirational communication, while **Almassri & Aris (2024)** demonstrated that motivational leadership positively influences employee engagement and performance outcomes in Saudi organizations. These findings highlight the critical role of visionary and confidence-building leadership in driving productivity and organizational success in dynamic industrial environments.

- **Encourages new thinking:**

A mean score of 3.95 reflects a leadership culture that prioritizes innovation and creative problem-solving. This result is consistent with recent empirical evidence from the Saudi context. Alharbi, Mansor, and Leong (2025) reported that transformational leadership significantly enhances employees' innovative performance by fostering innovative behaviors, particularly within manufacturing SMEs. Similarly, Almassri and Aris (2024) highlighted that intellectual stimulation—an essential dimension of transformational leadership—positively drives innovative work behavior through knowledge sharing in the telecommunications sector. Together, these findings underscore the importance of transformational leadership practices in cultivating environments that encourage new thinking and adaptability.

- **Considers individual needs:**

The mean score of 3.85 indicates moderate individualized consideration, reflecting that leaders make efforts to address employees' unique needs. Recent research emphasizes that such attention is crucial for enhancing employee engagement and performance. Alharbi, Mansor, and Leong (2022) found that transformational leaders who adapt their behavior to individual needs improve person-job fit and engagement in Saudi manufacturing contexts. Similarly, Alshahrani (2024) demonstrated that individualized consideration within transformational leadership fosters innovative work behavior and contributes to overall organizational performance in the Saudi healthcare sector. These findings highlight the pivotal role of leaders' attentiveness to individual needs in promoting employee motivation and organizational effectiveness.

4.2.2. Transactional Leadership

- **Clarifies expectations and rewards:**

A mean score of 3.76 indicates that contingent rewards are commonly utilized in leadership practices. This approach aligns with recent findings in the Saudi context. For instance, Asiri et al. (2023) observed that transactional leadership behaviors, such as clarifying expectations and providing contingent rewards, positively influence work engagement among nurses in Saudi general hospitals. Similarly, Alharbi et al. (2023) found that transactional leadership, characterized by clear expectations and rewards, enhances employee satisfaction and performance in Saudi healthcare settings. These studies underscore the effectiveness of contingent rewards in motivating employees and improving organizational outcomes.

- **Focuses on correcting mistakes:**

A mean score of 3.58 indicates a moderate perception of corrective supervision, reflecting that leaders actively monitor and address deviations from standards. Recent studies underscore the relevance of this approach in contemporary organizational settings. For instance, Alharbi et al. (2023) found that active management by exception, characterized by leaders' proactive monitoring and correction of errors, positively influences employee performance in Saudi manufacturing firms. Similarly, Alshahrani (2024) demonstrated that leaders who focus on correcting mistakes contribute to enhanced operational efficiency and adherence to quality standards in the Saudi healthcare sector.

- **Intervenes only when problems are serious:**

A mean score of 3.45 suggests that passive management is the least practiced leadership style. This aligns with findings from Alharbi et al. (2025), who observed that passive management by exception, characterized by leaders intervening only when problems become serious, was less prevalent compared to other leadership styles in Saudi manufacturing SMEs. Similarly, a study by Alasiry and Alkhaldi (2024) reported that passive management by exception was the least favored leadership style among primary healthcare center managers in Riyadh, Saudi Arabia. These findings underscore the limited application of passive management approaches in contemporary Saudi organizational settings.

4.2.3 Employee Performance

4.2.3.1 Employee Productivity

- * **Tasks Completed Efficiently and on Time:**

A mean score of 3.87 indicates that employees perceive task efficiency positively. Recent research in Saudi manufacturing SMEs confirms that leadership styles, particularly transformational leadership, significantly enhance task ownership and timely completion (Alharbi, Mansor, & Leong, 2025).

- * **Staff Committed to Responsibilities:**

A high mean of 3.95 reflects strong employee commitment. Alshahrani (2024) demonstrated that transformational leadership fosters internal motivation and responsibility, reinforcing employees' dedication to their roles and tasks in organizational settings.

4.2.3.2 Operational Efficiency

* Utilizes Resources Effectively :

The mean of 3.81 indicates that employees perceive effective resource use. Alnahdi et al. (2023) found that clear leadership direction and accountability are positively associated with operational efficiency in Saudi industrial firms.

* Operations Are Cost-Efficient :

A mean of 3.75 suggests moderate cost-conscious practices. Transactional leadership, with its focus on procedural compliance and performance monitoring, has been shown to improve budgetary and process control in Middle Eastern manufacturing contexts (Alharbi, Mansor, & Leong, 2024).

4.2.3.3 Goal Achievement:

* Achieves Performance Targets:

A mean of 3.78 indicates that employees regularly meet performance goals. Empirical studies in Saudi organizations highlight that leaders who set clear strategic priorities enhance goal attainment and alignment with organizational objectives (Alghamdi, 2023).

* Managers Set Measurable Objectives :

With a mean of 3.84, performance planning is well-structured. Recent research confirms that transactional leadership promotes predictability and accountability through measurable objectives (Alharbi et al., 2025).

4.2.3.4 Innovation and Adaptability:

* Supports Innovative Practices :

A mean of 3.90 reflects strong organizational support for innovation. Alharbi, Mansor, and Leong (2025) found that transformational leadership significantly drives organizational creativity and employee engagement in innovative behaviors in Saudi manufacturing SMEs.

* Adapts to Market Changes Quickly:

The mean of 3.82 suggests flexibility and adaptability are relatively strong. Alshahrani (2024) demonstrated that transformational leadership facilitates agility and responsiveness in dynamic business environments, enhancing organizational adaptability.

Table 2: Descriptive Statistics

Category	Item Description	Mean	Standard Deviation
Transformational Leadership	Talks about values and morals	4.02	0.68
	Expresses confidence in achieving goals	4.10	0.63
	Encourages new thinking	3.95	0.70
	Considers individual needs	3.85	0.74
Transactional Leadership	Clarifies expectations and rewards	3.76	0.66
	Focuses on correcting mistakes	3.58	0.71
	Intervenes only when problems are serious	3.45	0.73
Employee Productivity	Tasks completed efficiently and on time	3.87	0.62
	Staff committed to responsibilities	3.95	0.60
Operational Efficiency	Utilizes resources effectively	3.81	0.68
	Operations are cost-efficient	3.75	0.72
Goal Achievement	Achieves performance targets	3.78	0.66
	Managers set measurable objectives	3.84	0.64
Innovation and Adaptability	Supports innovative practices	3.90	0.69
	Adapts to market changes quickly	3.82	0.70

Source: Prepared By the Researcher for this Study.

Based on the mean scores: Transformational Leadership ($M = 3.98$) is clearly rated higher than Transactional Leadership ($M = 3.60$). Therefore, H4 is supported: Transformational leadership is the most commonly practiced leadership style among supervisors in the Saudi manufacturing sector. This supports previous findings such as: Almansour (2012) and Al-Malki & Juan (2018): Reported growing adoption of transformational practices in the Middle East due to increasing focus on innovation and employee engagement. Ng (2017): Found transformational leadership to be prevalent in high-performing manufacturing environments.

4.3 Reliability Analysis

Reliability analysis in **Table 3** was conducted using Cronbach's Alpha to assess the internal consistency of the measurement items in this study. All values exceeded the acceptable threshold of 0.70 (Nunnally, 1978), indicating that the items for each construct are consistently measuring the same underlying dimension.

4.3.1 Transformational Leadership ($\alpha = 0.89$)

This construct demonstrated very high internal consistency, indicating that items related to values, confidence, innovation, and individual consideration were consistently interpreted by respondents.

- This result aligns closely with Bass & Avolio (1995), who developed the MLQ scale and reported similar or higher reliability coefficients.
- The high alpha suggests that transformational leadership is well-captured and perceived in the Saudi industrial context, consistent with Antonakis et al. (2003) who confirmed the MLQ's cross-cultural reliability.

4.3.2 Transactional Leadership ($\alpha = 0.81$)

This construct demonstrated strong internal consistency, reflecting coherent responses regarding performance expectations, contingent rewards, and corrective actions. Recent research in Saudi organizations confirms the reliability of transactional leadership measures in operational contexts. For example, Alharbi, Mansor, and Leong (2024) reported Cronbach's alpha values between 0.79–0.83 for transactional leadership constructs in manufacturing SMEs, supporting their use for understanding directive leadership behaviors in Riyadh's industrial firms. Similarly, Alasiry and Alkhaldi (2024) validated transactional leadership measures in healthcare management, reinforcing their applicability in Middle Eastern organizational settings.

4.3.3 Employee Productivity ($\alpha = 0.78$)

Although comprising only two items, the employee productivity construct achieved acceptable reliability. The items assessed task efficiency and employee commitment, both essential indicators of individual-level performance. Alharbi et al. (2025) highlighted that transformational and transactional leadership significantly influence these aspects of employee productivity in Saudi manufacturing SMEs, demonstrating that brief, well-designed measures can yield reliable and meaningful insights.

4.3.4 Operational Efficiency ($\alpha = 0.76$)

Operational efficiency displayed acceptable internal consistency. These results align with contemporary applications of the Balanced Scorecard framework, where operational efficiency remains a critical performance dimension (Kaplan & Norton, 1996; Alnahdi et al., 2023). The items evaluated effective resource utilization and cost-efficient processes, which are particularly relevant in production and manufacturing environments. Recent empirical evidence confirms that leadership behaviors significantly impact operational efficiency in Saudi industrial firms (Alharbi, Mansor, & Leong, 2024).

4.3.5 Goal Achievement ($\alpha = 0.84$)

The Goal Achievement construct, with a Cronbach's alpha of 0.84, reflects the organization's ability to set and achieve clear, measurable objectives. This high reliability indicates a consistent understanding of strategic performance among respondents. Recent empirical evidence from Saudi manufacturing firms supports the link between transformational leadership and goal attainment. For instance, Alghamdi (2023) found that leaders who exhibit transformational behaviors significantly enhance employee accountability and the achievement of performance targets, reinforcing the importance of structured goal-setting in operational and strategic contexts.

4.3.6 Innovation & Adaptability ($\alpha = 0.85$)

The Innovation and Adaptability dimension, with $\alpha = 0.85$, measures organizational responsiveness to change and the promotion of innovation. A high alpha suggests consistent perceptions among employees regarding the firm's support for innovative practices. Recent research in Saudi industrial firms confirms this relationship: Alharbi, Mansor, and Leong (2025) demonstrated that transformational leadership fosters an innovative climate, which enhances organizational agility and adaptability. Similarly, Alshahrani (2024) reported that organizations that integrate leadership-driven innovation practices are more capable of responding effectively to market and technological changes.

Overall, the Cronbach's alpha results indicate that the constructs used in this study are both reliable and valid for the Saudi manufacturing sector. The consistency of responses confirms the applicability of MLQ-based leadership scales and performance indicators derived from established frameworks such as the Balanced Scorecard (Kaplan & Norton, 1996) and aligns with contemporary empirical evidence in Middle Eastern industrial contexts.

Table 3: Reliability Analysis

Construct	Number of Items	Cronbach's Alpha (α)
Transformational Leadership	4	0.89
Transactional Leadership	3	0.81
Employee Productivity	2	0.78
Operational Efficiency	2	0.76
Goal Achievement	2	0.84
Innovation & Adaptability	2	0.85

Source: Prepared By the Researcher for this Study.

4.4 Exploratory Factor Analysis (EFA)

4.4.1 Step 1: Assessing Suitability of Data for EFA:

Determine whether the dataset is appropriate for conducting Exploratory Factor Analysis (EFA), two preliminary statistical tests were performed: the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. These tests are widely recognized as essential diagnostic tools in factor. **Table 4** below presents KMO and Bartlett's Test Results

Table 4: KMO and Bartlett's Test Results

Test	Value	Threshold
Kaiser-Meyer-Olkin (KMO)	0.881	> 0.70
Bartlett's Test of Sphericity	$\chi^2 = 1483.24$	$p < 0.001$ (Sig.)
Degrees of Freedom	105	

Source: Prepared By the Researcher for this Study.

- **Kaiser-Meyer-Olkin (KMO) Measure = 0.881 :**

The KMO test assesses the adequacy of the sample size and correlation between variables. A KMO of 0.881 falls in the "meritorious" range, as classified by Kaiser (1974), suggesting that the items in the leadership and performance constructs share sufficient variance and are suitable for structure detection. This aligns with recommendations by Hair et al. (2019) and Field (2018), who state that KMO values > 0.80 are ideal for factor analysis.

- **Bartlett's Test of Sphericity ($\chi^2 = 1483.24$, $df = 105$, $p < 0.001$):**

This test checks whether the correlation matrix is significantly different from an identity matrix (i.e., where variables are unrelated). The significant result ($p < 0.001$) indicates strong relationships among items in the constructs, validating that factor analysis is appropriate. According to Tabachnick & Fidell (2013) and Fabrigar et al. (1999), a significant Bartlett's test is essential before proceeding with EFA. They emphasize that rejecting the null hypothesis of Bartlett's test supports the existence of underlying factors.

The KMO and Bartlett's results provide strong empirical support for conducting exploratory factor analysis on the questionnaire items covering leadership styles and organizational performance. KMO = 0.881 → excellent sampling adequacy. Bartlett's $\chi^2 = 1483.24$, $p < 0.001$ → strong inter-variable correlations. These results justify proceeding with factor extraction using Principal Axis Factoring (PAF) or similar methods.

4.4.2 Step 2: Factor Extraction:

The objective of this step is to identify the underlying factor structure of the items in the leadership and organizational performance constructs using Principal Axis Factoring (PAF) and Eigenvalue > 1 criterion. **Table 5** below presents the Total Variance Explained

Table 5: Total Variance Explained (Principal Axis Factoring)

Factor	Initial Eigenvalue	% of Variance Explained	Cumulative Variance
1. Transformational Leadership	3.28	21.9%	21.9%
2. Transactional Leadership	2.47	16.5%	38.4%
3. Employee Productivity	1.82	12.1%	50.5%
4. Operational Efficiency	1.63	10.9%	61.4%
5. Goal Achievement	1.42	9.5%	70.9%
6. Innovation & Adaptability	1.26	8.4%	79.3%

Source: Prepared By the Researcher for this Study.

4.4.2.1 Extraction Method Used:

- Principal Axis Factoring (PAF) was employed instead of Principal Component Analysis (PCA) because the goal was to uncover latent constructs, not merely to reduce data dimensionality.
- PAF allows for identifying factors based on shared variance among variables, which is ideal for psychological and organizational constructs (Fabrigar et al., 1999).

4.4.2.2 Eigenvalue Rule (Kaiser Criterion):

- Only factors with eigenvalues greater than 1 were retained (Kaiser, 1974).
- This rule ensures that retained factors explain more variance than a single observed variable would.

4.4.2.3 Six Factors Extracted:

- The analysis revealed six distinct factors, corresponding exactly to the theoretical structure: two for leadership style (transformational and transactional), and four for organizational performance dimensions.
- This confirms the validity of the measurement structure and the theoretical underpinnings based on Bass and Avolio's (1995) MLQ framework and Kaplan and Norton's (1996) performance theory.

4.4.2.4 Total Variance Explained:

The six factors together explained 79.3% of the total variance, which exceeds the minimum threshold of 60% recommended by Hair et al. (2019) and Field (2018) for social science research.

The factor extraction process confirmed the hypothesized structure of the constructs, separating leadership into two distinct styles and performance into four dimensions. The high total variance explained and theoretical alignment demonstrate that the scale is both statistically and conceptually sound, setting the stage for Step 3: Factor Rotation to improve clarity and interpretability of factor loadings.

4.4.3 Step 3: Factor Rotation (Varimax Rotation)

After the initial extraction of factors, rotation is applied to enhance interpretability by simplifying the factor loadings matrix. This means each item loads more strongly onto one factor and less strongly on others, clarifying the relationship between observed variables and latent constructs.

To achieve this, Varimax Rotation (an orthogonal rotation method) was applied. Varimax aims to maximize the variance of squared loadings for each factor, producing a clearer and more distinct factor structure (Kaiser, 1958).

This method is especially useful in social science research when the goal is to ensure that constructs are independent or weakly correlated — such as Transformational and Transactional Leadership — which are theoretically distinct in the literature (Bass & Avolio, 1995).

Table 6 below explains The Factor Loadings this table is a critical component of Exploratory Factor Analysis (EFA), as it indicates the degree to which each observed variable (survey item) is associated with an underlying latent construct (factor).

Table 6: Factor Loading

Items	Factor 1 (TL)	Factor 2 (TrL)	Factor 3 (Prod)	Factor 4 (Eff)	Factor 5 (Goal)	Factor 6 (Innov)
Independent Variables (Leadership Style)						
[Transformational Leadership]						
1. My leader talks about values and morals that guide our work.	0.732					
2. My leader expresses confidence that goals will be achieved.	0.714					
3. My leader encourages new ways of thinking about problems.	0.767					
4. My leader considers my individual needs and development.	0.685					
[Transactional Leadership]						
5. My leader clarifies what is expected and rewards accordingly.		0.782				
6. My leader focuses on correcting mistakes and enforcing rules.		0.738				
7. My leader intervenes only when problems become serious.		0.712				
Dependent Variables (Organizational Performance)						
[Employee Productivity]						
1. Employees complete tasks efficiently and on time.			0.801			
2. Staff members are committed to their responsibilities.			0.764			
[Operational Efficiency]						
3. The company utilizes resources effectively.				0.773		
4. Operations are performed in a cost-efficient way.				0.749		
[Goal Achievement]						
5. The company regularly achieves its performance targets.					0.782	
6. Managers set clear and measurable objectives.					0.744	
[Innovation and Adaptability]						
7. Management supports innovative practices.						0.769
8. The company adapts quickly to changes in the market.						0.751

Source: Prepared By the Researcher from Analysis of the Questionnaire (SPSS Output).

- **Factor 1 (Transformational Leadership)** includes four items that align with Bass and Avolio's (1995) MLQ scale. These items measure leader behavior related to vision, inspiration, innovation, and individual attention.
- **Factor 2 (Transactional Leadership)** clusters three items describing contingent reward and corrective action, also consistent with prior validation by Rowold & Heinitz (2007).
- **Factors 3 to 6 represent dimensions of organizational performance:**
 - **Employee Productivity (Factor 3)** reflects commitment and efficiency, aligning with Elbaz & Haddoud (2017).
 - **Operational Efficiency (Factor 4)** corresponds to effective use of resources and cost control, as emphasized by Kaplan & Norton (1996).
 - **Goal Achievement (Factor 5)** highlights strategic clarity and target attainment.
 - **Innovation & Adaptability (Factor 6)** captures openness to change, an important dimension identified by Damanpour (1991).

This outcome is in line with Hair et al. (2019), who note that a well-rotated structure simplifies interpretation and enhances the convergent and discriminant validity of constructs.

3.4.4 Step 4: Naming and Interpreting Factors

After rotation and factor extraction, Step 4 involves assigning meaningful names to each factor based on the pattern of high-loading items. Table 7 below presents the named factors that should reflect the conceptual themes represented by each group of variables, and interpretation should be validated against theoretical foundations and prior studies.

Table 7: Named Factors with Key Items and Interpretations

Factor	Name	Items with High Loadings
F1	Transformational Leadership	Talks about values and morals, expresses confidence, encourages innovation, considers individual needs
F2	Transactional Leadership	Clarifies expectations, corrects mistakes, intervenes only during problems
F3	Employee Productivity	Completes tasks efficiently, committed staff
F4	Operational Efficiency	Effective use of resources, cost-efficiency
F5	Goal Achievement	Achieving targets, clear objectives
F6	Innovation & Adaptability	Supports innovation, adapts to change

Source: Prepared By the Researcher for this Study.

Factor 1: Transformational Leadership

This factor includes items associated with idealized influence, inspirational motivation, and individualized consideration — three key components of transformational leadership (Bass & Avolio, 1995). It reflects leaders who focus on personal growth, innovation, and shared vision. Bass and Avolio (1995) emphasized that such leadership behaviors positively affect employee satisfaction and performance.

Factor 2: Transactional Leadership

The items here describe a contingent reward system and management by exception, central to transactional leadership theory (Bass, 1985). This style is more reactive, focusing on rule enforcement and performance expectations. Rowold & Heinitz (2007) confirmed that transactional leadership is distinct and often complements transformational leadership in structured environments.

Factor 3: Employee Productivity

This factor reflects task completion and employee commitment, which are commonly used indicators of productivity. Elbaz & Haddoud (2017) noted that transformational leaders improve productivity through employee empowerment.

Factor 4: Operational Efficiency:

Refers to the ability to use company resources optimally and control costs effectively. Kaplan and Norton (1996) include internal business processes as one of the key perspectives in the Balanced Scorecard for improving organizational efficiency.

Factor 5: Goal Achievement:

This factor measures the organization's ability to set, communicate, and achieve strategic objectives, aligning with traditional management principles. Drucker (1954) introduced "Management by Objectives" (MBO) as a foundational strategy to enhance performance through goal alignment.

Factor 6: Innovation & Adaptability:

This dimension includes openness to change and continuous improvement — key attributes of organizations that survive in dynamic markets. Damanpour (1991) and Teece et al. (1997) argue that adaptability and innovation are crucial for sustaining competitive advantage.

This naming and interpretation stage confirms the construct structure of the survey, ensuring each dimension reflects a theoretically justified construct with strong empirical validity. The naming is grounded in decades of leadership and organizational theory research, enhancing the face validity and utility of the instrument.

4.5 Pearson Correlation Analysis Between Leadership Styles and Performance Indicators:

Table 8 below presents the Pearson correlation coefficients among the key variables in this study—Transformational Leadership, Transactional Leadership, and four dimensions of Organizational Performance: Employee Productivity, Operational Efficiency, Goal Achievement, and Innovation & Adaptability. These coefficients reveal the strength and direction of the linear relationships between constructs.

Table 8: Pearson Correlation Matrix

Variables	Transformational Leadership	Transactional Leadership	Employee Productivity	Operational Efficiency	Goal Achievement	Innovation & Adaptability
Transformational Leadership	1.000	0.44**	0.69**	0.66**	0.72**	0.76**
Transactional Leadership	0.44**	1.000	0.48**	0.50**	0.53**	0.47**
Employee Productivity	0.69**	0.48**	1.000	0.64**	0.67**	0.65**
Operational Efficiency	0.66**	0.50**	0.64**	1.000	0.70**	0.62**
Goal Achievement	0.72**	0.53**	0.67**	0.70**	1.000	0.74**
Innovation & Adaptability	0.76**	0.47**	0.65**	0.62**	0.74**	1.000

Source: Prepared By the Researcher for this Study.

4.5.1 Transformational Leadership:

Transformational leadership demonstrated strong positive correlations with key organizational performance indicators in Saudi manufacturing firms:

- **Innovation & Adaptability ($r = 0.76$):** This high correlation suggests that transformational leaders foster a vision-oriented culture that encourages creativity and responsiveness to change. Recent empirical research supports this link: Alharbi, Mansor, and Leong (2025) found that transformational leadership significantly enhances innovative employee behavior in Saudi manufacturing SMEs, driving adaptability and organizational agility.
- **Goal Achievement ($r = 0.72$) and Employee Productivity ($r = 0.69$):** These results indicate that transformational leadership contributes to clearer objectives and higher individual performance. Consistently, Alghamdi (2023) reported that transformational behaviors in Saudi industrial firms improve employee engagement and the attainment of strategic goals.
- **Operational Efficiency ($r = 0.66$):** Transformational leaders inspire employees to optimize resource use and work more effectively, reflecting findings by Alnahdi et al. (2023), who observed that leadership fostering motivation and strategic alignment enhances operational efficiency in Riyadh's industrial firms.

4.5.2 Transactional Leadership:

Transactional leadership exhibited moderate positive correlations with performance indicators:

- **Goal Achievement ($r = 0.53$) and Operational Efficiency ($r = 0.50$):** These results align with contemporary research showing that transactional leaders, through performance monitoring and contingent rewards, ensure task completion and procedural compliance (Alharbi et al., 2024).
- **Employee Productivity ($r = 0.48$) and Innovation ($r = 0.47$):** While transactional leadership positively impacts performance, its influence on innovation and productivity is less pronounced than transformational leadership. Alshahrani (2024) confirmed that transactional behaviors alone are insufficient to stimulate creative problem-solving or adaptive change in Saudi industrial contexts.

Overall, the correlation analysis underscores the superior effectiveness of transformational leadership in promoting innovation, productivity, and strategic goal attainment, while transactional leadership remains effective in maintaining compliance and operational stability.

4.5.3 Correlations Between Performance Indicators

High inter-correlations were observed among organizational performance indicators, highlighting the interdependent nature of employee productivity, operational efficiency, goal achievement, and innovation:

- **Goal Achievement and Innovation ($r = 0.74$):** This strong positive correlation indicates that organizations fostering innovative practices are more likely to achieve performance goals effectively. Recent empirical evidence from Saudi manufacturing firms supports this link, showing that innovation-driven processes significantly enhance goal attainment (Alharbi, Mansor, & Leong, 2025).
- **Employee Productivity and Operational Efficiency ($r = 0.64$):** This moderate correlation reinforces the principle that higher employee productivity contributes to improved operational efficiency. Alnahdi et al. (2023) confirmed that productivity gains in Saudi industrial firms are associated with better resource utilization and streamlined production processes.

Overall, transformational leadership demonstrates greater effectiveness across all performance domains, particularly in dynamic and innovation-driven manufacturing environments such as those in Riyadh. Transactional leadership, while positively associated with outcomes, shows more limited scope and impact. These findings are consistent with the Full-Range Leadership Theory (Bass & Avolio, 1995) and align with strategic HRM frameworks emphasizing the central role of leadership in achieving organizational performance objectives (Alshahrani, 2024; Yukl, 2013).

4.6 Multiple Regression Analysis

To examine the impact of Transformational and Transactional Leadership Styles on Organizational Performance, using data collected from 400 employees in manufacturing companies in Riyadh. **Table 9** presents The Model Summary table in regression analysis that provides statistical information that tells us how well independent variables collectively predict the dependent variable.

Table 9: Regression Model Summary

Statistic	Value	Explanation
R (Correlation Coefficient)	0.579	This value shows the strength of the linear relationship between the independent variables (Transformational and Transactional Leadership) and the dependent variable (Organizational Performance). An R value of 0.579 suggests a moderate to strong positive relationship. This means that as leadership effectiveness increases, so does organizational performance.
R² (Coefficient of Determination)	0.335	R ² indicates that 33.5% of the variance in organizational performance can be explained by the two leadership styles. This is a substantial amount of explained variance for social science research, where human behavior is affected by many factors. The remaining 66.5% is due to other variables not included in this model.
Adjusted R²	0.331	This adjusts the R ² value based on the number of predictors in the model. Since this model includes only two predictors, the adjustment is small. Adjusted R ² is useful when comparing models with different numbers of predictors.
Standard Error of Estimate (SEE)	0.472	This value indicates the average distance that the observed values fall from the regression line. A smaller SEE means better model fit. In this context, a SEE of 0.472 suggests that predictions of organizational performance are generally within ± 0.472 units of the actual scores.
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Source: Prepared By the Researcher for this Study.

The Coefficients in **Table 10** summarizes the individual contribution of each independent variable (Leadership Style) to predict the dependent variable (Organizational Performance).

Table 10: Regression Coefficients

Predictor	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig. (p-value)
(Constant)	1.210	0.128	–	9.453	0.000
Transformational Leadership	0.493	0.052	0.562	9.482	0.000
Transactional Leadership	0.124	0.048	0.162	2.583	0.010

Source: Prepared By the Researcher for this Study.

1. (Constant):

- B = 1.210: This indicates the baseline predicted score of organizational performance when both leadership styles (transformational and transactional) are equal to zero.
- While the constant is not the main focus, it plays a critical role in forming the regression equation.

2. Transformational Leadership

- B = 0.493: A one-unit increase in transformational leadership is associated with a 0.493 unit increase in organizational performance, holding other variables constant.
- Beta = 0.562: This standardized coefficient suggests that transformational leadership has the strongest impact on performance among all predictors.
- p-value = 0.000: The result is statistically significant, confirming a reliable relationship.

According to Bass and Avolio (1994) established that transformational leaders motivate followers by aligning organizational goals with employees' values, which enhances performance. Also Ng (2017) found transformational leadership highly effective in improving productivity and innovation in manufacturing settings.

3. Transactional Leadership

- B = 0.124: Indicates that a one-unit increase in transactional leadership leads to a 0.124 increase in performance, which is positive but much smaller than transformational leadership.
- Beta = 0.162: Shows that the relative effect size is smaller compared to transformational leadership.
- p-value = 0.010: Statistically significant but less impactful.

According to Judge and Piccolo (2004) concluded that transactional leadership is effective for short-term goal accomplishment but is less inspiring and less sustainable. In the Saudi context, Al-Malki and Juan (2018) demonstrated that while transactional leadership supports organizational structure and accountability, its impact on innovation and strategic performance is limited.

Organizational Performance = $1.210 + (0.493 \times \text{Transformational}) + (0.124 \times \text{Transactional})$

- **Transformational leadership** has a **strong and statistically significant** impact on organizational performance in Saudi manufacturing firms.
- **Transactional leadership** also contributes, but to a **lesser extent**.
- The findings **strongly support hypotheses H1, H2, and H3**:
 - **H1**: Supported – Transformational leadership has a strong positive impact.
 - **H2**: Supported – Transactional leadership has a smaller but significant impact.
 - **H3**: Supported – Leadership styles are significantly related to employee productivity and overall performance.

5 Research Findings

This study explored the relationship between leadership styles—specifically transformational and transactional—and organizational performance within the Saudi manufacturing sector. Using descriptive statistics, Pearson correlation, and multiple regression analyses, the following findings were established:

Finding 1: Transformational leadership has a significant positive impact on organizational performance: (Supports H1)

The regression analysis revealed that transformational leadership significantly predicts higher levels of organizational performance across various dimensions, including productivity, operational efficiency, goal achievement, and innovation ($\beta = 0.48, p < 0.001$). This supports the notion that transformational leaders—who inspire, motivate, and attend to individual needs—create a positive impact on organizational outcomes.

These findings are consistent with: Bass & Avolio (1994), who asserted that transformational leaders foster innovation and commitment among employees. Al-Malki and Juan (2018), who found that transformational leadership is strongly associated with increased organizational effectiveness in Middle Eastern contexts. Ng (2017), whose study on the manufacturing sector confirmed the pivotal role of transformational practices in enhancing adaptability and competitiveness.

Finding 2: Transactional leadership has a positive, but weaker, impact on organizational performance: (Supports H2)

While transactional leadership also showed a statistically significant impact on performance ($\beta = 0.27, p < 0.05$), its effect was notably less than that of transformational leadership. This suggests that transactional behaviors—such as clarifying roles, rewarding performance, and correcting deviations—do contribute to stability and short-term efficiency, but may lack the transformative influence necessary for long-term growth and innovation.

This aligns with: Judge & Piccolo (2004), who emphasized that transactional leadership is effective in routine tasks but is less influential in driving innovation. Odumeru & Ogbonna (2013), who suggested that transactional leaders can achieve compliance but not necessarily inspire higher engagement or creativity.

Finding 3: Leadership style is significantly associated with employee productivity: (Supports H3)

Pearson correlation coefficients demonstrated a strong and statistically significant relationship between leadership style (especially transformational) and employee productivity ($r = 0.58, p < 0.001$). Employees under transformational leaders reported higher commitment, timeliness, and task completion efficiency.

These findings mirror: Yukl (2013), who found that transformational leaders elevate employee morale and work output. Al-Sharafi & Rajiani (2013), who confirmed that leadership approach directly influences individual and team performance in Gulf industrial organizations.

Finding 4: Transformational leadership is the most commonly practiced leadership style in Saudi manufacturing: (Supports H4)

Descriptive statistics indicated that transformational leadership items had higher mean scores (average $M = 3.98$) compared to transactional leadership (average $M = 3.60$), suggesting that managers in the Saudi manufacturing sector increasingly favor inspirational, ethical, and employee-centered approaches.

This is consistent with: Almansour (2012), who noted a cultural shift in the GCC toward leadership styles that promote vision and emotional intelligence. Al-Malki & Juan (2018), who observed a growing prevalence of transformational practices as companies aim to meet Vision 2030 objectives of innovation and global competitiveness.

The research findings strongly support the theoretical framework that transformational leadership is more effective than transactional leadership in enhancing organizational performance, especially in contexts that demand innovation, adaptability, and strategic alignment. The study adds empirical support to the growing body of literature advocating for visionary and supportive leadership models in dynamic industries such as manufacturing.

5.1 Research Implications

This study provides several important implications for theory, practice, and policy in the context of leadership and organizational performance, particularly in the Saudi manufacturing sector.

5.2 Theoretical Implications:

The findings of this study contribute significantly to the body of knowledge on leadership and organizational performance by empirically validating the Multifactor Leadership Theory (Bass & Avolio, 1994) in a non-Western, Middle Eastern context. The positive and significant impact of transformational leadership on organizational performance supports prior work by Judge and Piccolo (2004), who emphasized its universal relevance across sectors and cultures.

Furthermore, the differentiation between transformational and transactional leadership styles reinforces the multidimensional structure of leadership and confirms that each style contributes differently to specific dimensions of performance, such as innovation, employee productivity, and goal achievement (Ng, 2017; Al-Malki & Juan, 2018). This adds depth to the cross-cultural generalizability of leadership constructs, especially in emerging economies like Saudi Arabia.

5.3 Practical Implications

From a managerial perspective, the findings of this study provide **evidence-based guidance** for executives and HR practitioners in Saudi manufacturing organizations:

- **Prioritize transformational leadership development:** Programs should focus on cultivating behaviors such as individualized consideration, inspirational motivation, and intellectual stimulation. These competencies have been shown to enhance employee productivity, operational efficiency, and organizational agility, supporting a high-performance culture.
- **Complement transactional leadership strategically:** While transactional leadership positively influences operational monitoring and procedural compliance, it should function as a **supportive, rather than primary, leadership approach**. This approach aligns with recommendations by Al-Sharafi and Rajiani (2013), emphasizing the strategic blending of leadership styles to address specific organizational objectives.
- **Foster innovation and empowerment:** The strong positive correlation between transformational leadership and employee innovation highlights the need to create a culture that encourages creativity, autonomy, and proactive problem-solving. In the context of Saudi Arabia's competitive and rapidly evolving manufacturing sector, empowering employees to innovate is critical for sustaining performance and achieving strategic objectives.

Overall, these practical implications underscore that **investing in transformational leadership development offers tangible benefits**, enhancing not only day-to-day operational outcomes but also long-term organizational adaptability and competitiveness in alignment with national development goals such as Vision 2030.

5.4 Policy Implications

At the organizational and policy-making level, the findings of this study provide strong practical justification for strategic action in Saudi manufacturing firms and related regulatory bodies. The evidence indicates that investing in transformational leadership development yields measurable benefits in employee performance, operational efficiency, and innovation, thereby supporting both organizational success and national economic objectives.

Key policy recommendations include:

- Integrating leadership competency assessments into recruitment, promotion, and succession planning processes, particularly for mid- to senior-level managerial positions, to ensure that individuals with strong transformational capabilities are recognized and advanced.
- Promoting national-level leadership training reforms, in collaboration with institutions such as the Human Resources Development Fund (HRDF), to align with Vision 2030 initiatives emphasizing knowledge-based industries, innovation, and human capital development.
- Designing organizational structures and reward systems that incentivize transformational leadership behaviors—such as mentoring, collaborative teamwork, and strategic visioning—so that performance evaluation mechanisms actively reinforce behaviors that drive organizational performance and employee engagement.

In conclusion, this study provides a positive practical justification for organizations and policymakers: by fostering transformational leadership, firms can enhance operational effectiveness, cultivate a culture of innovation, and contribute directly to Saudi Arabia's strategic vision. The research thus serves as a pragmatic roadmap for leadership development, demonstrating tangible benefits for employees, managers, and the broader industrial sector.

5.5 Future Researches

While this study has provided valuable insights into the impact of leadership styles on organizational performance within the Saudi manufacturing sector, several directions remain for future investigation. These recommendations are designed to inform **policy-makers, managers, and industry stakeholders** in developing evidence-based strategies:

- **Sectoral Expansion:** Future studies could examine leadership-performance dynamics across other industrial sectors in Saudi Arabia, such as construction, logistics, or energy, to assess whether the observed effects of transformational and transactional leadership generalize beyond manufacturing.

- **Longitudinal Analysis:** Conducting longitudinal research would enable a better understanding of how leadership styles influence organizational performance over time, particularly in response to evolving market conditions, technological changes, and workforce demographics.
- **Intervention-Based Studies:** Experimental or quasi-experimental designs testing the effectiveness of targeted leadership development programs can provide practical guidance for HR practitioners and executives seeking to enhance productivity, innovation, and employee engagement.
- **Cross-Cultural Comparisons:** Comparative research between Saudi firms and organizations in other GCC countries or emerging markets can help identify culturally contingent leadership practices, supporting global managers and multinational firms in tailoring leadership approaches effectively.
- **Integration with Strategic Initiatives:** Investigating how leadership styles interact with organizational initiatives such as digital transformation, lean manufacturing, or sustainability programs could offer actionable insights for decision-makers aiming to align leadership development with strategic objectives.
- **Employee-Centric Outcomes:** Future research could explore the impact of leadership styles on additional employee-level outcomes, including well-being, job satisfaction, and retention, providing a more holistic view of performance and workforce sustainability.

By pursuing these directions, future research can not only **advance academic knowledge** but also generate practical evidence to guide leaders, HR professionals, and organizational stakeholders in enhancing performance, fostering innovation, and achieving strategic goals.

6 Conclusion:

This study set out to examine the relationship between leadership styles—specifically transformational and transactional leadership—and organizational performance within manufacturing companies in Riyadh, Saudi Arabia. Drawing upon the Multifactor Leadership Questionnaire (MLQ) framework and established performance indicators such as employee productivity, operational efficiency, goal achievement, and innovation adaptability, the findings provide strong empirical evidence to support the role of leadership in shaping organizational outcomes.

The results clearly indicate that transformational leadership is more prevalently practiced and has a stronger and statistically significant positive impact on organizational performance compared to transactional leadership. Leaders who emphasize values, vision, innovation, and individualized consideration were found to inspire higher levels of employee productivity, operational efficiency, and organizational adaptability. These findings support the core propositions of Bass and Avolio's (1994) transformational leadership theory and align with prior studies conducted in both Western and Middle Eastern contexts (e.g., Almansour, 2012; Alkahtani, 2015).

Moreover, the use of multiple regression analysis confirmed that transformational leadership significantly predicts performance outcomes across multiple dimensions, validating Hypotheses H1 and H3, while H2 was partially supported, highlighting the limited but still relevant role of transactional leadership. The fourth hypothesis (H4) was confirmed by descriptive data, which showed transformational leadership as the most commonly adopted style among surveyed managers.

Importantly, this study contributes to the growing body of leadership research in Saudi Arabia, providing practical insights for organizational development in the manufacturing sector. It also underscores the importance of aligning leadership development programs with transformational competencies to drive strategic performance.

In conclusion, the study not only meets its research objectives but also offers meaningful implications for scholars and practitioners seeking to enhance organizational performance through effective leadership. The results reaffirm the critical need for visionary, inspirational, and adaptive leaders who can guide Saudi organizations toward sustainable success—particularly in the context of Saudi Vision 2030, which emphasizes innovation, efficiency, and human capital development.

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