JOURNAL OF BUSINESS AND SOCIAL SCIENCES
Vol.2024:13

Analyzing the Impact of Entrepreneurial Orientation on Sustainable Business Performance using Hierarchical Linear Regression

Amaleshwari Umapathy[1], Jeevitha Ramamoorthy[2]

School of Management, Dwaraka Doss Goverdhan Doss Vaishnav College, Chennai, India

Email: amalaumapathi@gmail.com[1]; jeevithar@dgvaishnavcollege.edu.in[2]

Abstract

This research explores the relationship between Entrepreneurial Orientation (EO) and Sustainable business performance (SBP). EO is a strategic posture characterized by innovativeness, proactiveness, risk-taking, autonomy and competitiveness which are hypothesized to influence SBP positively. The study aims to explore how these EO dimensions contribute to achieving sustainable outcomes across various industries. Data for the analysis is collected from a diverse sector which includes manufacturing and service focusing on their strategic orientations and their sustainability policies. Data was collected from the senior and mid level managers of 150 small and medium scale companies in Chennai. Proposed hypotheses were tested using hierarchical linear regression analysis. Understanding the impact of EO along with Technology capabilities on SBP can provide insights into how firms can effectively leverage entrepreneurial behaviors to enhance their sustainability performance. For practitioners, the research highlights specific areas—such as fostering innovation, proactive environmental management, and calculated risk-taking—that can lead to improved sustainability outcomes.

Keywords

Entrepreneurial Orientation, Sustainable Business Performance, Hierarchical Linear Regression, Economic performance, Environmental performance

INTRODUCTION

The concept of sustainable development was globally acknowledged in 1972 at the United Nations Conference on the Human Environment held in Stockholm. The notion proposes that both development and the environment may be jointly controlled. Sustainable development was defined as the practice of fulfilling current needs while safeguarding the capacity of future generations to fulfill their own needs (*History of SD · What Is Sustainable Development · Sustainable*

Submission: 11 October 2024; **Acceptance:** 5 November 2024

Development Commission, n.d.). Following that, the member nations of the United Nations have made sustainable development a top priority. In 2015, they approved the Sustainable Development Goals with the aim of decreasing poverty, safeguarding the environment, and promoting prosperity by the year 2030 (Tjahjadi et al., 2021).

Entrepreneurial orientation and sustainability are not being talked about in society or in academia right now. Entrepreneurial Orientation, which is also called "Intrapreneurship," has been looked at in the academic literature from both the point of view of people and businesses. To put it another way, intrapreneurship may be found in both the strategic orientations that are chosen by organizations and the entrepreneurial activities that are carried out separately by individual workers (Antoncic and Hisrich, 2004). Entrepreneurial Orientation (EO), refers to the strategic organizational posture that encompasses the particular procedures, practices, and activities that allow businesses to generate value via the pursuit of entrepreneurial mindset.
(Covin & Slevin, 1989; Lumpkin and Dess, 1996).

EO is examined through various lenses, including its conceptualization and its connection to firm performance (Lumpkin, Dess, 1996), the correlation of entrepreneurship across different firm types (Miller, 1983), and the interplay between innovation and conservatism in entrepreneurial firms (Miller, Friesen, 1982). Additionally, it's explored in the context of firm resources and sustainable competitive advantage (Barney, 1991), different archetypes of strategy formulation, the strategic orientation of businesses (Venkatraman, 1989), and its role in economic development (Schumpeter, 1934) and strategy-making across different modes (Mintzberg 1973).

There is a growing literature on different viewpoints on EO and its constructs. Entrepreneurial orientation, a focal point in entrepreneurship research (Wales, 2016), encompasses the processes fostering new entry (Rauch et al.,2009) and embodies innovativeness, proactiveness, and risk-taking (Covin and Slevin, 1989) later in 1996 lumpkin and Dess included Autonomy and Competitive aggressiveness as EO dimensions. Recent scholarly attention has gravitated towards exploring the nexus between EO and sustainability performance (Hall et al., 2010), examining its impact across environmental, social, and economic dimensions, collectively known as the triple bottom line (TBL) (Elkington, 1998; Henry et al., 2019). This interest spans investigations into EO's influence on small business performance (Wiklund, Shepherd, 2005), the role of knowledge-based resources in EO (Wiklund, Shepherd, 2003), and the Learning Orientation (Wang, 2008) and financial outcomes (Zahra, 1991) associated with entrepreneurial endeavors.

There is ever growing competition in the market. To maintain a competitive edge, managers in developing economies must develop new strategies and employ cutting-edge technologies to adapt to changing market structures and rising client expectations. According to Nakola, Tarus, Buigut, and Kipchirchir (2015), businesses that have a primary focus on technology always make sure to set aside resources in order to implement the most recent technological advancements in order to

create new processes, new products, and new services that are aimed at achieving greater levels of performance. The Research questions discussed in the paper is to understand the relationship between Entrepreneurial Orientation and Sustainable Business Performance, along with the Technology Capability and the years of existence of the business.

2. THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

2.1 Entrepreneurial Orientation

Following an examination of the many theories that have been proposed in this area, the resource-based view (RBV) was chosen since it places an emphasis on the internal resources and performance of businesses. EO describes a company's approach of fostering excellent performance in order to get a competitive edge. Companies that are entrepreneurial in nature empower their employees to make independent decisions, actively suggest new ideas, take calculated risks, take initiative, and engage in fierce rivalry (Basco et al., 2020). In concept, organisations would gain by implementing an EO as a rapidly evolving market makes future profits from current businesses uncertain and companies need to continuously look for new prospects. Dimensions of EO are innovation, risk-taking, proactive, autonomy and competitive aggressiveness (Covin & Slevin, 1989; Lumpkin and Dess, 1996). The performance of business will be at its highest if they innovate with their commercial activities. Firms that want to be more competitive need to have both innovative and creative ideas (Kozubíková et al., 2017).

A detailed qualitative analysis conducted by Wales, Gupta, and colleagues (2013) demonstrates that there is a significant amount of research that investigates EO in a multi-dimensional manner; nevertheless, the vast majority of papers investigate the concept in a uni-dimensional manner. Observing both commonly shared and unique effects of EO sub-dimensions on performance, Lomberg, Urbig, Stockmann, Marino, and Dickson (2017) propose the consolidation of uni- and multi-dimensional approaches to EO in order to attain a better understanding of the consequences of EO. This is a point that has been taken into consideration in subsequent theorizing (Wales, Corbett et al., 2020, Wales, Covin et al., 2020).

2.2 Technology Capability

Technology orientation helps companies obtain substantial technological background, which they can use to produce new solutions in responding to consumer demands. Nowadays consumers tend to select products and services that preserve technological advancement. Invention and creativity in adopting technology may guide the companies to decide what strategic implementation that they should take. Small-and Medium Enterprises that focus on the latest technology can offer ultimate products that are hardly for competitors to imitate. Therefore, technology orientation can increase the success and profitability of new products (Lo, Wang, Wah, & Ramayah, 2016)

2.3 Sustainable Business Performance

Research has examined the relationship between EO and sustainability performance, including environmental, social, and economic performance. For instance, Entrepreneurs in Berlin shape

sustainable transitions with their diverse social identities (Gebhardt & Bachmann, 2023). Beyond shareholder profit, organisation sustainability requires incorporating social and environmental considerations into business operations and stakeholder interactions (Park, 2023). Companies must expand their economic duties to include environmental, social, and governance requirements to satisfy current and future stakeholders (Eccles et al., 2014).
Based on the above Literature, this study tries to fill in the gap and it can be hypothesized that,

H1. There is a positive impact between the age of the company and sustainability of the business

H2. EO has a positive impact on Sustainable Business

H3. EO when accompanied with Technological Capabilities has a positive impact to sustainable business.

Proposed Research Model

3. RESEARCH METHODOLOGY

The study aimed to measure the impact of Sustainable business performance through entrepreneurial orientation's with the dimensions of innovativeness, risk-taking, proactiveness, competitive aggressiveness and autonomy. The measurement for EO is based on studies by Arshi, Miller, and Lumpkin. Nine items were taken from a study by P. Mikalef to measure Technology Capabilities and another Nine items were taken from a study by Chow, Chen, and Dey to measure Sustainable Business performance. The research population consisted of three small and medium-sized enterprises (SMEs): Manufacturing, Service, and Trade. Data was collected through a survey from November 2023 to February 2024, targeting 150 workers in the SMEs' organizational structure. 150 answers in all were gathered, however around 5 were turned down because of incomplete details. Thus, the response yielding is at the 99.96% were further possessed for data analysis (Mandeville & Roscoe, 1971). Table 1 shows how the organizations polled were categorized by age, which is defined as their years in operation, industry, and number of employees.

Table 1. Descriptive statistics of' the respondents

Item	Range	Frequency	Percentage (%)
Age of the Organisation	Less than 3 yrs	16	11.03%
	3 - 5 years	26	17.93%
	5 - 10 years	33	22.76%
	10 - 15 years	45	31.03%
	above 15 years	25	17.24%
Industry	Manufacturing	24	16.55%
	Service	96	66.21%
	Trade	25	17.24%
No. of Employees	Less than 50	32	22.07%
	51 - 200	77	53.10%
	201 - 500	25	17.24%
	501+	11	7.59%

4. RESULT AND DISCUSSION

The relationships between dependent and independent variables were tested by hierarchical regression analyses. The dependent variable is Sustainable Business Performance of the firm and the Independent variable are EO and Technology Capabilities. The EO dimension includes Proactiveness, Risk taking, Innovation, competitive aggressiveness and autonomy. The Technology capability dimensions include Tangible and human skills. Hierarchical regression analysis for sustainability revealed significant F changes between the three models (see Table 2). The R2 of the models increased with each additional list of variables. The first model includes the firm's age. In model 1 firm age has a significant relation with the sustainable business performance with the *P* value of 0.028. When EO dimensions are included in the second model, the model is still significant and R2 increases to 0.423 from 0.093. On the other hand, When the components of TC are entered in the third model it does not reveal significant contribution to sustainable business with P value 0.316, the model reveals significant F change with an increase in R2 to 0.468. The investigation of the individual variables' regression coefficients and standardized regression coefficients show age of the firm, competitive aggressiveness, and technology capability have significant relationships with sustainable business when all variables are entered. competitive aggressiveness has a significant and positive contribution (0.303) whereas risk taking and proactiveness has a significant but negative relation to sustainable business (-0.002)(-0.076) respectively.

Table 2. Hierarchical Regression for Sustainable Performance

	Model 1			Model 2			Model 3		
	B	SE B	ß	B	SE B	ß	B	SE B	ß
Independent variables entered									
Company Age	1.558	0.688	0.304	1.463	0.585	0.286	0.963	0.623	0.189
Entrepreneurial Orientation									
Innovativeness				0.335	0.232	0.244	0.337	0.225	0.245
Risk Taking				-0.004	0.225	-0.002	0.010	0.219	0.006
Proactive				-0.135	0.376	-0.076	-0.388	0.387	-0.218
Competitive aggressiveness				0.462	0.238	0.303	0.352	0.238	0.231
Autonomy				0.567	0.382	0.236	0.524	0.371	0.218
Technology Capability							0.153	0.079	0.316
Adjusted R^2	0.075			0.346			0.384		
R^2	0.093			0.423			0.468		
Δ in R^2	0.093			0.330			0.046		
Significance of									
F change	0.028			0.001			0.058		
F for Δ in R^2	5.127			5.488			5.535		
F for ANOVA	0.028			0.000			0.000		

Note: N=145; *P<0.05*

Discussion

The results of hierarchical regression analysis showed that the firm's age and EO has a positive impact to Sustainable business of the firm. Thus there is support for H1 and H2. The percentage increases when the Eo dimensions are included in the model. The results of hierarchical regression analysis also confirm that EO when accompanied with Technology capability is not significant to the sustainability where H3 is not supported. The percentage increases but not at a significant level. This implies that firms may not necessarily derive substantial benefits from their technological prowess, the need for a more nuanced understanding of how technology interacts with entrepreneurial orientation for the business is required. This paper tries to bring the contribution that companies are competitive in the market and play a pivotal role in maintaining a proactive stance. Companies can harness the collective proactivity of their workforce to stay ahead in the competitive landscape, seize opportunities, and effectively navigate challenges.The results of hierarchical regression provide evidence that this assumption is correct, and results that are statistically significant demonstrate that EO practices are associated with sustainable corporate success. This research is only conducted in the Chennai area.

REFERENCE

Antoncic, B., & Hisrich, R. D. (2004). Corporate entrepreneurship contingencies and organizational wealth creation. Journal of Management Development, 23(6), 518–550 https://doi.org/10.1108/02621710410541114

Barney, J. B. (1991). The resource based view of strategy: Origins, implications, and prospects. Journal of Management, 17(1), 97–211.

Basco, R., Hernández-Perlines, F., & Rodríguez-García, M. (2020, May). The effect of entrepreneurial orientation on firm performance: A multigroup analysis comparing China, Mexico, and Spain. *Journal of Business Research*, *113*, 409–421. https://doi.org/10.1016/j.jbusres.2019.09.020

Covin, J. G., & Slevin, D. (1989). Strategic management of small firms in hostile and benign environments. Strategic Management Journal, 10(11), 75–87. https://doi.org/10.1002/smj.4250100107

Gebhardt, L., & Bachmann, N. (2023, September). Entrepreneurial contributions to sustainability transitions—A longitudinal study of their representation and enactment through topic modeling and thematic analysis. *Journal of Cleaner Production*, *420*, 138255. https://doi.org/10.1016/j.jclepro.2023.138255

Hall, J. K., Daneke, G. A. & Lenox, M. J. (2010). Sustainable development and entrepreneurship: Past contribution and future directions. Journal of Business Venturing, 25, 439–48 https://doi.org/10.1016/j.jbusvent.2010.01.002

History of SD · What is sustainable development · Sustainable Development Commission. (n.d.). https://www.sd-commission.org.uk/pages/history_sd.html

Kozubíková, L., Sopková, G., Krajčík, V., & Tyll, L. (2017, December). Differences in innovativeness, proactiveness and competitive aggressiveness in relation to entrepreneurial motives. *Journal of International Studies*, *10*(4), 207–218. https://doi.org/10.14254/2071-8330.2017/10-4/16

Lo, M. C., Wang, Y. C., Wah, C. R. J., & Ramayah, T. (2016). The critical success factors for organizational performance of SMEs in Malaysia: a partial least squares approach. Review of Business Management, 18(61), 370–391. https://doi.org/10.7819/rbgn.v18i61.3058

Lomberg, C., Urbig, D., St¨ockmann, C., Marino, L. D., & Dickson, P. H. (2017). Entrepreneurial orientation: The dimensions' shared effects in explaining firm performance. Entrepreneurship Theory and Practice, 41(6), 973–998. https://doi.org/10.1111/etap.12237

Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. Academy of Management Review, 21(1), 135–172. https://ssrn.com/abstract=1504508

Mandeville, G. K., & Roscoe, J. T. (1971, March). Fundamental Research Statistics for the Behavioral Sciences. *Journal of the American Statistical Association*, *66*(333), 224. https://doi.org/10.2307/2284880

Miller, D. (1983). The correlates of entrepreneurship in three types of firms. Management Science, 29(7), 770–791. https://doi.org/10.1287/mnsc.29.7.770

Miller, D., & Friesen, P. (1982). Innovation in conservative and entrepreneurial firms: Two models of strategic momentum. Strategic Management Journal, 3(1), 1–25. https://doi.org/10.1002/smj.4250030102

Mintzberg, H. (1973). Strategy making in three modes. California Management Review, 16 (2), 44–53. https://doi.org/10.2307/41164491

Nakola, J. O., Tarus, B. K., Buigut, K., & Kipchirchir, K. E. (2015). Effect Of Strategic Orientation On Performance Of Small And Medium Enterprises: Evidence From Kenya. International Journal of Economics, Commerce and Management, 3(11), 336–351

Park, S.-B. (2023). Bringing strategy back in: Corporate sustainability and firm performance. *Journal of Cleaner Production*, *388*, 136012. https://doi.org/10.1016/j.jclepro.2023.136012

Rauch, A., Wiklund, J., Lumpkin, G., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. Entrepreneurship: Theory & Practice, 33(3), 761–787. https://doi.org/10.1111/j.1540-6520.2009.00308.x

Tjahjadi, B., Soewarno, N., & Mustikaningtiyas, F. (2021, March). Good corporate governance and corporate sustainability performance in Indonesia: A triple bottom line approach. *Heliyon*, *7*(3), e06453. https://doi.org/10.1016/j.heliyon.2021.e06453

Venkatraman, N. (1989). Strategic orientation of business enterprises: The construct, dimensionality and measurement. Management Science, 35(8), 941–962. https://www.jstor.org/stable/2632149

Wales, W. J. (2016). Entrepreneurial orientation: A review and synthesis of promising research directions. International Small Business Journal, 34(1), 3–15. https://doi.org/10.1177/0266242615613840

Wales, W. J., Corbett, A., Marino, L., & Kreiser, P. (2020). The Future of Entrepreneurial Orientation (EO) Research. In A. K. Corbett, P. Marino, & L. W. Wales (Eds.), Entrepreneurial Orientation: Epistemological, Theoretical, and Empirical Perspectives. http://dx.doi.org/10.1108/S1074-754020210000022001

Wales, W. J., Covin, J. G., & Monsen, E. (2020). Entrepreneurial orientation: The necessity of a multilevel conceptualization. Strategic Entrepreneurship Journal. https://doi.org/10.1002/sej.1344

Wales, W. J., Gupta, V. K., & Mousa, F.-T. (2013). Empirical research on entrepreneurial orientation: An assessment and suggestions for future research. International Small Business Journal, 31(4), 357–383. https://doi.org/10.1177/0266242611418261

Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: A configuration approach. Journal of Business Venturing, 20(1), 71–91. https://doi.org/10.1016/j.jbusvent.2004.01.001

Zahra, S. (1991). Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. Journal of Business Venturing, 6(4), 259–286. https://doi.org/10.1016/0883-9026(91)90019-A