
The Influence of Ethical Leadership and Sustainable Leadership on Sustainable Performance: The Moderating Role of Gender

Submitted 01/08/23, 1st revision 16/08/23, 2nd revision 14/09/23, accepted 30/09/23

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Abstract:

Purpose: *To determine the influence of ethical leadership and sustainable leadership on sustainable performance in medium-sized companies. In addition, this research evaluates the moderating role of gender in this relationship.*

Design/Methodology/Approach: *Data from medium-sized companies in Guayaquil, Quito, Manabí, El Oro, and Azuay in Ecuador were used. Using structural equation modeling, the influence of ethical and sustainable leadership on sustainable performance and the moderating role of gender were analyzed.*

Findings: *The results show that ethical leadership has a significant negative influence on sustainable performance and sustainable leadership has a significant positive influence on sustainable performance. Additionally, the moderation of gender in the relationship between sustainable leadership and sustainable performance is verified.*

Practical implications: *This study proposes a new model considering three constructs: ethical leadership, sustainable leadership and sustainable performance, which will serve for future research on these topics.*

Originality/value: *With these findings, new knowledge is contributed to both the scientific community and business management.*

Keywords: *Ethical leadership, sustainable leadership, sustainable performance.*

JEL codes:

Paper type: *Research article.*

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1. Introduction

Medium-sized companies play an important role in the country's economy, they are the source of economic and social development, such as job creation, export promotion and industrial development of the country (De Sousa Jabbour *et al.*, 2020). Despite De Sousa's indications, there are not many publications on medium-sized enterprises. So far, the literature has focused more on large companies than on medium-sized companies in terms of implementing sustainable business practices (Boakye *et al.*, 2020; Dey *et al.*, 2020).

Sustainability is a new business trend that has fundamentally changed the demands of business leaders (Iqbal *et al.*, 2020a). However, developing and maintaining sustainable business operations can be a challenging task because it requires broad consensus and collective efforts from all stakeholders (Jawaad and Zafar, 2020; Koirala and Pradhan, 2020). Among the different stakeholders, the roles of managers can be critical because they are responsible for developing appropriate strategies, acquiring and utilizing the necessary resources, and guiding employees in the right direction to achieve sustainable goals, objectives, and performance (Cheema *et al.*, 2020).

Also, managers as leaders of organizations must develop sustainability ideas that can activate the behavioral intention of employees toward environmental conservation for the environment (Cheema *et al.*, 2020). Likewise, managers as leaders of organizations should develop sustainability ideas that can activate employees' behavioral intention towards environmental conservation to improve sustainable performance and gain competitive advantage (Rubel *et al.*, 2021; Uddin *et al.*, 2021).

On the other hand, appropriate leadership can induce mutual learning, ethical values and norms and promote voluntary environmental behavior that reinforces the dynamic capability of the firm to achieve superior performance in financial and social aspects (Liao and Zhang, 2020; Pureza and Lee, 2020; Tariq *et al.*, 2020). In turn, sustainable leadership in turn promotes sustainability values at the individual, organizational and societal levels (Iqbal *et al.*, 2020a).

However, sustainability has become the main concern of business organizations because it provides opportunities for long-term growth and development, financial viability and competitive advantages (Kim and Hall, 2021; Wang *et al.*, 2021).

The objective of this research is to determine the influence of ethical leadership and sustainable leadership on sustainable performance in medium-sized companies. In addition, this research assesses the moderating role of gender in this relationship. The scales used for the questionnaire are the ethical leadership scale developed by (Brown *et al.*, 2015), the sustainable leadership scale developed by (McCann and Holt, 2010) and the sustainable performance scale developed by (Qorri *et al.*, 2018).

The survey was conducted in medium-sized companies in Pichincha, Guayas, Manabí, Azuay and El Oro in Ecuador.

Few studies can be found in the literature on the three constructs ethical leadership, sustainable leadership and sustainable performance. The contribution of this study considers the research needs on sustainable performance that would contribute to understand from a holistic perspective from the resource and capability based theory (Barney, 1991), the social learning theory (Bandura, 1977; 1986), the stakeholders theory (Freman, 1984).

Authors (Dey *et al.*, 2022; Ogaga *et al.*, 2020) mention that research on the impact of ethical leadership on sustainable performance is still limited, (Buruwat *et al.*, 2019) indicates that sustainable leadership is still in infancy, and (Boakye *et al.*, 2020) stated that lack of awareness of the environmental impacts of their operations and low adoption rates of environmental practices.

This study addresses these empirical and theoretical knowledge gaps, builds a structural equation model linking the three latent variables mentioned above. The main findings show that these links are significant, providing new insights for both the scientific community and business managers.

2. Literature Review

2.1 Ethical Leadership

Burns (1978) proposed that transformational leadership is moral leadership because transformational leaders inspire their followers to look beyond self-interest and work together for a collective purpose. However, this seminal work sparked a debate on the ethics of transformational and charismatic leadership with scholars opining on both sides of the theme. The most commonly used definition is that ethical leadership is about demonstrating acceptable behavior through personal actions and interpersonal relationships, and encouraging such behavior among followers through two-way communication, support, and decision making (Brown *et al.*, 2005).

In addition, ethical leaders who share the common characteristics of moral people and managers act as the dominant force to ensure sustained performance (Iqbal *et al.*, 2020a). Also, Wang *et al.* (2017) pointed out that despite the importance of ethical leadership, its effect on different aspects of firm-level performance is unclear.

2.2 Sustainable Leadership

Sustainability is a new business model that has changed the needs of business managers and has created a new type of leadership called sustainable leadership (Iqbal *et al.*, 2020a). In addition, the sustainable leader is someone who is able to define, implement plans, strategies and management methods that are consistent

with the principles and purposes of sustainable development (Pastore, 2020). On the other hand, sustainable leaders use the resources of their organizations to solve environmental and social problems creating value for shareholders (Fatoki, 2021).

Also, sustainable leaders enhance the innovative thinking skills of their employees by facilitating knowledge sharing within the organization. Sustainable leaders also promote innovation by providing employees with the confidence and support to generate new ideas (Iqbal, Ahmed and Halim, 2021; Norena-Chavez and Thalassinou, 2022a; 2022b; 2023).

Sustainable leadership denoted clear purpose, visual learning, awareness of personal assumptions and motivations, good stress management, and self-care (Iqbal *et al.*, 2020b). Also, sustainable leadership focuses on the connections between business, society and the environment, and generates value in long-term strategic decisions (Iqbal *et al.*, 2020a). Finally, sustainable leadership is recommended as a highly effective leadership for addressing environmental problems (Kantabutra and Punnakitikashem, 2020).

2.3 Sustainable Performance

Sustainable performance is defined as the ability to operate efficiently, profitably, survive, grow, and rebel against environmental opportunities and threats (Umar and Dikko, 2018). On the other hand, sustainable performance is seen as the achievements of an organization that relate to stakeholder expectations in three key areas: economic, social and environmental performance, and the actions taken to achieve that economic, social and environmental dimension, reflecting the organization's efforts (Carroll, 2021; Rajesh, 2020).

In addition, Bouloiz (2020) points out that business organizations are now being given in order to use natural resources, resources and a way to maintain relations with workers and the environment. Therefore, sustainable development requires companies to integrate economic, social and environmental objectives in their practices without compromising the resources used by future generations (Iqbal *et al.*, 2020a). Similarly, the benefits of sustainability include a competitive advantage in business organizations (Virakul and Russ-Eft, 2019).

2.4 Ethical Leadership and Sustainable Performance

The relationship between the constructs ethical leadership and sustainable performance has been explored by some researchers. Ogaga *et al.* (2022) examined how to account for the direct effect of ethical leadership on the sustainability of agri-food companies and the moderating effect of environmental dynamism on the ethical leadership-organizational sustainability relationship.

The result confirmed that ethical leadership has a positive impact on the sustainability of agribusiness firms and also supports that environmental dynamism strengthens the relationship between ethical leadership and firm sustainability. Dey *et al.* (2022) investigated the impact of ethical leadership on sustainable business performance through the mediating roles of ethical climate and voluntary environmental behavior, and the moderating role of employees' biospheric values.

Empirical evidence revealed a significant influence of ethical leadership on employees' voluntary environmental behavior, which subsequently impacted the sustainable performance of business organizations. Schaefer *et al.* (2020) argued that the engagement of medium-sized firms in social and environmental issues can be driven by the personal values of their managers or owners, this suggests that ethical leadership of owners/managers can influence the sustainable performance of medium-sized firms.

2.5 Sustainable Leadership and Sustainable Performance

The literature review on the link between sustainable leadership and sustainable performance allows us to identify studies such as, Burawat (2019) and Iqbal *et al.* (2020a; 2020b) examined the effects of sustainable leadership in numerous SMEs in different countries and found that sustainable leadership had a positive impact on sustainable performance. Furthermore, Fatoki's (2020) analysis with a sample of hotel companies confirmed the positive relationship between sustainable leadership and sustainable performance.

Iqbal *et al.* (2022) explored how and when sustainable leadership (SL) influences sustainable performance by examining social innovation (SI) as a mediating mechanism and managerial discretion (MD) Empirical findings confirmed the presence of SI as a competitive partial mediator between SL and sustainable performance. An empirical analysis by Suriyankietkaew and Avery (2016) with a sample of Thai SMEs confirmed a significant positive relationship between 16 out of 23 sustainable leadership practices and corporate financial performance.

2.6 Gender as a Moderating Variable

Recent research on pro-environmental behaviors emphasizes that gender should be taken into account when analyzing employee behaviors toward the environment, as differences in gender beliefs, attitudes, and behaviors may have different manifestations of pro-environmental behaviors (Swim *et al.*, 2019; Wang *et al.*, 2019).

The use of control variables is critical because it allows researchers to consider the effects of sociodemographic characteristics on the variables of interest in a study (Bernerth and Aguinis, 2015). This research addresses sustainable leadership as constructs that are part of sustainability, which can be determined by individual

characteristics, including sociodemographic traits such as gender, age, and educational background (Ge *et al.*, 2019).

For example, Hernaes *et al.* (2019) found that gender is a relevant predictor of innovative work behavior. Therefore, the inclusion of sociodemographic variables will be considered in this research as some authors also use these variables in their study of sustainable leadership (Saleem *et al.*, 2020; Ogaga *et al.*, 2022; Iqbal *et al.*, 2020b).

2.7 Research Hypotheses

Based on the literature review, the following research hypotheses were proposed:

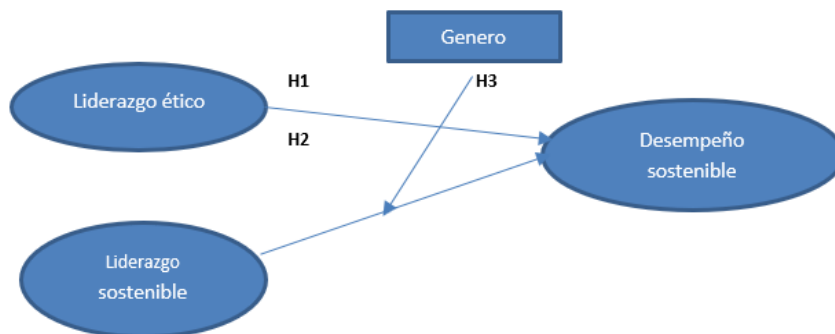
H1: Ethical leadership has a significant positive influence on sustainable performance in medium-sized companies.

H2: Sustainable leadership has a significant positive influence on sustainable performance in medium-sized companies.

H3: Gender has a moderating effect on the relationship between sustainable leadership and sustainable performance.

The hypothetical conceptual model presented in Figure 1 depicts the relationship between the latent constructs ethical leadership (EL), sustainable leadership (SL) and sustainable performance

Figure 1. Conceptual model



Source: Own study.

3. Methodology and Data

Ecuador's internal revenue system defines two criteria to define medium-sized companies, based on sales volume and number of employees: (A) Medium B: sales volume: \$2'000,001 to \$5'000,000. The # of employees: 100 to 199; (B) Medium A: sales volume: \$1'000,001 to \$2'000,000. The # of employees: 50 to 99. Also, according to the Annual Bulletin 2021 of the Central Bank of Ecuador, and the

Study of the Superintendence of Companies, the medium-sized companies sector makes a great contribution to Ecuador's gross domestic product (GDP), being one of the most stable sectors and with the highest number of jobs in the country.

The universe of medium-sized companies registered in the database of the internal revenue system is a total of 15,541 companies in the year 2021. Thus, the sample was $n=385$ medium-sized companies distributed as follows: Pichincha 143; Guayas 111; Manabí 51; Azuay 37 and El Oro 29, which concentrate 63.24% (9822) of the medium-sized companies of the total number of companies in Ecuador, therefore, the sample is of the stratified probability sampling type and the constant fraction (Number of companies/# of questionnaires) was used.

The research in this study had a quantitative approach and a non-experimental correlational design. The method used was the structural equation model, which is a statistical tool used to verify and quantify theories from observable data, mainly in the social sciences. The methodology used was maximum likelihood (ML) depending on the distribution of the data.

The process of collecting data from the managers of the firms was carried out physically, explaining to them the context of the questionnaire. Finally, valid questionnaires were obtained from the 385 responses. Authors such as Hair *et al.* (2018) and Kline (2016) considered that a sample size greater than 250 is sufficient in CB-SEM to minimize the impact of sampling error. In this sense, the sample of the present study is considered adequate to perform the analysis and verification of the research hypotheses (Gomer *et al.*, 2019).

3.1 Measures

The Ethical Leadership Scale (ELS) developed by (Brown *et al.*, 2005) was used to measure ethical leadership, this instrument consists of ten items, e.g. "Listen to what employees have to say". The questionnaire used a Likert-type frequency scale from 1 to 5: 1 ("strongly disagree"), 2 ("disagree"), 3 ("neither agree nor disagree"), 4 ("agree") and 5 ("strongly agree"). Therefore, the ten items formed a coherent (unidimensional) structure where higher scores indicate higher ethical leadership behavior. In addition, the (ELS) was used to measure ethical leadership in several studies in different countries with high degrees of validity and reliability.

To measure sustainable leadership this study used the sustainable leadership questionnaire developed by (McCann and Holt, 2010) which uses fifteen items, e.g. "You act in a sustainable and socially responsible way". The questionnaire also used a Likert frequency scale from 1 to 5: 1 ("strongly disagree"), 2 ("disagree"), 3 ("neither agree nor disagree"), 4 ("agree") and 5 ("strongly agree").

The questionnaire developed by Qorri *et al.* (2018) was used to measure sustainable performance that uses thirteen items, for example "Increased sales during the last

three years". In addition, perceptual measures of the last three years "were used. The questionnaire also uses a Likert frequency scale from 1 to 5: 1 ("strongly disagree"), 2 ("disagree"), 3 ("neither agree nor disagree"), 4 ("agree") and 5 ("strongly agree").

In addition to the scales used for the questionnaire, data corresponding to the sample description were included, such as the sociodemographic control variable gender, age and educational level, the former was used as a moderating variable, for the moderation of gender in the relationship between sustainable leadership and sustainable performance.

3.2 Data Analysis

The data were analyzed using IBM® SPSS® v22 and AMOS®24 software (Arbuckle, 2019). In the first phase, a descriptive and inferential analysis was performed. Second, the psychometric properties of the measurement scales were examined to obtain evidence of validity based on the internal structure of the instruments. For this procedure, the covariance-based method used was the structural equation model (CB-SEM) and, to perform the confirmatory factor analysis (CFA), the maximum likelihood estimation method was used.

From the results obtained, convergent and discriminant validity and reliability were evaluated (Ferrando *et al.*, 2022). In addition, the literature provides two methods for measuring SEM models. Covariance-based SEM (CB-SEM) and partial least squares SEM (PLS-SEM) are two types of SEM.

AMOS is undoubtedly the most popular software for CB-SEM analysis. CB-SEM is mainly used in confirmatory research to confirm (or reject) theories. However, PLS-SEM is basically performed with Smart PLS software for the purposes of theory development and validation in research (Hair *et al.*, 2014).

According to the data, CB-SEM was used to evaluate the proposed theoretical model, since this study adopted a confirmatory approach based on theory (Hair, Babin, and Krey, 2017). In addition, structural equation analysis was performed where the effects of latent variables or constructs were obtained (Chion and Charles, 2016). Subsequently, the results were reported according to the standards for non-experimental studies (Appelbaum *et al.*, 2018).

4. Results

The study subjects were 385 managers of medium-sized companies of which 38.4% (n=148) are from Pichincha (Quito), 29.9% (n=115) are Guayaquil (Guayas), 13.8% (n=53) are from Manabí (Portoviejo), 10.1% (n=39) are from Azuay (Cuenca) and 7.8% (30) are from El Oro (Machala). The majority of managers are men (57.1%) and women (42.9%).

4.1 Descriptive and Inferential Analysis of Constructs

Table 1, shows the descriptive statistics for the dimensions evaluated. There are no missing data and, by using Mahalanobis distance, we cannot detect any outliers that may distort the results (Byrne, 2016). Likewise, those of skewness and kurtosis are within the expected limit according to the criteria of Finney and DiStefano (2006), which allow skewness to have a maximum value of two and kurtosis a maximum value of 7. Therefore, the data show a distribution within the range of a univariate normal distribution.

In addition, the value of Mardia's coefficient, based on skewness and kurtosis, is 55.6. Thus, evidence was found for the multivariate normality assumption since it is lower than the proposed 224 suggested by Bollen (1989) based on the equation $p(p + 2)$, where p is the number of variables observed in the CB-SEM Model. Likewise, the correlation between the dimensions ethical leadership and sustainable leadership is 0.79 which is below 0.9, indicating the absence of multicollinearity.

Table 1. Descriptive results for construct dimensions (N = 385)

	Ethical. L	Sustainable. L	Sustainable. P
Mean	4.265	4.036	3.975
Standard deviation	0.770	0.719	0.661
Skewness	-0.880	-0.377	-0.096
(Standard error)	0.124	0.124	0.124
Kurtosis	0.061	0.038	0.127
Standard error	0.248	0.248	0.248

Source: Own study.

Table 2, contains the results of the estimation of the measurement model: the CMIN/DF representing the relative Chi-square (also called normed Chi-square) which is equal to the Chi-square index divided for the degrees of freedom the criterion for acceptance is < 5 (Hu and Bentler, 1999). Comparative fit (CFI) ≥ 0.90 is favorable evidence of model fit (Bentler, 1990), which is met for all models evaluated. With respect to root mean squared error of approximation (RMSEA) and standardized root mean residual (SRMR), favorable evidence was also obtained (we obtained) for the models (≤ 0.08) (MacCallum *et al.*, 1996). Consequently, the measurement model shows an adequate fit with the indices proposed by the literature.

Table 2. Fit indices for the measurement models.

Model measurement	(X ²)/df	p	CMIN/DF	CFI	RMSEA	SRMR
1 EL	71.8/12	0.000	5.983	0.986	0.08	0.012
2 SL	112.1/16	0.000	7.014	0.959	0.08	0.036
3 SP	84.1/22	0.000	3.832	0.992	0.06	0.081
4 EL+SL+SP	1120/289	0.000	4.699	0.945	0.07	0.534

Source: Own study.

4.2 Validity and Reliability

To obtain construct validity. Standardized factor loadings were used as input for reliability estimates and convergent and discriminant validity. In Table 3, the AVE of each potential construct exceeds the criterion of 0.7. Therefore, this result indicates that there are no problems with discriminant validity. In addition, there is little evidence against discriminant validity because there is no cross-loading or associated error. Therefore, these results demonstrate the discriminant validity of the measurement model.

Also, the reliability coefficients (RCs) are all above 0.7, indicating sufficient internal consistency (Cho, 2016). These results support the evidence for assessing the convergent validity of the measurement model. Likewise, the values presented for the reliability are above 0.70 which proves the reliability of the measurement model.

Table 3. Convergent and discriminant validity of the constructs.

	EVA %	CR	Alpha
1. Ethical leadership (EL)	0.810	0.831	0.952
2. Sustainable leadership (SL)	0.700	0.815	0.932
3. Sustainable Performance (SP)	0.890	0.858	0.968
4. (EL) + (SL) + (SP)	--	--	0.959

Note: Average variance extracted (EVA); Composite Reliability (CR); Alpha-Cronbach(x)

*** $p < 0.000$

Source: Own study.

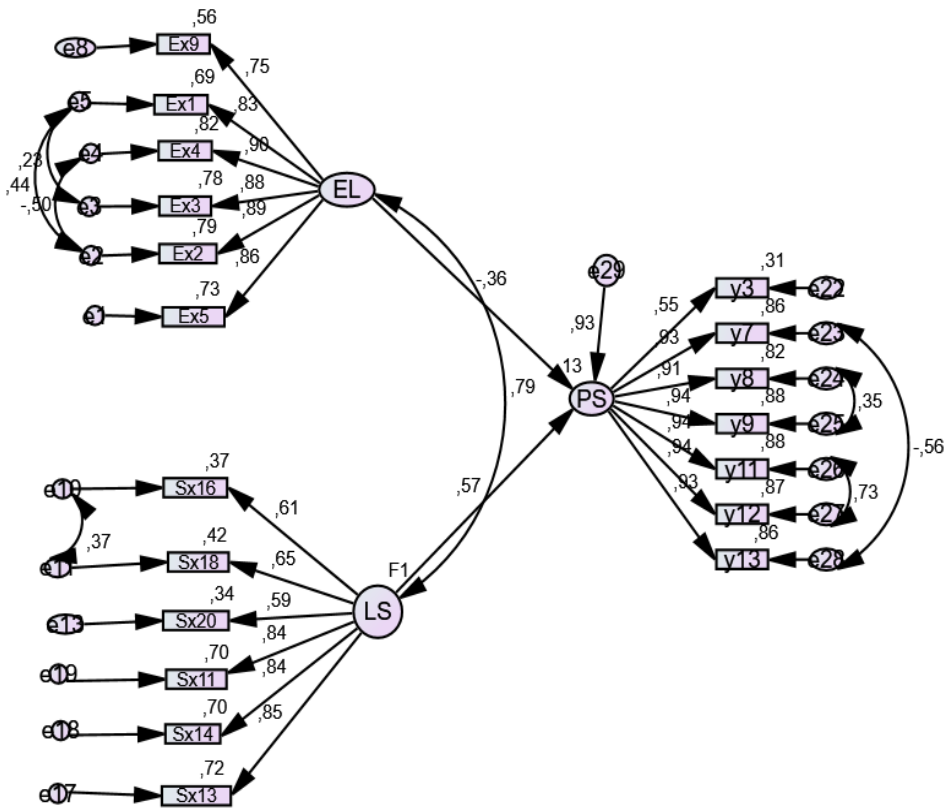
4.3 Evaluation of the Proposed Model

Figure 2, shows the estimated structural equation model. CB-SEM and maximum likelihood were used as the evaluation method to estimate the structural model parameters, obtain the fit index and verify if the structural relationships (trajectories) correspond to the theoretical predictions. The fit indices; CMIN/DF= 3.947 $p < 0.000$; CFI = 0.946; RMSEA =0.062; SRMR = 0.036) evidence that the model has an adequate fit. Therefore, using these data the results represent empirical evidence for the theoretical model.

Table 4, shows the results of the structural model for the first two research hypotheses of this study. By examining the estimated standardized factor loadings for the structural relationships of the theoretical model, we can observe that the first hypothesis shows a significant negative relationship between ethical leadership and sustainable performance, in this sense the hypothesis (H1) is not supported.

Also, it is observed that the second hypothesis shows a significant positive relationship between sustainable leadership and sustainable performance, in this sense the hypothesis (H2) is supported. For sustainable performance the explained variability (R2) is 13%. In this sense, both hypotheses are supported.

Figure 2. Structural model of the factors explaining the influence (relationships).



Note: Developed using IBM SPSS and AMOS v24.

Source: Own study.

Table 4. Structural model results

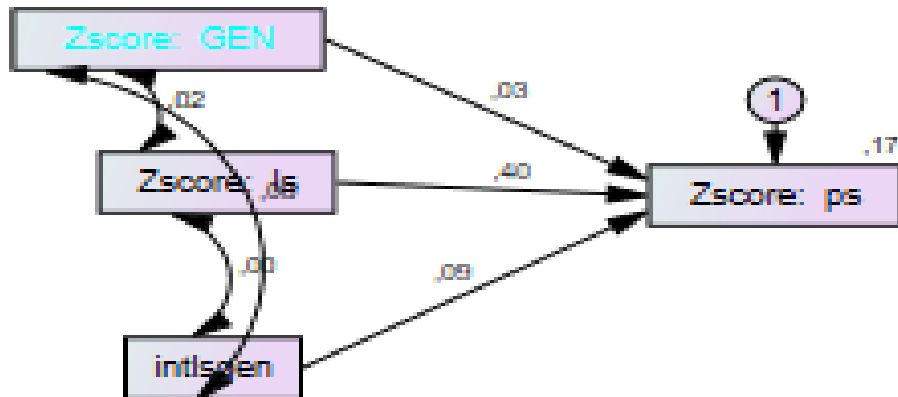
Related hypotheses	Standardized estimates	t-value	Supported hypothesis
H1: Ethical leadership--> Sustained performance	-0.36	12.33	Unsupported
H2: sustainable leadership--> Sustained performance	0.57	14.43	Supported
Cuadrado múltiple correlación (R2):			
Sustainable performance	0.13		

Source: Own study.

4.4 Gender Moderation

Gender moderation in the relationship between sustainable leadership and sustainable performance was examined using AMOS 24 analysis.

Figure 3. Gender moderation model



Source: Own study.

Table 5, shows the result of the moderation model of the research hypothesis (H3) of this study. When examining the estimated standardized factor loadings, we can observe moderate values, which are statistically significant. For sustainable performance the explained variability (R²) is 17%. In this sense, hypothesis (H3) is supported.

Table 5. Gender moderation results

Related hypotheses	Standardized estimates	t-value	Supported hypothesis
H3: sustainable leadership--> Sustained performance	0.40	8.54	Supported
Cuadrado múltiple correlación (R²):			
Sustained performance	0.17		

Source: Own study.

5. Discussion and Conclusions

The results of this research show a significant negative relationship between ethical leadership and sustainable performance, which fills the empirical gap that was identified in the literature review of this study. Related to the research of Schaefer *et al.* (2020) who argue that the commitment of medium-sized firms to social and environmental issues can be driven by the personal values of their managers or owners, this suggests that managers' ethical leadership can influence the sustainable performance of medium-sized firms, which in this case is negative.

Therefore, hypothesis (H1) is rejected. Furthermore, these results differ from the findings of Ogaga *et al.* (2022) who confirmed that ethical leadership positively influences the sustainability of firms in the agricultural sector.

The sustainable leadership and sustainable performance relationship shows a significant positive relationship that fills the gap identified in the literature therefore the hypothesis (H2) is accepted, which is consistent with previous research that obtained similar results conducted by Fatoki (2020), Iqbal *et al.* (2020th), Suriyankietkaew and Avery (2016), Armani *et al.* (2020), Burawat (2019), Iqbal *et al.* (2020).

It was shown that gender orientation moderates the relationship between sustainable leadership and sustainable performance, thus hypothesis (H3) is accepted. This result is consistent with the study Hernaus *et al.* (2019) who found that gender is a relevant predictor. In addition, some authors have used this variable in their studies of sustainable leadership (Saleem *et al.*, 2020; Ogaga *et al.*, 2022; Iqbal *et al.*, 2020b).

The results of this research can be used as guidelines for the management of medium-sized companies. The incidence of the three constructs of this study in organizations and the importance of their application in management as one of the guidelines to avoid failure was evaluated (Kimbu *et al.*, 2021).

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