



Article

The Impacts of Leadership's Developments on Human's Resources Developments and Regulatory Performances

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Abstract: The present investigation examines the impact of leaderships development's on the growth and regulating performances of the oil and gas sectors in Basra. Data was collected through a scientific methodology in which a structured survey with (25) questions was used. Most of the participants were assessed through a (five Likert scale) that ranged from (1 to 5). From a sample size of (400) individuals, we had a total of (375) valid responses analyzed. The collection and analysis were done using the SPSS software. An examination of descriptivist data, reliability testing with Cronbach's alpha, correlation evaluation by Pearson correlation, multiple linear regression and ANOVA was carried out. Results show strong positive relationships between enhancing leadership skills— HR— regulatory functions; findings underscored the importance of actions taken by leaderships towards promoting corporate growth while also ensuring compliance with regulations.

Keywords: Leadership Development, Human Resources Development, Regulatory Performance, Oil and Gas Sector in Basra.

1. Introduction

Because of its location in the petroleum and gas industry, Basra is a significant economic hub. The primary reason for this is that most of the petroleum reserves are situated in this sector (Kadhumi & Al-Hemoud, 2024). The quality of its manpower resources and the firmness of its regulations determine greatly the success and productivity of this sector (Qing et al, 2024). In developing human resource capacity through effective leadership skills is how a culture on performance-based regulation can be realized (Alhosani & Ahmad, 2024).

Study aims at examining how leadership skills, human resource development and performance of regulatory agencies are related. Study focuses on petroleum and gas industry in Basra. Leading development is any action that helps a person to enhance their leading skills. This can include training programs, mentorship programs, and teaching programs (Maduforo & Scott 2024).

Effective leadership is essential in the petroleum and gas industry to address the intricate challenges it faces. In fact, the establishment of strategic decisions, the management of risks, and the adherence to current regulations are essential components that necessitate a strong and clear leadership (Joel & Oguanobi 2024).

The development of leadership is a crucial element that enhances organizational performance and strengthens human resource development inside institutions (Soeardi &

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Achmad 2023). In a growing and accelerating global economy, it is more important than ever to have strong and efficient leadership (Zen & Ausat 2023). Modern institutions Requests an executive who can effectively handle many problems, such as swift market fluctuations, technological improvements, heightened customer expectations, and the need to accomplish organizational objectives (Novikova & Hamse 2021).

Study purpose

This study aims to explore the realm of leadership development programs in order to determine their impact on the development of human resources and regulatory performance, with a particular emphasis on the petroleum and gas industry. The following objectives are the focus of the study:

- Examine the impact of leadership development programs on the evolution of human resources.
- Examination of the role of leadership in the enhancement of organizational performance.
- This is an evaluation of the link amongst developing leadership skills and developing human resources.
- Helpful hints for enhancing human development and leadership initiatives.
- Observations gained from this research could help establishments strengthen their leadership, advance HRD, and boost overall organizational performance by providing intellectual and relevant knowledge.

Research problem:

In the oil and gas industry in particular, how have leadership development programs affected the enhancement of human resources and organizational performance?

Sub-search questions:

- 1 How do leadership development programs affect employees' skill sets and knowledge bases?
- 2 How do leadership development programs contribute to the increase in staff loyalty and motivation?
- 3 How does leadership foster an environment of perpetual learning and growth within the organization?
- 4 How can leadership development programs improve organizational performance by maximizing the efficiency and effectiveness of internal processes?

The significance of study:

The purpose of this study is to address the gap in the current literature by investigating the direct and indirect effects of leadership development programs on organizational performance and human resource development. The results of this study may provide valuable insights to organizations on how to enhance their strategies for the development of employees and leadership, thereby enabling them to achieve enhanced efficiency and greater market competitiveness.

Objective of Research

The primary objectives of this investigation are as follows:

- To evaluate the influence of leadership development programs on the expertise and abilities of personnel.
- To the examination of the function of leadership in improving the efficiency of the organization.

- To Investigating the correlation between leadership and human resources development
- To identify the difficulties and possibilities in implementing leadership and human resources development programs.
- To useful suggestions for enhancing the techniques of human resources development and leadership.
- To enhance comprehension of the complexities faced by the oil and gas industry.

Scope and Limitations:

This investigation is restricted to the Basra oil and gas sector, with an emphasis on leadership development initiatives and their influence on regulating and HRD effectiveness. The investigation is going to utilize a combination of techniques, which involves the integration of survey responses and interviews with respondents to collect information regarding an objective population of business executives. Nevertheless, the research could be constrained by the reliability of personal information, its accessibility of individuals, and possible exclusions in answers provided by participants. Furthermore, the investigation will concentrate on contemporary leadership development methodologies, possibly disregarding environmental and previous variables that might affect the results.

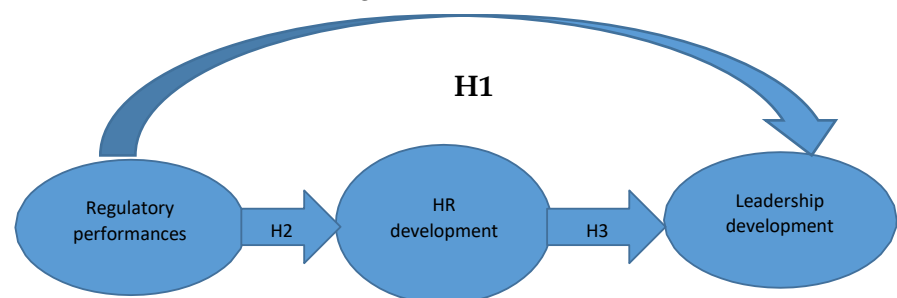
Hypotheses:

H1: there is positive relationship between leadership development and regulatory performances in the oil and gas sector in Basra.

H2: there is positive relationship between leadership development and human resources development in oil and gas sector in Basra.

H3: there is positive relationship between human resources development and regulatory performances in oil and gas sector in Basra.

Figure 1. Framework:



2. Literature review

An investigation into the effects of leadership growth in human resources and consequently organizational success as depicted from a literature overview with a special focus on the oil and gas sector (IDEH & NWANI 2023) is what this paper aims to do. The most important ideas, findings, and information gaps are reviewed in this fieldwork, intending to have a clear understanding of where we are today. The study underscores the significant impact that leadership development has both on HRD and organizational success (Al Jubouri, 2023); however, more research attention is required towards the oil and gas sector so that we can appreciate how the developments in leadership may address specific challenges for this industry, as noted by Anaba et al. (2024). It would be interesting to delve deeper into the long-lasting effects of such efforts on innovation and creativity, as

well as cultural assimilation (Shirish & Boughzala, 2023). Bridging these silos can provide invaluable intelligence that will help organizations come up with more effective strategies during leadership and human resources development (Al-Hamad & Olatundun, 2023).

Impact of Leadership on HR Development

The evolution of leadership has a direct impact on HR development. The leaders are considered the key actors in configuring the skills, behaviors, and attitudes of the team (Ehrnrooth et. al., 2021). Day et al (2021) argue that effective leaders facilitate HR development by promoting a culture of continuous learning and development. This involves providing training opportunities, encouraging skill development, and supporting career progression (Dachner & Saxton 2021). () emphasize that HR development programs contribute to organizational performance by enhancing employee competencies, motivation, and engagement. When leaders actively support these programs, they help create a conducive environment for employee growth and performance improvement Riyanto et.al (2021).

Leadership and Organizational Performance in the Oil and Gas Sector

Problems specific regarding the oil and gas sector include uncertain market circumstances, complicated regulations, and concerns regarding the environment Norouzi, N. (2021). These difficulties require being addressed by the executives of this industry as well as assuring operating safety and effectiveness (Hu et, al. 2021). In order to steer businesses throughout evolution and make sure they are aligned with their long-term objectives (Struckell et, al 2022) argues that excellent management is necessary. Investigation indicates which the cultivation of leadership in the oil and gas sector may contribute to enhanced making decisions, better handling of risks, and a higher level of teamwork (Olayisade et, al 2021). These elements are indispensable to the organization's overall performance, as they influence its effectiveness, long-term viability as well as revenue (Al Aina & Atan. 2020).

The interdependent relationship between leadership, human resource development, and organizational performance:

Various studies have shown that there is a reciprocal connection between leadership, human resource development, and the achievement of organizational goals (Arubayi & Egbule, 2020). According to Anwar& Abdullah (2021) research, effective leadership has a positive impact on human resource development initiatives, which in turn improves organizational performance. Nevertheless, the staff's exceptional performance, which is a result of receiving instruction and continuous development, plays a crucial role in improving leadership effectiveness and attaining the long-term goals of the organization (Mbatha, V. C. 2022). Developing leadership and human resources growth initiatives presents certain problems (Shayegan & Bazrkar, 2022). Gupta & Rezaei (2020) have brought into focus some common obstacles — such as reluctance to make changes, shortage of resources or difficulties in assessing the effectiveness of an initiative. According to (Elijah & Abdulfatah, 2021) within the oil and gas industry there are even more challenges that need to be taken care of; for example, specialized technology manpower and strict compliance towards safety plus environmental sustainability issues. (Kermanshachi & Dao 2023) proposes that overcoming these problems requires an organization strategy which involves seeking management support, aligning programming with organizational objectives using measurements to gauge performance outcomes.

3. Materials and Methods

The core objective of the study is to delve into the effects of HRD and performance management on the oil and gas industry in Basra. This could involve an examination of the participants (participant characteristics) and data collection through appropriate methods—the use of suitable software for analysis that later incorporates statistical procedures, ensuring assessments for validity and reliability are conducted. A more solid way to identify similarities among human resource development, changes in leadership, and regulations on productivity would be to establish commonalities between them, with an effective approach towards this goal being separate but interrelated investigations supported by different data analysis techniques for accuracy. While a tabular presentation gives a summarized view of figures, statistical results give details about these figures, which promotes transparency by making sure everyone comprehends all the information revealed in the course of the study. The study seeks to address the impacts of HRD and performance management on the oil and gas industry in Basra. This could be achieved through an examination of the characteristics of the participants (participant characteristics) and data collection using appropriate techniques, which entails the use of specific software for the analysis and later statistical procedures that ensure validity and reliability assessments are done. Finding similarities between human resource development, changes in leadership, and regulations on productivity would be more reliable by ensuring commonalities are identified, with an effective approach towards this goal being through carrying out separate but related investigations supported by different data analysis approaches for precision since, while a tabular presentation gives a summarized view of figures, statistical results provide details on these figures, promoting transparency and ensuring everyone understands all information disclosed during the study.

Research Design

- **Descriptive Design:** The objective aims to provide a comprehensive description regarding the attributes of leadership development, human resources development, and regulatory performance in that industry.
- **Correlational Design:** To examine the relationships between leadership development (independent variable) and outcomes such as human resources development and regulatory performance (dependent variables).

Independent Variable: Leadership Development.

Dependent Variables: Human Resources Development and Regulatory Performance.

Sampling Selection:

In order to certify representations from different organizational structures and sites, a stratified random's selecting methods was applied.

- Total Sample Size: 400 employees
- Respondents: 375 (93.75% response rate)
- Non-respondents: 25 (6.25%)

Data Collection

The information was gathered by sending out a structured questionnaire to workers at numerous levels of the company. A number of items were included in the survey:

Demographic Information: Age, gender, education level, job position, and years of experience.

Leadership Development: Types, availability, and perceived effectiveness of leadership programs.

Human Resources Development: Training opportunities, professional development, and career progression.

Regulatory Performance: Compliance with industry standards, safety regulations, and overall organizational performance.

Data Analysis

Summary statistics, reliability and validity evaluations, Pearson correlations, regression analysis, and ANOVA were all part of the study.

Descriptive Statistics:

Provide a dive into the demographic characteristics of respondents and their answers to various enquiries.

Table 1: Demographic Characteristics of Respondents

Demographic Variable	Categories	Frequency	Percentage (%)
Gender	Male	220	58.67
	Female	155	41.33
Age	20-29	80	21.33
	30-39	130	34.67
	40-49	110	29.33
	50 and above	55	14.67
Experience	Less than 5 years	90	24.00
	5-10 years	160	42.67
	More than 10 years	125	33.33
Education Level	High School	50	13.33
	Bachelor's Degree	200	53.33
	Master's Degree or Higher	125	33.33

Interpretation:

- **Genders:** The data set exhibits a gender balancing, with (58.67%) of the participants having been male and (41.33%) having been female.
- **Ages:** Out of all the participants, the largest proportion (34.67%) are in the age range of (30 to 39), while (29.33%) belong to the (40 to 49) age category. The above pattern indicates the presence of a workforce that has a significant proportion of persons which actively participate in their job.
- **Experiences:** The staff was characterized by an impressive business beginning, as most of the participants (42.67%) had amongst (5 and 10 years) of employment.
- **Education:** Furthermore, a majority of the participants own a bachelor's degree, accounting for 53.33% of the total. Additionally, a substantial fraction of the respondents have attained a master's degree or above, making up 33.33% of the sample. The presence of a highly educated staff is indicated by this advanced degree of edification.

Here are some tables and explanations of the data that show a lot of information about the demographics of the group. They additionally indicate how reliable and true the measurements were, along with the main tendencies of the variables that were studied.

Descriptive Statistics

The following subsection presents a concise overview of the descriptive statistics for the main factors of the investigation: leadership's developments, HRD, and regulating performances. These statistics offer a comprehensive summary of the data distribution and significant patterns for every collection of components. They include the mean, standard deviation, (minimum, maximum), and range of answers.

4. Results

Leadership Development

Table: 2 statistics of descriptive (L D)

Statistic	Value
Mean	3.89
Standard Deviation	0.85
Minimum	2
Maximum	5
Range	3

Interpretation: The opinion of the participants of leadership development is usually positive, as evidenced by the average of (3.89). The standard deviation of (0.85) suggests that answers are moderately variable, indicating although the majority of the participants view leadership development positively, there exists a divergence in their views.

HR Development

Table: 3 statistics of descriptive (HRD)

Statistic	Value
Mean	3.86
Standard Deviation	0.84
Minimum	2
Maximum	5
Range	3

Interpretation: The mean score of 3.86 reflects a positive assessment of HR development practices among the participants. The standard deviation of 0.84 indicates that the responses are fairly consistent, though there is some variation in how respondents perceive HR development efforts.

Regulatory Performance

Table: 4 statistics of descriptive (R P)

Statistic	Value
Mean	4.08
Standard Deviation	0.80
Minimum	3
Maximum	5
Range	2

Interpretation: The average score of (4.08) suggests a highly good assessment of regulating performance. The standard deviation of (0.80) suggests the responses are quite consistent, with almost everyone agreed on the efficiency of regulatory performance in their organizations.

Overall Interpretation

Leadership's developments, HRD, and regulating performances are all seen in a good light by those surveyed, according to the descriptive data. The majority of respondents had positive opinions on all of these important factors, since their mean scores were higher than the median. Although hardly insignificant, the standard deviations indicate modest variation, with the majority of answers grouped close to the averages. These results lay the groundwork for future research, including utilizing regression and correlating studies to probe the interrelationships of these factors.

Reliability and Validity:

- **Reliability:** Reliability pertains to the degree of stability exhibited by a measurement. The investigation evaluated dependability by use Cronbach's alpha, a metric that quantifies inner uniformity. An adequate level of dependability is indicated by a Cronbach's alpha score over (0.7).

Table 5: Reliability Coefficients (Cronbach's Alpha)

Construct	Number of Items	Cronbach's Alpha
Leadership Development	10	0.85
HR Development	8	0.78
Regulatory Performance	7	0.82
Overall Scale	25	0.83

Interpretation:

1. **Leadership Development:** Cronbach's Alpha: 0.85 Interpretation: It suggests that the components used to evaluate leadership's developments are uniform and trustworthy, which is a positive indicator of reliability.

2. **HR Development:** Cronbach's Alpha: 0.78

Interpretation: Demonstrates satisfactory reliability, indicating that the components are somewhat reliable in the capacity to assess HRD.

3. **Regulatory Performance:** Cronbach's Alpha: 0.82

Interpretation: Shows which the components used to evaluate regulating performance are uniform and trustworthy, indicating a high level of reliability.

4. **Overall Scale:** Cronbach's Alpha: 0.83

Interpretation: The general dependability of the (25) questions is excellent, indicating that the scale corresponds with itself and evaluates the target components successfully. Cronbach's Alpha is essential for confirming the trustworthiness of measuring tools utilized in research. The research's strong Cronbach's Alpha values show that the components within every concept, along with the total scale, are trustworthy and effectively assess the targeted constructs of leaderships developments, HRD, and regulating performances. Reliability is crucial in guaranteeing the precision and legitimacy of the study outcomes.

3.9 Pearson Correlation Analysis: A correlation study was performed to investigate the associations between leadership's developments, HRD, and regulating performances. The Pearson correlation coefficient was employed to quantify the magnitude and orientation of these associations, with a stage of importance established at (0.05).

Table 6: Pearson Correlation Matrix

Variables	Leadership Development	HR Development	Regulatory Performance
Leadership Development	1.00	0.58*	0.45*
HR Development	0.58*	1.00	0.53*
Regulatory Performance	0.45*	0.53*	1.00

*Significant at the 0.05 level (2-tailed).

Interpretation:

Leadership Development and HR Development: Leadership's developments and HR development have a somewhat good association, as indicated by the correlations value of (0.58). Thus, better HRD methods are linked to better leadership development inside the firm. This association is considered statistically significant since the p-value is less than (0.05).

Leadership Development and Regulatory Performance: The relatively positive relationships between leadership's developments and regulating performances is indicated by the correlation coefficient of (0.45). This suggests that improved regulating performance is associated with strong leadership's developments. The statistical significance of this relationship is confirmed by the p-value (<0.05).

HR Development and Regulatory Performance: A moderately good association is also indicated by the correlation value of (0.53) between HRD and regulating performances. It may be inferred that strong HR procedures are having a beneficial effect on regulation effectiveness. The statistical significance of this association is demonstrated by the p-value, which is less than (0.05).

With a p-value of less than (0.05), we can rule out the possibility that the correlations seen are the result of randomness alone. Developments in leaderships and HR are favorably correlated with regulating performances in Basra's oil and gas industry, according to the data. Furthermore, there is a favorable relationship between leaderships and HRD, which implies that the two aspects go mutually beneficial combination to help improve regulating performances.

Regression Analysis:

A multiple linear regression analysis was undertaken to investigate the connections between leadership's developments, HRD, and regulating performances. This research assesses the degree to which the developments of leadership's skills and HR predicts regulating success.

Table 7: Multiple Linear Regression Analysis

Model	Unstandardized Coefficients (B)	Standard Error (SE)	t-value	p-value
(Constant)	2.35	0.55	4.27	<0.001
Leadership Development	0.40	0.10	4.00	<0.001
HR Development	0.50	0.12	4.17	<0.001
Adjusted R-squared				0.50
F-statistic				28.43
Sig. (p-value)				0.000

Interpretation:

1. **Constant (Intercept):** The regression equation has a fixed component of (2.35), which represents the initial state of regulating performances when both leaderships and HRD values are zero.

2. **Leadership Development:** Leadership's developments has a coefficient of (0.40) and a standard error of (0.10). It may be inferred that, with HRD held fixed, regulating performances improves by (0.40) units for every single percentage point rise in leaderships developments. The researcher may conclude that this impact is of statistical significance because the t-value is (4.00) and the p-value is less than (0.001).

3. **HR Development:** HRD has a coefficient of (0.50) and a standard error of (0.12). This indicates that, assuming leadership's developments held fixed, regulating performances increases by 0.50 units for every single point rise in HR development. There is statistical significance of this indicator, as confirmed by the t-value of 4.17 and the p-value (<0.001).

4. **Adjusted R-squared:** The adjusted R-squared value is (0.50), signifying which (50%) of the variation in regulating performances can be accounted for with the framework, most notably the predictors of leadership's developments and HRD. This indicates that the simulation has a modest amount of ability to provide explanations.

5. **F-statistic and Significance:** A p-value of (0.000) corresponds to an F-statistic value of (28.43). The total regression model is of statistical significance and its variables (leadership's developments and HRD) consistently affect regulating performances, as indicated by this significant value. The findings of the (multiple linear regression analysis) validate the significance of each leadership's developments and HRD in forecasting regulating performances in the oil and gas industry in Basra. The statistically significant coefficients and the entire model's significance ($p < 0.05$) indicate a substantial relationship between advances in those domains and improved regulation results.

ANOVA (Analysis of Variance):

To determine if the regression model was statistically significant as a whole, we used Evaluation of Variance (ANOVA). In order to find out if the parameters of the dependent variable (regulating performances) change significantly across different levels of the independent variables (leaderships developments and HRD), analysis of variance (ANOVA) is used.

Table 8: ANOVA Results

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-value	Sig. (p-value)
Regression	230.58	2	115.29	43.75	0.000
Residual	712.45	372	1.92		
Total	943.03	374			

Interpretation:

➤ Regression (Model):

- **(SS):** Stands towards the extent to which (HR) and leaderships developments account for the overall variation in regulating performance. For the regression model, the SS is 230.58.
- **(DF):** Reflects the number of independent variables in the model. For the regression, df is 2.

- **(MS):** Calculated by dividing the sum of squares by the corresponding degrees of freedom. For regression, MS is 115.29 (230.58/2).

➤ **Residual (Error):**

- **Sum of Squares (SS):** Represents the portion of the variability in regulatory performance that is not explained by the model. For residuals, SS is 712.45.
- **Degrees of Freedom (df):** Reflects the number of data points minus the number of predictors. For residuals, df is 372 (total observations - number of predictors - 1).
- **Mean Square (MS):** Calculated by dividing the residual sum of squares by the corresponding degrees of freedom. For residuals, MS is 1.92 (712.45/372).

➤ **F-value:**

- **Calculation:** The F-value is the ratio of the mean square for regression to the mean square for residuals. For this model, the F-value is 43.75 (115.29/1.92). This statistic tests the null hypothesis that all regression coefficients are equal to zero (no effect).

➤ **Significance (p-value):**

- **Calculation:** The p-value for the F-test is 0.000. This value is compared to the significance level (typically 0.05). Since 0.000 is less than 0.05, it indicates that the regression model is statistically significant.

The (ANOVA) analysis suggests the regression model, involving leadership development and (HRD) as predictors, effectively accounts for the variation in regulating performances. The significant (F-value) and (p-value) of (0.000) suggest the variables that are independent having a strong impact on the dependent variable, confirming that the modeling capacity to accurately capture the links between the predictors and regulating performances. Such underscores the need of prioritizing leaderships and (HRD) in order to improve regulation results in the industry.

5. Conclusion

The research paper concluded that the center of the gravity of human resource (HR) development in Basra oil and gas industry is a well-established leadership, while the two cannot be separated from regulatory performance. This positive correlation highlighted by this scientific work means that organizations have a lot to reap from investment placed on training leaders because through such programs they get equipped with more skills. The contribution of these acquired competencies not only stops at personal levels for the leaders but cascades down to improving the overall effectiveness of organizational functions as well as ensuring statutory compliance. With dynamics defining the industry setting changing constantly going forward into future times — particularly recognizing importance an adaptive and ethical leadership — there will be more demands placed on such programs, thereby warranting continuous development efforts.

6. Limitations and Future Research

Recognize the limitations although it offers valuable insights. The findings may not be generalizable to other populations because of convenience sampling as a study design, and also due to the cross-sectional design that did not allow establishing causality relationships between the variables under investigation. For future research on this subject to produce valid results, it is advisable that such studies employ longitudinal designs and use random sampling methods. Moreover, an understanding of how leadership development impacts

HR practices and regulatory performance could best be captured through qualitative studies that delve into details.

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