

Impact of Entrepreneurial and Environmental Sustainability Orientation on Organizational Performance in Kathmandu Valley

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ABSTRACT

This research investigates the mediating effect of Environmental Sustainability Orientation (ESO) on the relationship between Entrepreneurial Orientation (EO) and Organizational Performance (OP) within the Kathmandu Valley. The study aims to determine how an organization's sustainability knowledge, commitment, and practices mediate the positive impacts of innovations, proactiveness, and risk-taking on organizational performance. A quantitative approach was employed, collecting data from 64 firms in Kathmandu using a standardized questionnaire. Statistical analyses, including regression and correlation analysis, were conducted to examine the relationships between the variables. The results indicate that EO positively influences organizational performance. Additionally, ESO serves as a significant mediating factor between EO and OP, highlighting the synergistic benefits of integrating entrepreneurial and sustainability practices. The findings suggest that organizations experience enhanced performance when entrepreneurship is aligned with sustainability efforts. The study emphasizes the importance of fostering both entrepreneurial orientation and environmental sustainability within organizations to optimize performance outcomes. Practitioners are encouraged to develop strategies that integrate these orientations to achieve better organizational results.

Keywords: environmental sustainability orientation, entrepreneurial orientation, organizational performance, Kathmandu valley, developing countries

Introduction

Environmental Sustainability Orientation (ESO) explains the strategic approach of an organization to incorporate environmental factors into its business model (Roxas et al., 2017). ESO is a thoughtful approach where an organization redesigns its organizational structures, system, procedures, and operations to reduce the negative impact of its

operations on the environment. By embracing this perspective, businesses may link their operations with sustainable practices and promote a balance between responsibility for the environment and economic growth (Roxas et al., 2017). The perspective incorporates several key elements of a company's engagement with environmental sustainability. The level of knowledge that

an organization has regarding environmental sustainability is considered first which includes the impact of its operations on the environment and staying informed about best practices and regulations (Roxas & Chadee, 2012). Second, it studies how the organization is adapting particular environmental sustainability practices ranging from waste reduction initiatives to energy-efficient processes (Danso et al., 2019).

Lastly, it assesses the commitment of the company to these practices, evaluating not just their implementation but also the extent to which sustainability is embedded in the company's culture and strategic goals (Hogan & Coote, 2014). Together, these factors create a comprehensive view of the organization's approach to environmental sustainability and its implications for overall performance.

Entrepreneurship has a significant impact on expanding economic activities and fostering growth through various innovative ways to solve problems. Entrepreneurial Orientation (EO) is one of the important processes that has a huge impact on organizational performance. EO consists of three main components: Innovativeness, Proactivity, and Risk-taking. Innovativeness is shown in an organization's ability to come up with new ideas and products and thrive in a dynamic market. An ability to take a forward-thinking approach which helps organizations foresee trends and seize new opportunities before they are widespread is proactiveness. Being able to take risks means making bold decisions and developing an imaginary vision that might result in both failure and success (Mishra et al., 2024).

Organizational performance shows an outcome within particular operational areas of an organization which includes research and development, production, and marketing.

These functional areas of performance provide insight into how different aspects of entrepreneurial orientation influence operational outcomes within organizations. (Rezaei & Ortt, 2018). The role of

entrepreneurs can foster Organization Performance by embracing entrepreneurial orientation dimensions and gain superior performance and sustainable competitive advantage (Hussain et al., 2015). Through the use of organizational culture theories and practices, the study promoted innovative behavior and demonstrated how many facets of organizational culture had a positive impact on company performance through innovation (Hogan & Coote, 2014).

Entrepreneurship plays an important role in an organization's performance in developing countries. As awareness of environmental sustainability grows, we have observed that integrating it into a firm's entrepreneurial orientation has improved an organization's performance in developed countries (Adomako & Tran, 2022). This research intends to investigate this important phenomenon specifically in developing countries. Developing countries are economies like Nepal, where resource limitations restrict businesses' risk-taking and proactiveness, highlighting a need for research on how entrepreneurial orientation impacts Organizational Performance with environmental sustainability orientation as a mediator. (Mishra et al., 2024). This thorough analysis fills a significant research void regarding the connection between organizational performance, environmental sustainability orientation (ESO), and entrepreneurial orientation (EO). The study recommends that future research take a look into this unexplored sector which helps the organization and policymakers to encourage entrepreneurship and sustainable business practices. With organizational performance as the dependent variable and Innovative, Proactiveness, and Risk-taking as the independent variable it suggests a more in-depth analysis of EO. In addition to playing a mediating role, the review emphasizes the ESO's strategic importance in differentiating business and enhancing performance. It shows that EO has a positive impact on ESO which also improves organizational performance.

Problem Statement

The joint effort of firms' adoption of environmental sustainability in their core system has piqued the interest of many scholars, policymakers, business practitioners, and environmental stakeholders (Adomako & Tran, 2022). Recent studies have highlighted the relationship between environmental sustainability and entrepreneurial orientation (EO) has effects in a firm's organizational performance (Danso et al., 2019). Green entrepreneurship is integrating economic, environmental, and social advantages into business operations to create sustainable development (Roxas & Chadee, 2012). Active decision-making is crucial for industrial organizations to engage in sustainability management (Adomako et al., 2022) and senior executives with a green entrepreneurial mindset are more likely to lead to long-term company success (Danso et al., 2019).

Regardless of these results, there is still a detailed study missing on how EO and environmental sustainability orientation (ESO) interact together to enhance organizational performance in developing economies like Nepal. Limited resources and external limitations in these situations are most likely to hinder the adoption of risk-taking behaviors and proactive techniques which results in a complex environment that impacts sustainability efforts. The particular problems faced by organizations in Kathmandu Valley like limited capital and environmental concerns suggest that the way EO and ESO interact may be different than in more developed settings.

It is important to address this gap and provide a chance to study how EO and ESO enhance organizational performance in developing countries. Local firms and governments can benefit from such research and encourage entrepreneurship balancing economic growth with environmental sustainability. This research might significantly improve the understanding of how entrepreneurial and sustainability attitudes function in diverse economic and cultural environments.

Research Objective

The main objective of this study is to analyze how Entrepreneurial Orientation (EO) and

Environmental Sustainability Orientation (ESO) lead to the improvement of an organization's performance in Kathmandu valley that benefits the natural environment and promotes the practice of environmental sustainability and waste management. The main objective of this study is to examine the mediating effect of Environmental Sustainability Orientation (ESO) between Entrepreneurial Orientation (EO) and Organizational Performance (OP). It also aims to determine the relationship between Entrepreneurial Orientation (EO) and Organizational Performance (OP).

Literature Review

Mishra and Aithal (2023) explore the factors influencing green banking practices, emphasizing the importance of sustainability in the financial sector. Their research highlights how environmental sustainability orientation can enhance organizational performance, aligning with their earlier work on green financing in Nepal (Mishra & Aithal, 2022). Furthermore, Mishra and Aithal (2021a) discuss the role of foreign aid in Nepal's development, indicating a broader context for understanding financial practices in developing economies. The comparative performance assessment of eco-friendly buildings versus conventional structures in Kathmandu Valley (Mishra & Rai, 2017) further underscores the necessity for sustainable practices across various sectors. In addition to environmental considerations, Mishra (2019) examines marketing strategies within the cement industry, revealing how consumer behavior is influenced by sustainability efforts. The analysis of laptop users' purchasing behavior in Kathmandu (Mishra & Aithal, 2021b) and consumer decision-making for cement brands (Mishra & Shrestha, 2019) also reflects the growing importance of sustainability in consumer preferences. Collectively, these studies contribute to a nuanced understanding of how sustainability-oriented practices can positively impact organizational performance and consumer behavior in Nepal's evolving market landscape.

Entrepreneurial Orientation (EO) and Organizational Performance (OP)

A study by [Hossain and Asheq \(2019\)](#) explicitly examined the impact of entrepreneurial orientation (EO) on organizational performance in Bangladesh. The study in Dhaka used 300 samples and found that competitive aggressiveness was not significant among the five EO aspects. All the other EO aspects however had a favorable effect on organizations. The report highlighted the importance for entrepreneurs to improve their skills through training programs to improve EO and take advantage of potential opportunities.

The relationship between organization performance in women-owned businesses and EO was investigated by [Mahmood and Hanafi \(2013\)](#). The study found out that the EO and firm performance are significantly correlated which is largely mediated by competitive advantage. The results show that to be competitive in the market, female owners must adopt an entrepreneurial mindset.

[Gupta et al. \(2016\)](#) investigated the relationship between EO and performance in India's SMEs. Researchers discovered a significant positive correlation between EO and business performance, using data from 198 Indian organizations. Environmental factors such as the level of competition and demand growth were found to moderate this relationship.

[Rezaei and Ortt \(2018\)](#) investigated how functional performance acted as a mediator between firm performance and EO. Based on 279 organizations, their analysis showed a positive correlation between functional performances (R & D, production, and marketing/sales) and EO qualities (innovativeness, proactivity, and risk-taking). Notably, risk-taking negatively correlated with production, whereas innovativeness was positively connected with R&D and proactivity with marketing/sales.

[Peng's et al. \(2015\)](#) study on Risk-taking & Organization Growth studied the relationship between capital structure, risk-taking, and Organization Performance. This study focused on the risk between entrepreneurial private

companies owned domestically and affiliated private companies owned by foreigners. It was found that taking out loans didn't stop from taking risks, furthermore, risk-taking is always important for the company's growth & profits, mainly during difficult times.

[Gupta \(2019\)](#) examined the relationship between organizational performance and entrepreneurial orientation (EO) in small and medium-sized enterprises in India. The study found a significant positive correlation between EO and organizational performance based on information from 198 Indian companies. The study also considers environmental contingencies, such as demand growth and competitive intensity, as moderators of the EO-performance relationship.

In their study, [Loof and Heshmati \(2002\)](#) studied the relationship between innovation and performance focusing on account growth rate dimensions. The study examined the factors that cause effect variations using estimation methods, performance measures, organization classification, innovation types, and data sources. Hence, the above discussion is hypothesized as:

H1: Entrepreneurial Orientation (EO) is significantly related with Organizational Performance (OP)

Entrepreneurial Orientation (EO) and Environmental Sustainability Orientation (ESO)

ESO includes the environmental issues in their culture, decision-making, strategy, and business operations, as well as their interactions with diverse stakeholders. ESO reflects the entire proactive strategic position of enterprises towards the integration of environmental concerns and practices into their strategic, tactical, and operational actions ([Amankwah-Amoah et al., 2019](#)).

ESO is considered an important factor that leads to improvement in the organization's performance. It is the source of a competitive advantage that aims to differentiate the organization from its competitors. ESO is also considered a form

of strategic capability of the firm that is valuable, inimitable, and non-substitutable.

Bayighomog Likoum et al. (2020) proposed a framework that links firm performance, brand management systems, organizational innovation, and market-sensing ability. The framework suggested that organizational innovation and brand management systems mediate the relationship between market-sensing capability and organizational performance, focusing on resource-based and dynamic capabilities theory. The mediated effect of proactiveness on firm performance is dependent on the firm's commercial links (Yeniaras & Unver, 2016).

The organization's risk-taking proclivity and the level of operational autonomy offered to individuals of the organization are both important factors in the effective implementation of this business strategy (Das & Joshi, 2007). Li et al. (2009) showed the relationship between EO, knowledge creation, and organization performance. They surveyed 164 entrepreneurs and found that EO and organization's performance which is mediated by the knowledge-creation process has a positive relationship. This study emphasizes the importance of managers understanding and supporting the knowledge creation process which helps to enhance valuable knowledge assets.

Gursoy and Aydogan (2002) investigated the ownership structure of Turkish non-financial firms listed on the Istanbul Stock Exchange and its impact on performance and risk-taking behavior. The study described Turkish corporations as highly concentrated and family-owned, emphasizing the importance of ownership concentration and mix on performance and risk-taking behavior. Higher ownership concentration was associated with better market performance but lower accounting performance, whereas family-owned businesses demonstrated lower performance with lower risk.

Hence EO is the prerequisite for the development of ESO in the organization. EO can establish ESO in the organization of developing nations through proactiveness, innovativeness, and risk-taking. Thus the following hypothesis is put forth:

H2: Entrepreneurial Orientation (EO) has a significant effect on Environmental Sustainability Orientation (ESO)

Environmental Sustainability Orientation (ESO) and Organizational Performance (OP)

Growing numbers of small enterprises in developing countries are implementing sustainable business practices, which has prompted research into the reasons behind these strategies and how they affect performance. This section highlights the significance of entrepreneurial orientation in examining the relationship between environmental sustainability orientation (ESO) and firm performance, drawing on the natural resource-based view of the company.

Adomako et al. (2019), who concentrate on family and non-family businesses in Ghana, discuss the influence of ESO. According to the study, ESO has a major effect on non-family businesses but does not affect family businesses. According to the research, non-family businesses are better positioned for improved performance when their ESO is higher, and the favorable correlation between ESO and organizational success is also influenced by age.

Roxas and Chadee (2012) studied how ESO links financial resources among small manufacturing companies in the Philippines. They uncovered that even with limited resources, a small business can already apply effective sustainable practices. This is because ESO is multidimensional. Roxas et al. (2017) further explained that it must be integrated into entrepreneurial orientation since it can assist a company in developing coordinated and sustainable development.

Danso et al. (2019) examined that ESO can act as a bridge between EO and organization performance, where strong stakeholder integration strengthens the positive relationship that exists between ESO and performance. That underlined the strategic importance of ESO as a competitive advantage for businesses.

Giacosa (2022) studied the role of green capability in the relationship between ESO and organizational performance. The research mainly

focused on Malaysian Firms where they found that the green capabilities significantly established the influence of ESO and the need for organizations to embed sustainability practices into their operational strategies.

Lee and Lim (2009) investigated the impact of owner characteristics on the performance of small and medium-sized service businesses through a survey of Japanese eateries. The study signified the importance of developing entrepreneurial orientation for success and its positive influence. Competitive aggressiveness and business size are important in an organization's performance.

All of these studies add to our knowledge of the intricate relationship between an organization's performance, entrepreneurial orientation, and environmental sustainability orientation, providing insightful information for future studies and small business-related public policy considerations. The above discussion is further put forth as hypothesis:

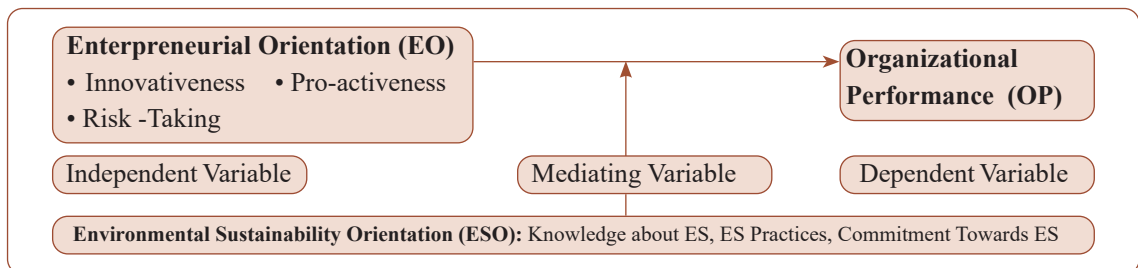
H3: Environmental Sustainability Orientation (ESO) is positively associated with Organizational performance (OP).

The Mediating Effect of ESO on EO and OP

ESO includes the environmental issues in their culture, decision-making, strategy, and business operations, as well as their interactions with diverse stakeholders. Bos-Brouwes (2010) explains the ongoing adoption and integration of environmental concerns into the organizations' business operations which are largely triggered by the proactiveness of the owners and the way of finding innovative solutions to address the potential negative effects on the natural environment.

Figure 1

Conceptual Framework (Mishra et al., 2024)



ESO reflects the entire proactive strategic position of enterprises towards the integration of environmental concerns and practices into their strategic, tactical, and operational actions (Amankwah-Amoah et al., 2019).

ESO is considered an important factor that leads to improvement in the organization's performance. It is the source of a competitive advantage that aims to differentiate the organization from its competitors. ESO is also considered a form of strategic capability of the form that is valuable, inimitable, and non-substitutable.

Roxas et al. (2017) studied that for the development of ESO organizations are required to carry on an entrepreneurial approach by becoming innovative and proactive and be able to take on calculated risks in practicing sustainable business practices.

According to the discussion above on the relationship between EO, ESO, and organization performance, it can be said that EO influences the growth of ESO which affects organizational performance. Hence it can be hypothesized that :

H4: ESO has a mediating effect on the relationship between Entrepreneurial Orientation (EO) and Organizational performance (OP).

Conceptual Framework

A theoretical framework provides the guidelines for the research. It supports the research by determining the dependent, independent, and mediating variables. The following theoretical framework is drawn from the research gap in the article namely, "The Influence of Environmental Sustainability Orientations on Organizational Performance: A Review"

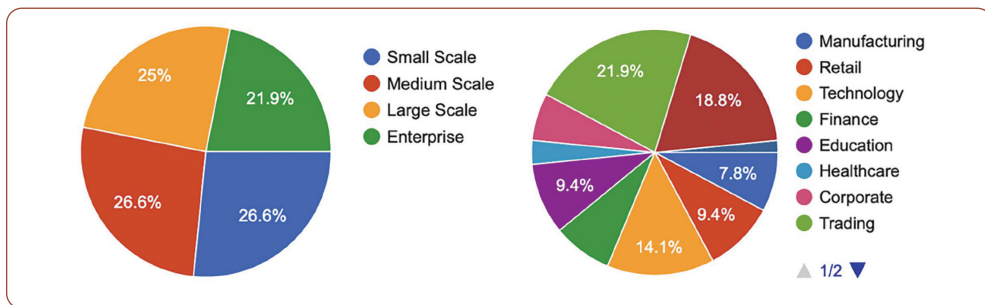
Methodology

This study employs a quantitative approach to attain the research objective. The quantitative approach evaluates the relationship between the variables through numerical data obtained from the standardized questionnaire. The primary data source of this study is the data collected from

the standardized questionnaire with a 5-point Likert scale. It was supplemented by secondary data sources such as existing academic literature. Data was collected inside the Kathmandu Valley to understand how EO and ESO significantly impacted organizational performance in developing countries.

Figure 2

Classification of Companies



This study gathered data from 64 companies, the majority of them being technology, trading and manufacturing companies located in Kathmandu, Nepal. These companies were chosen based on specific criteria: entrepreneurial ownership or management, active contributions to strengthening the economic and social framework of their communities, integration of sustainability strategies into their operations, and diverse leadership comprising both experienced professionals and young leaders.

The study is based on Kathmandu Valley which is the economic and entrepreneurial hub of Nepal. All of the selected organizations showcase similar characteristics which include innovation, risk-taking, proactiveness, and sustainability-oriented practices. This study implemented a nonprobability sampling approach due to time and resource constraints.

A questionnaire divided into two sections was distributed to collect the data for this study. The first section involved demographic-related information such as Organization type (small, medium, or big), major industry, sustainability practices, and questions regarding sustainability teams and

ESG policies to understand the organizational sustainability perspective better.

The second section measured key variables Entrepreneurial Orientation (EO), Environmental Sustainability Orientation (ESO), and Organizational Performance (OP) using 23 items grouped under dimensions like proactiveness, innovativeness, risk-taking, sustainability knowledge, and commitment. All the responses were recorded on a 5-point Likert scale (Likert, 1932). Data collection was carried out through online mediums such as Google Forms.

The internal validity of the collected data was tested using Cronbach's Alpha Test and for the external validity, it was tested by screening and sorting all the responses.

The study coded the collected data into the SPSS for statistical analysis. Statistical tools like Regression analysis and correlation analysis were used to establish the relationship between EO, ESO, and OP within Nepalese firms. This technique proved the hypothesis and provided an in-depth understanding of how a developing economy functions.

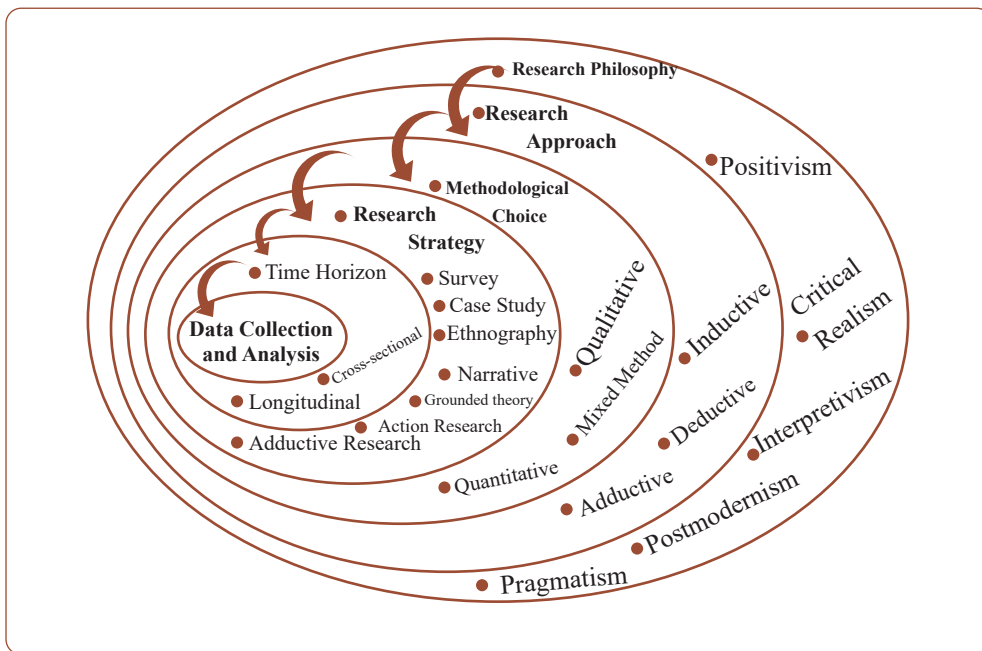
Research Onion

Pragmatism because this study aims to analyze the EO, ESO, and business performance using qualitative methods. This study explores the impact of Entrepreneurial orientation and Environmental sustainability on organizational performance.

An abductive approach is used combining the elements of both deductive and inductive reasoning which is essential for understanding the complex relationship between variables. Data collection is based on surveys of different companies.

Figure 3

Research Onion



The survey approach was adopted to gather data from 64 firms within Kathmandu Valley. This approach included distributing a standardized questionnaire to collect quantifiable data from the perspective of innovativeness, risk-taking, and proactiveness.

This research used a cross-sectional method to capture data from a sampled respondent at a single point in time. This approach examines the relationship among variables like entrepreneurial orientation, environmental sustainability orientation, and organizational performance in Kathmandu Valley within a specific time frame.

This study utilizes a mono-method approach which was solely based on the quantitative method. The data was collected through standardized questionnaires and all the collected data were statistically analyzed.

This study collected data through standardized questionnaires featuring a 5-point Likert scale. For statistical analysis, statistical tools like regression and correlation were used to establish and test the hypothesis.

Data Analysis & Interpretation

Table 1

Cronbach's Alpha Test

Variable	Cronbach's Alpha
Proactiveness	0.648
Risk Taking	0.753
Innovativeness	0.749
KES	0.794
ES	0.827
CES	0.874
OP	0.837
All Variables	0.931

The table shows the reliability of different measures in the study, based on Cronbach's Alpha, which indicates how well the items in each category work together to measure the same concept. Most variables have good reliability. The reliability analysis shows that most variables in the study, such as Risk Taking (0.753), Innovativeness

(0.749), KES (0.794), ES (0.827), CES (0.874), and OP (0.837), have good to excellent reliability, indicating consistent measures. However, Proactiveness (0.648) shows lower reliability, suggesting a need for improvement in this area. The overall reliability of the scale is excellent (0.931), supporting the robustness of the study's measurements.

Table 2

Cronbach's Alpha Test

SN	Heading	Frequency	Percent	Cumulative Percent
1. Business Category	Enterprise	16	25	25
	Large Scale	16	25	50
	Medium Scale	17	26.6	76.6
	Small Scale	15	23.4	100
	Total	64	100	
2. Industry	Consulting	1	1.6	1.6
	Corporate	4	6.3	7.8
	Education	6	9.4	17.2
	Finance	5	7.8	25
	Healthcare	2	3.1	28.1
	Large Scale	1	1.6	29.7
	Manufacturing	5	7.8	37.5
	Other	12	18.8	56.3
	Retail	4	6.3	62.5
	Technology	9	14.1	76.6
	Trading	15	23.4	100
	Total	64	100	

SN	Heading	Frequency	Percent	Cumulative Percent	
3.	Avg education level of top management	Bachelor's Degree	23	35.9	35.9
		Doctorate/PhD	4	6.3	42.2
		Finance	1	1.6	43.8
		High School Diploma	12	18.8	62.5
		Master's Degree	23	35.9	98.4
		Other	1	1.6	100
		Total	64	100	
4.	Avg age level of top management	30-40	18	28.1	28.1
		41-50	29	45.3	73.4
		Over 50	6	9.4	82.8
		Under 30	11	17.2	100
		Total	64	100	
5.	Time in operation	1-5 years	15	23.4	23.4
		11-20 years	14	21.9	45.3
		6-10 years	13	20.3	65.6
		Less than 1 year	4	6.3	71.9
		Over 20 years	18	28.1	100
		Total	64	100	
6.	Sustainability Team	No	31	48.4	48.4
		Yes	33	51.6	100
		Total	64	100	
7.	Primary market	International	19	29.7	29.7
		Local (within a specific city or region)	10	15.6	45.3
		National (within Nepal)	35	54.7	100
		Total	64	100	
8.	ESG	No	36	56.3	56.3
		Yes	28	43.8	100
		Total	64	100	
9.	R&D team	1-5	22	34.4	34.4
		11-20	4	6.3	40.6
		6-10	15	23.4	64.1
		None	16	25	89.1
		Over 20	7	10.9	100
		Total	64	100	

The data showed that most of the businesses fall under the Medium Scale category of 26.6% which is followed by Enterprises and Large Scale

businesses of 25% each. 23.4% of the respondents consist of Small-scale businesses. In terms of industries, 23.4% of respondents consist of trading

and 18.8% represent the “Other” sectors with consulting and large-scale businesses being 1.6%.

The data highlights that the top management possesses a well-educated leader with 71.8% of respondents holding either a bachelor’s degree or a master’s degree. 45.3% of the leaders are aged between 41 and 50 followed by 28.1% aged between 30-40.

28.1% of the businesses have been operating for more than 20 years whereas 23.4% show the new business operating for 1-5 years. 51.6% of respondents have a dedicated sustainability team whereas 48.4% of businesses still lack such teams.

In the context of market focus, 54.7% operate within the national market while businesses having an international focus consist of 29.7%, and the rest 15.7% cater to local markets. 43.8% of the respondents stand for the adoption of ESG practices and the remaining 56.3% are still behind the ESG initiatives.

Businesses with an area concerned for an R&D team are 25%. However, 34.4% of businesses showed some level of focus on innovation with small R&D teams of 1-5 members.

These findings explain that the businesses in Nepal are led by well-educated and experienced management with diverse scales and industries. While there seems to be room for improvement in ESG adoption and R&D investments focusing on sustainability practices.

Regression Analysis

The study used The Baron and Kenny method for testing the mediation effect of ESO on the relation between EO and OP. The procedures laid out by Baron and Kenny offer a structured approach to understanding the relations between these variables. To test the mediation hypothesis, four regression models are used:

- a. Between the independent variable (EO) and the dependent variable (OP)
- b. Between the independent variable (EO) and the mediating variable (ESO)
- c. Between the mediating variable (ESO) and the dependent variable (OP)
- d. Between the interaction of the mediating variable (ESO) with the independent variable (EO) and the dependent variable (OP)

Baron and Kenny developed this systematic approach, which consists of four distinct steps:

- a. establishing the initial correlation between the independent and dependent variables;
- b. linking the independent variable and the mediator;
- c. correlating the mediating variable and the dependent variable; and
- d. validating the complete mediation (Baron, R. M., & Kenny, D. A., 1986).

Figure 4

Detailed Conceptual Framework (Baron & Kenny, 1986)

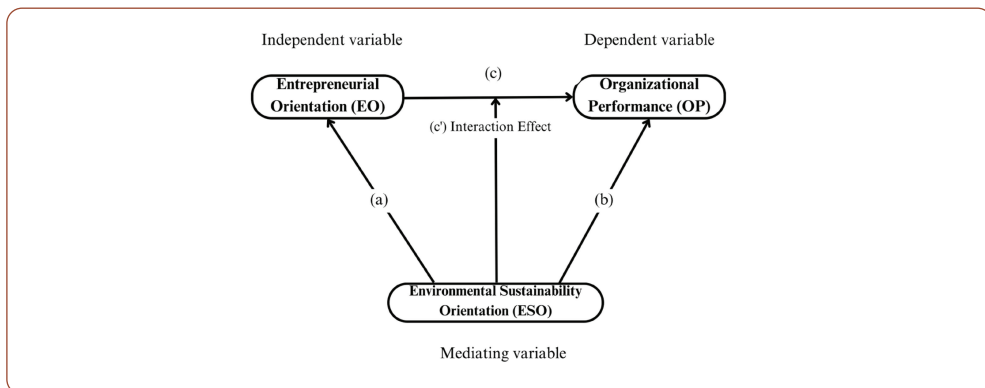


Table 3

Correlation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.604a	.365	.355	.61143
2	.575a	.331	.320	.67257
3	.593a	.352	.342	.61777
4	.675a	.456	.438	.57094

In model 1 a moderate positive connection of R=0.604 can be seen between Entrepreneurial Orientation (EO) and Organizational Performance (OP) showing a moderate relation between them. The adjusted coefficient of determination (R-Square) between these two variables is 0.355 meaning 35.5% of the time OP is defined by the EO which consists of 3 sub-variables; Innovativeness (IN), Risk-Taking (RT), and Proactiveness (P). The study’s analysis shows that there is a significant role of proactiveness, innovativeness, and risk-taking in organizational performance.

In model 2, the relation between our mediating variable (ESO) and independent variable (EO) is moderately positive, R=0.575. The adjusted coefficient of determination (R-square) is computed at 0.320 which means that 32% of the time ESO is defined by EO showing a significant role of EO; innovativeness, proactiveness, and risk-taking towards ESO; knowledge about environmental sustainability, commitment towards environmental sustainability and environmental sustainability practices.

Table 4

Regression analysis - ANOVA

Model	Heading	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.342	1	13.342	35.688	.000b
	Residual	23.178	62	0.374		
	Total	36.52	63			
2	Regression	12.858	1	12.858	33.693	.000b
	Residual	23.662	62	0.382		
	Total	36.52	63			
3	Regression	13.874	1	13.874	30.67	.000b
	Residual	28.045	62	0.452		
	Total	41.919	63			
4	Regression	16.636	2	8.318	25.517	.000b
	Residual	19.884	61	0.326		
	Total	36.52	63			

There is a moderately positive connection of R=0.593 between Environmental Sustainability Orientation (ESO) and Organizational Performance (OP) showing a moderate relation in model 3. The adjusted coefficient of determination (R-Square) between these two variables is 0.342 meaning 34.2% of the time OP is defined by ESO which consists 3 more sub variables; Knowledge about Environmental Sustainability (KES), Commitment towards Environmental Sustainability (CES) and Environmental Sustainability Practices (ES). This shows that there is a significant role of KES, CES, and ES in OP.

In model 4, the interaction between EO and ESO has a moderately positive relation with OP. An adjusted R-Square of 0.438 shows that 43.8% of the time OP is explained by the interaction between EO and ESO. Here, through our analysis, we can see that the interaction between the independent variable and dependent variable increased adjusted R-Square suggesting that there might be a mediating role.

The ANOVA table provides findings for determining whether or not the model is fit for the study being conducted. The null hypothesis for this analysis would be H0, which states that the model is not fit for the research. In all four tables, our Sig. value (P-value) is less than 0.05 (Sig. = 0.000), indicating that all four regression models constructed are appropriate for the research.

Since the ANOVA table in the regression only explains the relationships within the sample, a further examination of the significance value for each variable involved is required to make conclusions about the entire population, and that information is provided by the coefficients table.

Table 5
Regression Analysis - Coefficients and hypothesis testing

Model	Hading	Dependency	Unstandardized Coefficients		Standardized Coefficients	t	sig	95.0% Confidence Interval for B	
			B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	OP	1.218	0.41		2.972	0.004	0.399	2.038
	EO		0.666	0.111	0.604	5.974	0	0.443	0.889
2	(Constant)	ESO	1.313	0.451		2.912	0.005	0.412	2.215
	EO		0.679	0.123	0.575	5.538	0	0.434	0.924
3	(Constant)	OP	1.538	0.368		4.184	0	0.804	2.273
	ESO		0.554	0.095	0.593	5.805	0	0.363	0.745
4	(Constant)	OP	0.768	0.408		1.882	0.065	-0.048	1.585
	ESO		0.343	0.108	0.367	3.179	0.002	0.127	0.558
	EO		0.433	0.127	0.393	3.404	0.001	0.179	0.688

Model 1: Between the Independent Variable (EO) and the Dependent Variable (OP)

The finding demonstrated a significance level of 0.000, which is less than 0.05, rejecting the null hypothesis and implying that Entrepreneurial Orientation (Avg_EO) has a statistically significant effect on Organisational Performance (Avg_OP). Which is consistent with the study's first hypothesis.

H1: There is a positively significant relationship between Entrepreneurial Orientation (EO) and Organizational Performance (OP).

Entrepreneurial Orientation (Avg_EO) also has a regression coefficient of 0.666, indicating that every time Entrepreneurial Orientation (Avg_EO) grows by one, Organisational Performance (Avg_OP) increases by 0.666.

Model 2: Between the Independent Variable (EO) and the Mediating Variable (ESO)

The study yielded a significance level of 0.000 (less than 0.05), rejecting the null hypothesis and implying that entrepreneurial orientation (Avg_EO) has a statistically significant effect on entrepreneurial sustainability orientation (Avg_ESO). This finding supports the study's second hypothesis.

H2: Entrepreneurial Orientation (EO) is significantly associated with Environmental Sustainability Orientation (ESO).

The table also shows a regression coefficient of 0.679 for Entrepreneurial orientation (Avg_EO), which means that for every one increase in Entrepreneurial Orientation (EO), Entrepreneurial Sustainability Orientation (ESO) improves by 0.679.

Model 3: Between the Mediating Variable (ESO) and the Dependent Variable (OP)

The finding had a significance level of 0.000, which is less than 0.05, indicating that the null hypothesis had been rejected. As a result, Environmental Sustainability Orientation (ESO) is linked to improved organisational performance (OP). This result is consistent with the study's third hypothesis.

H3: Environmental Sustainability Orientation (ESO) is positively associated with organizational performance (OP).

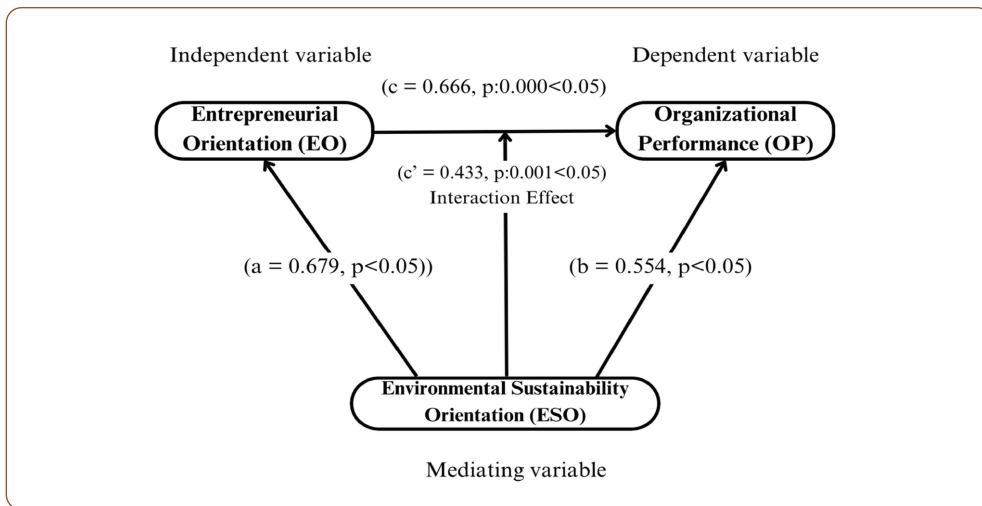
The regression coefficient for the mediating variable Environmental sustainability orientation (Avg_ESO) is 0.554, indicating that for every one increase in Entrepreneurial sustainability orientation (Avg_ESO), Organisational Performance (Avg_OP) increases by 0.554.

Model 4: Between the Interaction of the Mediating Variable (ESO) with the Independent Variable (EO) and the Dependent Variable (OP) : Interaction Effect Model

The regression coefficient for the mediating variable Entrepreneurial sustainability orientation (Avg_ESO) is 0.343 and independent variable Entrepreneurial orientation (Avg_EO) is 0.433, suggesting that for every one rise in Entrepreneurial sustainability orientation (Avg_ESO), Organizational Performance (Avg_OP) improved by 0.343 and every one rise in Entrepreneurial orientation (Avg_EO), Organizational Performance (Avg_OP) improved by 0.433. The finding shows ESO has a significance level of 0.002 and EO has a significance level of 0.001, which is less than 0.05, rejecting the null hypothesis and suggesting that model is statistically significant.

Figure 5

Mediation Summary (Baron & Kenny, 1986)



The approach above follows the framework established by (Baron et al., 1986) which consists of four steps. Steps 1–3 concentrate on establishing substantial zero-order correlations between the variables: the independent variable (EO) must significantly predict (OP) without the any

interference of mediator (ESO), the independent variable (EO) must significantly predict the mediator (ESO) and the mediator (ESO) must significantly predict the dependent variable (OP). If any of these relationships are not significant, then it is assumed that there is no mediation

possible (Baron, et al.,1986). And as the result shows in figure 5, all of these relationships in the model a ($p = 0.000 < 0.05$), b ($p = 0.000 < 0.05$) and c ($p = 0.000 < 0.05$) are significant. The fourth step concludes the mediation effect by analyzing the interaction effect of independent variable (EO) and mediator (ESO) on the dependent variable (OP). If the effect of EO is not significant after the interaction with ESO (model c'), it is believed that there is a complete mediation. However, if the effect of both EO (model c') and ESO (model b) is still significant even after the interaction, the finding supports partial mediation which is the case in the study conducted.

Table 6

Judd & kenny Difference of Coefficients Approach

	Analysis	Visual Depiction
Model 1	$Y = a + B_1M + B_2X$ $Y = a + 0.343 * M + 0.433 * X$	
Model 2	$Y = a + BX$ $Y = a + 0.666 * X$	

The method requires subtracting partial regression coefficients from Model 1- B_2 from the simple regression coefficient from Model 2- B (Kenny et al., 2014). Both of these regressions indicate the effect of EO on OP, but B is the zero-order coefficient from simple regression, whereas B_2 is the partial regression coefficient from multiple regression. The indirect effect is calculated as the difference between two coefficients.

$$\text{Bindirect} = B - B_2$$

Or, $\text{Bindirect} = 0.666 - 0.433$

$$\text{Bindirect} = 0.233$$

The result states that 23.3% of the time Environmental Sustainability Orientation (ESO) mediates the relationship between Entrepreneurial Orientation (EO) and Organizational Performance (OP).

The Indirect Effect

The above four-step regression analysis is the general approach to test the mediation; however, this approach may have limitations. The indirect pathway, where X impacts Y through the compound pathway of a and b, is not tested. The Barron and Kenny model overlooks genuine mediation effects (MacKinnon et al., 2007). Thus, calculating the indirect effect and testing for significance is a superior strategy. The regression coefficient for the indirect effect measures the change in OP for every unit change in EO, which is mediated by ESO. Therefore, (Kenny et al., 2014) proposed calculating the difference of two regression coefficients to test the indirect effect.

This result shows that the study’s fourth hypothesis; H4: ESO has the mediating relationship between Entrepreneurial Orientation (EO) and organizational performance (OP) with the mediation role of Environmental Sustainability Orientation (ESO) is correct.

Conclusion

The purpose of this study was to analyze the mediating effect of Environmental Sustainability Orientation (ESO) on the relation between Entrepreneurial Orientation (EO) and Organizational Performance (OP) in developing economies, focusing on firms in Nepal. The research investigated two major objectives that were to investigate the impact of EO, comprising innovativeness, proactiveness, and risk-taking, on OP, and to determine the mediating role of ESO on EO and OP. The data was obtained from 64 firms in Kathmandu which provided useful

insights into how businesses with limited resource environments can achieve better performance by adopting entrepreneurial attitudes and nurturing sustainable business practices. The findings fill an existing gap in the research on EO, ESO, and OP within developing countries and the increasing need to combine environmental strategies with business tactics for the success of the organization.

In other words, results confirmed the first hypothesis that there was a positive and significant relationship between EO and OP, which, in other words, meant that enterprises characterised by greater degrees of innovativeness, proactiveness, and risk-taking had comparatively good organisational performance. Thus, the empirical findings of the present study have brought into sharp focus the fact that EO-innovativeness, proactiveness, and risk-taking exerts a positively influential effect on OP. These findings are similar, who found a favourable connection between EO and OP. EO has a considerable impact on organisational performance, particularly in marketplaces with high levels of competition. According to the second hypothesis, EO and ESO are significantly correlated. This agrees with the studies of which ascertained that sustainable practices increase organizational performance. It was found that organizations with a high degree of EO were most likely to consider innovativeness, proactiveness, and risk-taking in adopting sustainable practices in their businesses. The third hypothesis proved that ESO has a positive effect on OP and these findings are consistent with observed that ESO could be used to give firms a competitive edge to help them perform better than other firms in the market. The fourth hypothesis was that ESO mediates the relationship between EO and OP, insinuating that sustainable practices do play an important role in the improvement of Organizational Performance. These also agree with the findings, who came up with similar findings that suggested the role of ESO in linking EO and OP. On the other hand, contend that sustainable practice may also be bounded by resource availability factors as well as other contextual considerations.

The positive relationship between EO and OP underlines the fact that organizations have to

adopt behaviors that are innovative, proactive, and risk-taking in nature to obtain superior performance results. Moreover, the fact that ESO is being integrated within organizational strategies has suggested that sustainability practices, besides improving a firm's environmental reputation, also enhance its competitive advantage, by improving the performance outcomes as well. Moreover, this integration of ESO within organizational strategies suggests that not only do sustainability practices increase a firm's environmental reputation, but they also bolster its competitive advantage, while improving the performance outcomes at the same time.

Beyond the above practical effects, the research contributes to the theoretical discussion of EO, ESO, and OP within developing economies. In particular, the mediating role of ESO points to one way in which sustainability practices can usefully augment the efficacy of entrepreneurial strategies. The findings thus support the natural resource-based view of the firm, which says that sustainable management of resources may be a source of competitive advantage. The theoretical foundation for future research aimed at integrating sustainability into entrepreneurship and exploring further implications.

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