

## *The Role of Performance Quality as A Mediating Variable on The Relationship Between Transactional Leadership and Sustainable Development: A Field Study*

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### Abstract

The higher education sector is considered one of the important sectors and is referred to as the vital artery due to its great importance in providing the labor market and state institutions with expertise, skills and human energies. This sector's contribution to the development process by keeping pace with modern technology and sciences and its possession of enormous human competencies, expertise and potential has made this sector a major focus of interest for other sectors. The main purpose of the study is how to maintain the quality of performance and sustainability of quality through sustainable development. A random sample of workers in the higher education sector was taken and the questionnaire was the main tool for data collection, where (235) questionnaires were distributed, of which (192) were valid for use. The (SPSS) and (AMOS) Structural Equation Model (SEM) version (25) were used to analyze the data and results. There is a significant positive statistical relationship between transactional leadership and sustainable development. In addition, there was a significant impact and role of the mediating variable (performance quality) on the relationship between the independent variable (transactional leadership) and the dependent variable (sustainable development).

**Keywords:** Service quality, transactional leadership, sustainable development, AMOS-SPSS statistical analysis.

### 1- Introduction

Higher education is considered one of the most important sectors on the local and global levels, as this sector has great importance that contributes to the development of the public and private sectors, as it possesses competencies and expertise with enormous potential that contributes to supplying the labor market with technology and developing infrastructure. Higher education is considered the main source for other sectors and for the labor market, as it is considered to have a close relationship with all sectors and is in great contact with other public and private sectors. Its contribution to the labor market is considered a major contribution represented by the large outputs of higher education and supplying the labor market with those outputs, in addition to its contribution to addressing problems in other sectors through studies and practical research, which is considered to be of great importance in addressing cases that require immediate solutions. Iraqi universities are considered solid universities over the decades, as many scientists graduated from them, including engineers, doctors, administrators, and various specializations. They are distinguished by the modernity of the curricula to keep pace with the outside world and for the competencies and experiences they contain, as Iraqi higher education is known for its high quality, expertise, and ability to face challenges despite the circumstances that Iraq went through during the previous years. However, it faced those challenges and Iraqi universities maintained their quality,

development, and technology, which distinguishes them (Abbasi et al., 2025b). This is what distinguishes Iraqi universities and places them on the important classifications of Arab and international education. Iraqi public universities include academic leaders with significant and important experience, skills, and knowledge that enable them to contribute to the management of leadership positions in universities with firmness and success, due to their different leadership styles, according to the leadership style and in a manner consistent with the academic environmental conditions and according to the appropriate circumstances and time (Abbasi et al., 2025a; Azim et al., 2019). Some follow the transactional leadership style or pattern, some follow the transformational leadership style, others follow the academic leadership style, and there are other different leadership styles and methods, all of which are considered effective in achieving the university's goals and strategies in line with the nature of the academic environment, as successful leadership motivates the satisfaction of employees and contributes to developing their skills and developing their scientific expertise through seminars, conferences and workshops that are always of great benefit to employees, as leadership is considered an art and a science, as it is in contact with management (Imaniyati et al., 2025; Sabwami, 2025; Shih et al., 2025).

## 2. Study Background

### 2.1 Transactional Leadership

Transactional leadership has been defined in different ways. It has been defined as a leadership style adopted by the leader or manager based on the exchange of interests between the leader and the subordinate, where the exchange focuses on the principle of mutual benefit between the leader and the subordinates (Wuryaningrat et al., 2024; Zheng et al., 2025). Transactional leadership is an approach followed by leaders in dealing with subordinates by providing a suitable environment for subordinates through the motivation and evaluation provided by leaders to their work in a manner that is far from the use of force. Transactional leadership is considered one of the effective leadership methods in administrative work and on founders by providing them with everything they need, which makes the founders in a position of complete satisfaction, which contributes to encouraging them to do administrative work and provide the best that can be provided, in addition to following the directives of the managers or leaders directly responsible for them (Ahmad, 2025; Baviskar & Nannavare, 2025; Samodien et al., 2024). Higher education includes many leaderships that adopt different leadership styles, including academic leadership, transformational leadership, transactional leadership, and other leadership styles and patterns adopted by university leaders. The leadership methods used by university leaders differ depending on the curriculum, academic

environment, and nature of the work of each institution. In addition, social, personal and scientific factors are what determine the extent to which any leadership style is followed. This comes either through studies, training courses, seminars and modern methods, or through instinct. Therefore, reciprocal leadership is considered a mutual benefit between the leader and the founders (Du et al., 2025; Gonzales-Pinedo et al., 2023; Imaniyati et al., 2025; Kiran et al., 2025). This determines the nature of the relationship between them through what the leader provides to the followers in terms of meeting their needs, and in return, the subordinates carry out the official directives accurately and without boredom and implement the strategies and future plans (Barkat et al., 2025; Imaniyati et al., 2025; Nwagu & Okoye, 2024; Zheng et al., 2025). The higher education sector is considered one of the most important public and private sectors due to its importance in meeting the needs of the local and global market for expertise, competencies, manpower and productive force, and to keep pace with the outside world and keep pace with it. Many studies have indicated that transactional leadership is a successful approach in institutions that seek to achieve their goals, as it contributes to achieving the quality of institutional performance. Many studies have indicated that there is a strong relationship between transactional leadership and the quality of institutional performance, which was evident through the

results (Clements, 2023; Malek et al., 2024; Samodien et al., 2024; Wuryaningrat et al., 2024). Studies have shown that reciprocal leadership has a significant impact on the quality of institutional performance, as this impact contributes to improving the quality of performance of employees by providing an integrated environment, which contributes to employee and leadership satisfaction (Aun et al., 2020; Sun et al., 2025; Vukmir, 2006). This reflects a reciprocal image between leadership and subordinates. Many organizations are contributing to the pursuit of adopting the style and pattern of reciprocal leadership because of its reflective effects on institutions and because it contributes to the satisfaction of employees in institutions (Shih et al., 2025). This is what encourages the adoption of the style or pattern of reciprocal leadership in institutions.

## 2.2 Performance Quality

Performance quality is defined as the basic criterion for evaluating the extent to which the organization's goals are achieved through the skills and behavior of the organization's employees (Fayyaz et al., 2025; Hassanah Husin et al., 2025). Performance quality has been defined in different ways, including the extent to which the individual assigned to the task is able to perform his work with high quality (Lebuda & Benedek, 2025; Wuryaningrat et al., 2024; Zhang & Zhu, 2025). Performance quality is defined as the skills possessed by employees in terms of experience and competence in achieving the organization's goals, which contributes to developing the skills and capabilities of employees in the organization. The most important thing that distinguishes higher education is the competencies and expertise present in this sector, as it includes a large group of experiences and competencies that contribute to achieving the organization's goals in a manner consistent with the academic environment. This is what distinguishes higher education, as the quality of institutional performance is what it includes (Lin et al., 2024; Nwagu & Okoye, 2024; Siambi, 2023). Organizations, particularly the higher education sector, seek to train, develop, and advance employees in a way that is consistent with the external

world's technology and keeps pace with the external world. This depends on the quality of employees' performance and the skills and experience they possess. The importance of performance quality is divided into two main axes (Akhtar et al., 2023; Malek et al., 2024; Wuryaningrat et al., 2024). The first is the importance of performance quality at the organization level, and the second is the importance of performance quality at the employee level. The importance of quality performance at the employee level is that it contributes to enhancing skills, developing capabilities, and diagnosing the strengths and weaknesses of the organization for its employees through a comprehensive evaluation. The importance of quality performance at the organizational level, as it is represented in the organization's confidence in its employees and the development and improvement of the capabilities and skills of its employees, thus contributing to the development of the organization (Akhmetov et al., 2025; Arefieva et al., 2025; Balakrishnan et al., 2025; Gonzales-Pinedo et al., 2023).

## 2.3 Sustainable Development

There are many definitions of sustainable development, where it has been defined as meeting the needs of the present without harming or compromising future needs by organizing the work of management in a manner consistent with the plans and goals of the organization (Aguilar-Cruz & Campos-Sánchez, 2024; AlQhtani, 2025; Malek et al., 2024). The dimensions of sustainable development can be summarized in two main dimensions: the social dimension and the economic dimension. The economic dimension includes maintaining sustainable economic growth, which contributes to providing job opportunities and maintaining economic prosperity in a manner consistent with the economic environment and achieving all requirements. The dimensions of sustainable development can be summarized in two main dimensions: the social dimension and the economic dimension (Al-Raeei, 2025; Biermann et al., 2022, 2022; Chusniyah & Makruf, 2025a). The economic dimension includes maintaining sustainable economic growth, which contributes to providing job

opportunities and maintaining economic prosperity in a manner consistent with the economic environment and achieving all requirements. The environmental dimension is added to it, which includes how to preserve the environment and its natural resources, reduce pollution, and preserve natural resources such as oil and water resources such as dams and rivers (Elmassah et al., 2022; Gazi et al., 2024; Heleta & Bagus, 2021). Therefore, it is considered very important in achieving and implementing sustainability. The importance of sustainable development in higher education is represented in many aspects, as it does not lie only in the curricula, but also in graduating academic leaders, expertise and competencies that contribute to supplying the labor market with sustainable development through the skills they possess (Figueira & Fullman, 2025; Gallego-Álvarez & Rodriguez-Dominguez, 2023; Hafeez et al., 2024). Higher education plays an important and decisive role in forming important academic leaders who have a thorough understanding of the fundamental issues of sustainable development. In addition, higher education contributes effectively to focusing on scientific research and basic issues related to sustainable development, as it is considered the main driver of scientific research (Chishti et al., 2025; Chusniyah & Makruf, 2025b; Corcoran et al., 2002).

### 3. Study Problem

Higher education is considered the main source for other sectors and for the labor market, as it is considered to have a close relationship with all sectors and is in great contact with other public and private sectors. Its contribution to the labor market is considered a major contribution represented by the large outputs of higher education and supplying the labor market with those outputs, in addition to its contribution to addressing problems in other sectors through studies and practical research, which is considered to be of great importance in addressing cases that require immediate solutions. Iraqi universities are considered solid universities over the decades; The study problem revolves around the impact of performance quality on the relationship

between transactional leadership and sustainable development.

### 4. Study of Objectives

- 1- To Measuring The Relationship Between of Transactional Leadership and Sustainable Development
- 2- To Measuring the Relationship Between of Transactional Leadership and performance quality
- 3- To Measuring The Impact of Performance Quality on The Relationship Between Transactional Leadership and Sustainable Development

### 5. Hypothesis of Study

1. Hypothesis (H1) of Transactional Leadership significantly affects Sustainable Development
2. Hypothesis (H2) Transactional Leadership significantly relationship with performance quality
3. Hypothesis (H3) of Performance Quality significantly affects on The Relationship Between Transactional Leadership and Sustainable Development.

### 6. Methodology

The researchers followed the quantitative method in this study, where data were collected and analyzed through the quantitative method. The questionnaire was a main department in collecting data, as the questionnaire was designed based on previous studies, as the independent variable included (9) items of (Transactional leadership), the mediating variable of (performance quality), (10) items, and the dependent variable of (sustainable development), (8) items. A random sample was taken from workers in the higher education sector, specifically from government universities, and the sample size was (235). The valid questionnaires for analysis were (192) questionnaires. The (SPSS) and (AMOS) Structural Equation Model (SEM) version (25) were used to analyze the data and results. There is a significant positive statistical relationship between transactional leadership and sustainable development. In addition, there was a significant impact and role of the mediating variable (performance quality) on the relationship between the independent variable (transactional leadership) and the

dependent variable (sustainable development).

## 7. Results and dissection

The collected data were analyzed using the statistical program SPSS and the AMOS-SEM program. The data were entered into the SPSS program and the degree of reliability

and validity of the data was measured. It was found that the degree of reliability for all variables was more than 70, which is acceptable based on research sources. Table 1 shows the degree of reliability of the variables.

**Table 1: Reliability of variables**

Variables cod		COD	No. items	Cronbach's Alpha
Transactional Leadership	Independent	TL	9	0.83
Performance Quality	Moderator	PQ	10	0.74
Sustainable Development	Dependent	SD	8	0.77

In order to analyze the relationship between the variables and to prove the hypotheses that were previously established, the SPSS program was used to measure the relationship between the variables and to indicate whether there is a relationship between the variables and what type of relationship is positive or negative to prove the hypotheses that were

established, which are: (Hypothesis (H1) of Transactional Leadership significantly relationship with Sustainable Development), (Hypothesis (H2) Transactional Leadership significantly relationship with performance quality) Table No. 2 shows the type of relationship between the variables.

**Table 2 Correlations: the relationship between the variables**

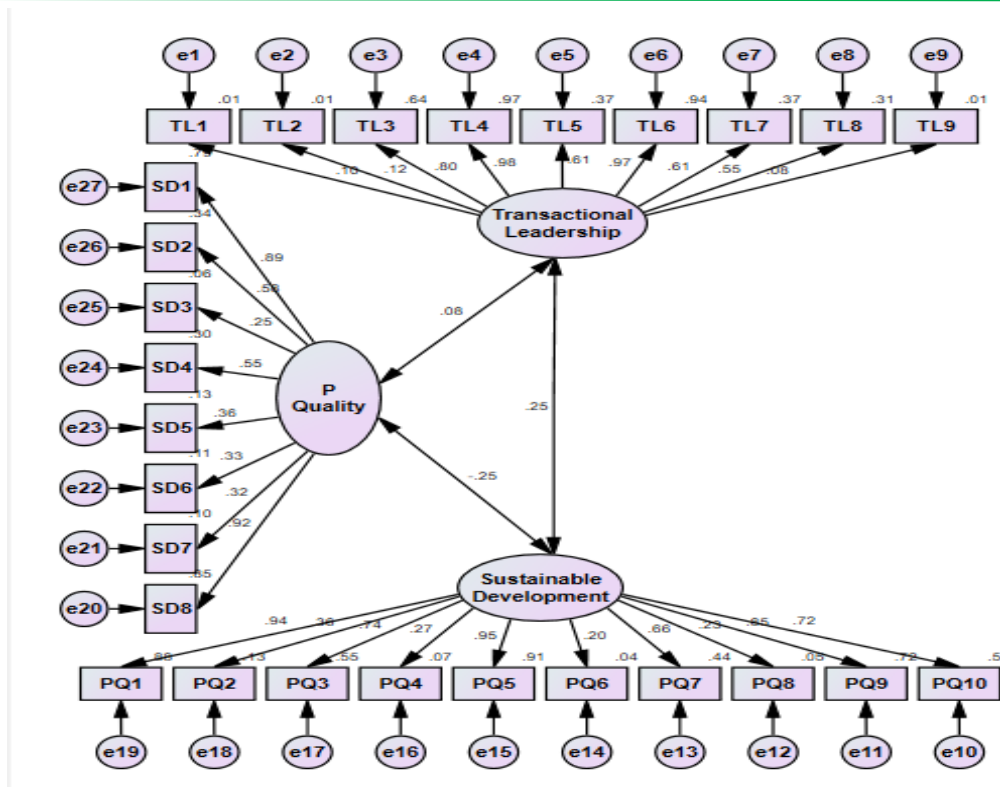
		TL	PQ	SD
TL	Pearson Correlation	1	.288**	.288**
	Sig. (2-tailed)		.000	.000
	N	192	192	192
PQ	Pearson Correlation	.288**	1	1.000**
	Sig. (2-tailed)	.000		.000
	N	192	192	192
SD	Pearson Correlation	.288**	1.000**	1
	Sig. (2-tailed)	.000	.000	
	N	192	192	192

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The results shown in Table 2 show that the relationship between the independent variable, transactional leadership, and the dependent variable, sustainable development, is a positive, significant, and statistically significant relationship with statistical significance at (.288\*\* ). Accordingly, the first hypothesis is considered to have been achieved. In addition, the results show that the relationship between the independent variable, transactional leadership, and the mediating variable, performance quality, is a strong, positive relationship with statistical

significance at (.288\*\* ). Accordingly, the second hypothesis is considered to have been achieved.

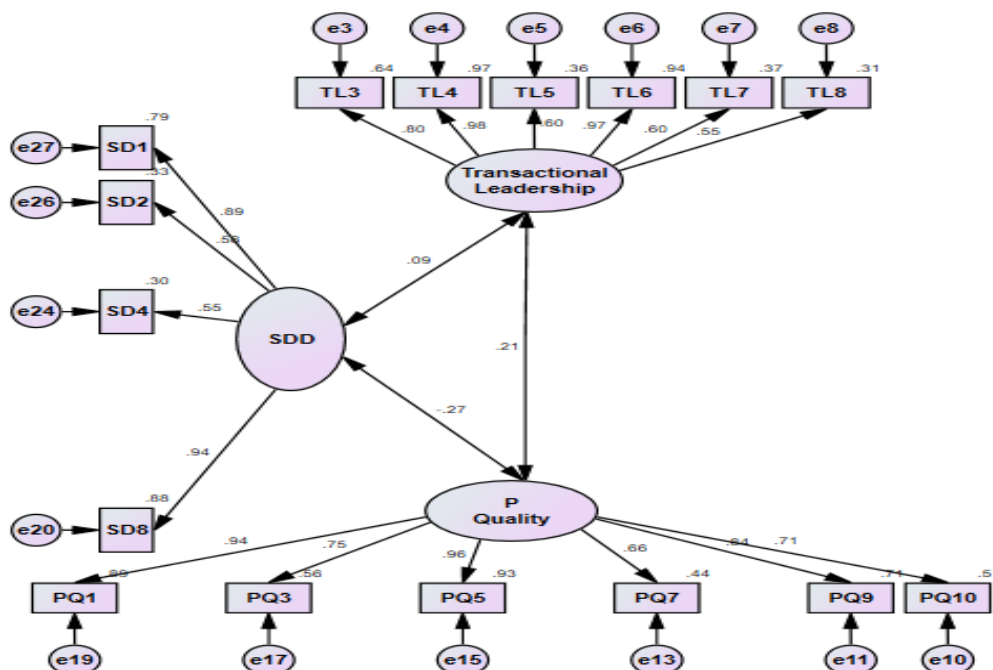
In order to test the third hypothesis, measuring or testing the effect of the mediating variable, performance quality, on the relationship between the independent variable, transactional leadership, and the dependent variable, sustainable development, the statistical program AMOS-SEM was used to report and analyze the data and measure the effect of the mediating variable on the relationship between the other variables.



**Figure1: The Measurement Between Transactional Leadership, Quality Performance and Sustainable Development**

The data were analyzed using the AMOS-SEM program, the structural equation model, to measure the effect of the mediating variable on the relationship between the independent variable and the dependent variable. The results of the first stage in Figure 1 showed that the number of paragraphs for the independent variable,

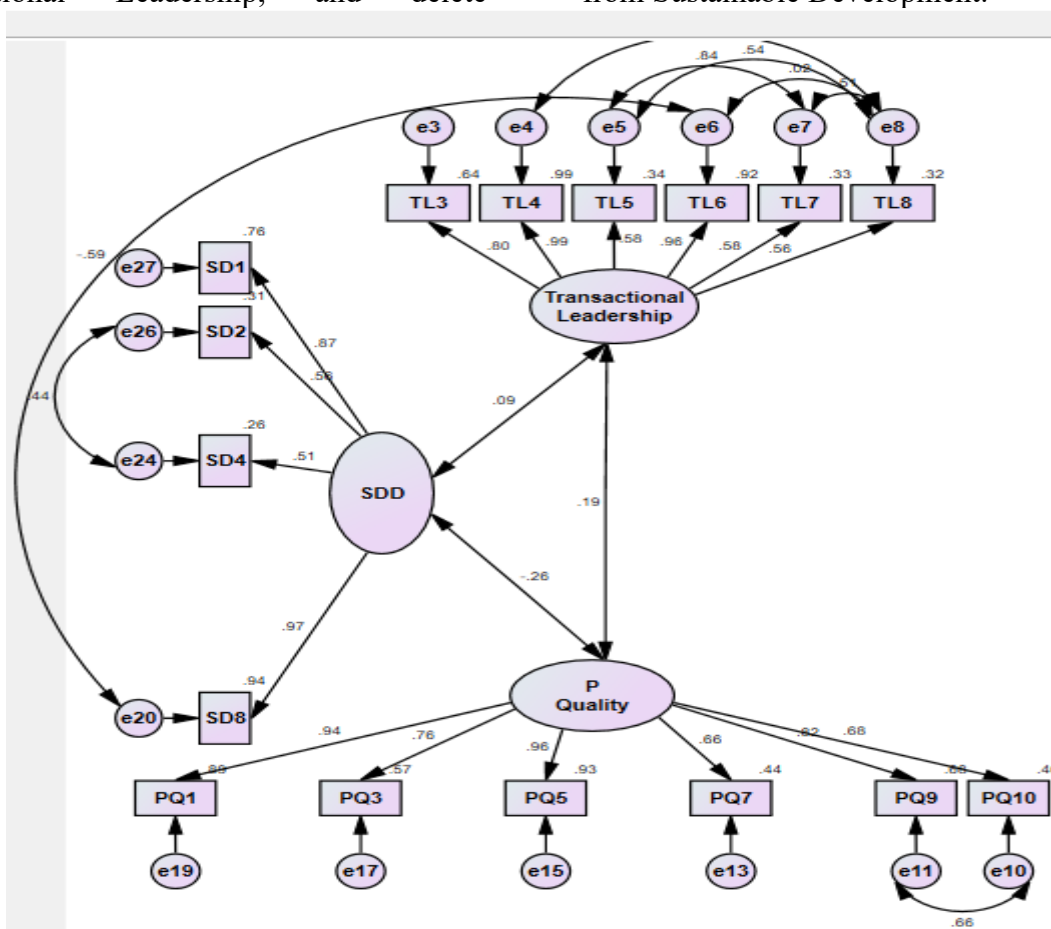
transactional leadership (9) items, the number of paragraphs for the mediating variable, performance quality (10) items, and the number of paragraphs for the dependent variable, sustainable development (8) items, where some items need to be deleted because the influence factor is less than (0.5).



**Figure2: The Measurement Between Transactional Leadership, Quality Performance and Sustainable Development After Modification**

items with an impact factor of less than 0.5 were deleted. (TL1, TL2, TL3) from Transactional Leadership, and delete

(QP2, QP4, QP6, QP8) from Quality Performance, and delete (SD3, SD5, SD6, SD7) from Sustainable Development.



**Figure3: The Final Measurement Between Transactional Leadership, Quality Performance and Sustainable Development After Modification**

After testing the data three times and deleting the paragraphs in which the influence factor is less than 0.5 and making the required adjustments, the final results were obtained, which are considered acceptable results, as the percentage of the basic criteria for the test is acceptable, as its percentage is greater than 0.90, including (CFI) (IFI) (TLI) (RFI), all of which are greater than 0.90, based on Table

No. (3,4), which shows the results. Accordingly, the mediating variable is considered to have a positive influence on the relationship between the independent variable, transactional leadership, and the dependent variable, sustainable development. Accordingly, the third hypothesis is considered to have been achieved.

**Table 3 Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.931	.911	.963	.951	.962
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**Table 4 CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	43	195.771	93	.000	2.105
Saturated model	136	.000	0		
Independence model	16	2846.278	120	.000	23.719

## 8. Conclusion

Higher education is considered the main source for other sectors and for the labor market, as it is considered to have a close relationship with all sectors and is in great contact with other public and private sectors. Its contribution to the labor market is considered a major contribution represented by the large outputs of higher education and supplying the labor market with those outputs, in addition to its contribution to addressing problems in other sectors through studies and practical research, which is considered to be of great importance in addressing cases that require immediate solutions. Iraqi universities are considered solid universities over the decades, The study problem revolves around the impact of performance quality on the relationship between transactional leadership and sustainable development The researchers followed the quantitative method in this study, where data were collected and analyzed through the quantitative method. The questionnaire was a main department in collecting data, as the questionnaire was designed based on previous studies, as the independent variable included (9) items of (Transactional leadership), the mediating variable of (performance quality), (10) items, and the dependent variable of (sustainable development), (8) items. A random sample was taken from workers in the higher education sector, specifically from government universities, and the sample size was (235). The valid questionnaires for analysis were (192) questionnaires. The (SPSS) and (AMOS) Structural Equation Model (SEM) version (25) were used to analyze the data and results. There is a significant positive statistical relationship between transactional leadership and sustainable development. In addition, there was a significant impact and role of the mediating variable (performance quality) on the relationship between the independent variable (transactional leadership) and the dependent variable (sustainable development ).

## Data Availability:

The data used to support the results of this study has been included in the article.

## Conflict of Interest:

The authors declare that they have no conflicts of interest.

## Funding Sources:

No financial support was received.

## Acknowledgments:

None.

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