

How Entrepreneurship Impacts Sustainable Development: An Empirical Evidence from Emerging Economies

By Ahmed Naji Badawi¹ and Mohammed Ahmed Saeed²

ABSTRACT:

The purpose of the manuscript was to examine the impact of entrepreneurship on the sustainable development of Saudi Arabia's consulting industry. Entrepreneurship dimensions included risk-taking, innovativeness, and proactiveness, whereas sustainable development dimensions included economic, social, and environmental sustainability. The research participants were represented by managers of consulting companies in Saudi Arabia. A purposive sample of 177 managers at companies located in Jeddah was acquired, representing a response rate of 80.45% of the total disseminated surveys. To assess the research's hypotheses, structural equation modeling (SEM) was employed as an inferential statistical analytic approach. The study's findings offered support for the impact of entrepreneurship on the sustainable development of the consulting industry in Saudi Arabia. Furthermore, the findings indicated that all dimensions of entrepreneurship had positive effects on the sustainable development of the consulting industry in Saudi Arabia, with risk-taking having the largest impact and proactiveness having the lowest. Accordingly, the manuscript recommended managers of consulting companies and decision-makers in Saudi Arabia allocate extra resources for research and development activities to create new models that could assist in the proactive capture of investment opportunities.

JEL Classification: L26, L31, Q01.

Keywords: Entrepreneurship, Sustainable Development, Consulting Industry, Saudi Arabia.

1. Introduction

The association between institutional processes and sustainable development is arguably the most fascinating challenge for economists. The core concept of sustainable development is the effective management of economic resources that provides the survival of humanity (Kaul et al., 2022). This philosophy prioritizes human progress and individual well-being, along with the preservation of the capacity of subsequent generations to satisfy their needs (Zhang et al., 2021). However, the personal inclination to control the market industry and earn more profits cannot be overlooked without considering the social, environmental, and economic ramifications for the natural surroundings (Dantas et al., 2021). Karamustafa and Arsan (2023) mentioned that in the rapidly changing complicated economic environment, sustainable development is a major cornerstone and strategic goal that governments, as well as other entities, strive to achieve, particularly in the successive crises that afflicted the global economy that coincided with the wide utilization of the 4.0 Industrial Revolution technologies.

¹ Masters's graduate, Department of Economics, King Abdulaziz University, Kingdom of Saudi Arabia - Jeddah P.O. Box: 80200. Zip Code: 21589

² Assistant Professor, Department of Economics, King Abdulaziz University, Kingdom of Saudi Arabia - Jeddah P.O. Box: 80200. Zip Code: 21589

Since the initiation of this decade, companies have transformed into adopting innovative and modern strategies for supporting economic growth and promoting creativity based on performance and operational effectiveness. According to the theories related to innovation and creation, entrepreneurship has a vital function in boosting economic growth (Tao et al., 2022). Furthermore, this notion serves as a connector between the strategic perspective and the capability to overcome uncertainty in troubled economic systems (Ramadani et al., 2022). According to Gebre Borojo and Yushi (2020), an economy's entrepreneurial strategy serves as one of the crucial factors in boosting the investment climate and attracting new foreign investments, as well as proof of economic openness through pursuing the method of free trade exchange.

The sustainable development of consulting industry is critical for the country's economic growth and environmental stewardship in Saudi Arabia. While entrepreneurship has been recognized as a driver for creativity and advancement in the economy, its influence on promoting sustainability in the Saudi Arabia context remains largely unstudied. This research gap has remained in part due to the lack of enough incorporation of the unique socio-economic frameworks of Saudi Arabia, including its state-led diversification agenda, changes in the dynamics of the private sector and policy driven innovation ecosystem into the theories of the relationship between entrepreneurship and sustainability. Consequently, the relevance of global models of entrepreneurship-sustainability to the context of Saudi is questionable, which is why the localized academic investigation is necessary. This knowledge gap inhibits comprehending of how entrepreneurship may successfully contribute to sustainable practices, limiting the consulting industry's potential for beneficial transformation and impeding Saudi Arabia's progress toward meeting its sustainable development goals. Moreover, the absence of research on the influence of entrepreneurship on the sustainable development of the consulting industry in Saudi Arabia makes developing evidence-based policies and strategies problematic. Politicians, industry leaders, and entrepreneurs cannot execute focused measures to generate positive change unless they have a complete grasp of the relationship between entrepreneurship and sustainability. This limits the industry's capacity to embrace innovative solutions, address sustainability difficulties, and capitalize on new economic opportunities that correspond with Saudi Arabia's long-term development goals.

Therefore, there is an urgent need for this research to discuss the impact of entrepreneurship on the sustainable development of the consulting industry in Saudi Arabia, which is supported with empirical evidence. This research delves into the specific contributions of entrepreneurs, such as their role in driving innovation, promoting sustainable business models, and creating positive social and environmental outcomes. By addressing this research gap, policymakers and industry stakeholders can gain insights into effective strategies, policies, and interventions that encourage and support sustainable entrepreneurship in the consulting industry, thereby accelerating Saudi Arabia's progress towards a more sustainable future.

2. Review of Literature

2.1 Entrepreneurship

Economic theory and innovation theory have been used to explain the phenomena of entrepreneurship. According to economic theory, psychological motivation

is the primary motivator of entrepreneurs since it enhances the ability to adapt to uncertain circumstances to reap benefits and grow wealth (Lanivich et al., 2022; Parker, 2018; Hicks, 1931). While the theory of innovation defines entrepreneurship as the cornerstone of the "creative destruction" process, which transfers the cycle of economic growth of resources from the present level to higher levels based on continual technical advancement (Schumpeter, 1934; Chua, 2018). Although researchers concur on the theoretical basis and the significance of entrepreneurship in boosting economic growth, several definitions of this notion have arisen. Entrepreneurship is described as the process of investing and restructuring economic resources to discover economic opportunities and develop new products or services that are offered to customers for profit as compensation for embracing uncertainty (Huang and Chen, 2021).

Bandera et al. (2021) stated that entrepreneurship is the ability to meet customer requirements with creative products and services that achieve stakeholders' strategic goals. Entrepreneurship is built on three fundamental dimensions (Kim, 2020; Jin and Lee, 2020). (a) Risk-taking is defined as the ability and desire to participate in actions or decisions that include uncertainty, possible loss, or the prospect of failure in pursuit of a desired goal or opportunity (Alsuwaidi et al., 2021). It includes making decisions or doing actions where the outcome is unknown or where negative repercussions are possible. (b) Innovativeness can be described as the capability to provide new ideas, concepts, goods, services, processes, or business models that result in positive change or produce value (Sabahi and Parast, 2020). It entails the ability to create and implement unique ideas, techniques, or strategies to address existing issues, meet unmet needs, or capitalize on untapped possibilities. (c) Proactiveness is defined as a forward-thinking approach characterized by taking the initiative, predicting future needs or possibilities, and acting in advance to solve them (Kim, 2020). It entails being proactive rather than reactive, actively striving to shape and influence results rather than just reacting to events.

2.2 Sustainable development

Since the publishing of the 1987 Portland Commission Report, there has been an upsurge in research interest in sustainable development, which emphasises enhancing nations' ability to meet basic human requirements while extending the potential of fulfilling its people's wants and living decent lives (Bexell and Jönsson, 2017). Sachs et al. (2022) explained sustainable development as regulations and processes based on a cost-benefit analysis that encourage environmental protection norms and attain advanced levels of sustainable well-being. Sustainable development is a holistic approach to achieving ongoing improvements in persons' quality of life while utilizing the least amount of natural resource stock so that future generations may benefit from these stocks and other assets deriving from them (Tomislav, 2018). The Sustainable Development Goals (SDGs) of the United Nations, agreed by member states in 2015, provide a framework for global efforts toward sustainable development. The SDGs include 17 interrelated objectives and 169 targets aimed at addressing critical global concerns such as poverty eradication, hunger, health, education, gender equality, renewable energy, sustainable cities, and climate action (Allen et al., 2018; Bose and Khan, 2022).

Three main aspects of sustainable development could be demonstrated. (a) Economic sustainability is defined as an economic system's or activity's capability to

maintain long-term prosperity, progress, and well-being without depleting resources, producing serious imbalances, or endangering future generations' ability to satisfy their own requirements (Novitz, 2020). It entails regulating economic operations in such a manner that they provide long-term stability, resilience, and equal distribution of rewards. (b) Environmental sustainability indicates the responsible and appropriate management of natural resources and ecosystems to ensure their long-term survival and the maintenance of the planet's ecological balance (Zhang et al., 2021). It involves addressing the requirements of the current generation while protecting and conserving natural resources and biodiversity for those who follow. (c) Social sustainability refers to the ability of communities to preserve and improve the well-being, quality of life, and equal opportunities for all their members, both now and in the future (Loviscek, 2021). It includes the social, cultural, and human components of sustainability and focuses on creating inclusive and just societies in which individuals and communities can thrive.

2.3 Entrepreneurship and sustainable development

By generating innovation, encouraging economic growth, and solving social concerns, entrepreneurship serves a critical role in furthering sustainable development. Entrepreneurship is a significant driver for accomplishing sustainability goals as a result of its entrepreneurial attitude and philosophy. In a systematic review conducted by Shaktawat and Vadhera (2021) to discuss comprehensive risk management in hydropower projects with a special focus on sustainable development, they discovered a critical need to recognize risk analysis in the cost estimation process and to provide financing with an appropriate margin on the upfront base cost to account for uncertainties, particularly for emerging economies. Zaidan et al. (2022) emphasized the influence of decision-making, crisis management, and risk-taking on sustainability in the Iraqi energy sector through open innovation. The findings of the partial least squares structural equation analysis of 397 responses verified the direct essential influence of decision-making, crisis management, and risk-taking on sustainability, as well as the indirect positive impact of open innovation. Furthermore, Li and Li (2021) did a comprehensive literature review of 1,156 research published in the Journal of Sustainability to better comprehend the link between risk governance and sustainability. The findings demonstrated an implicit link between risk governance and sustainability, with risk governance serving as a process of involvement and coordination as well as a way of dealing with uncertainty and complexity to achieve sustainable development outcomes. As a result, the first research assumption was formulated as follows:

H1: Risk-taking has a positive impact on sustainable development.

Wongwilai et al. (2022) investigated the relationship between innovative ideas, innovative processes, innovative manufacturing, innovative supply chain, and company sustainability. The findings of an analysis of 300 surveys from employees of Indonesian textile firms revealed the critical importance of innovative concepts in increasing organizations' ability to achieve sustainable development. Bhupendra and Sangle (2022) used structural equation modelling to analyse the responses of 389 company managers in the Indian economy to provide an empirical test for analysing the structural process model based on the combinations of types of organizational innovation to achieve the multiple

aspects of sustainability. The findings demonstrated that organizational innovation features connected with senior management's propensity to take risks might be a key element in distinguishing between traditional organizations and companies geared toward sustainability. In a comparable manner, Schönfeld and Ferreira (2021) provided a critical examination of the role of innovation policies in the economic, environmental, and social aspects of sustainable development for European Union countries. According to the findings, countries should prioritize innovation to systematically remove barriers to the development and implementation of innovations in the name of competitiveness, job creation, and economic growth. As a result, the second research assumption might be stated as follows:

H2: innovativeness has a positive impact on sustainable development.

Ahmed et al. (2021) used structural equation modeling and conditional process modelling to analyse 798 responses from China, India, Pakistan, Bangladesh, the United Arab Emirates, and Vietnam to assess the impact of proactive environmental strategy on the competitive and sustainable development of the enterprise through technological environmental innovation and the company image as mediating variables. The findings revealed that the proactive environmental strategy and competitive advantage had a substantial and favourable influence on the organization's long-term growth. In the consulting industry, Carballo-Penela and Castromán-Diz (2015) performed a sophisticated study on the influence of environmental proactive motives on sustainable development in Spain for 41 managers using multiple hierarchical regression analysis. According to the findings, consulting companies' strategic positioning and the implementation of proactive environmental initiatives have a beneficial impact on sustainable development efforts. Therefore, the third hypothesis of the study might be stated as follows:

H3: proactiveness has a positive impact on sustainable development.

The proposed research model for this study is depicted in Figure 1. Three hypotheses were developed to describe how the dimensions of entrepreneurship, i.e., risk-taking, innovativeness, and proactiveness, impact sustainable development in emerging economics.

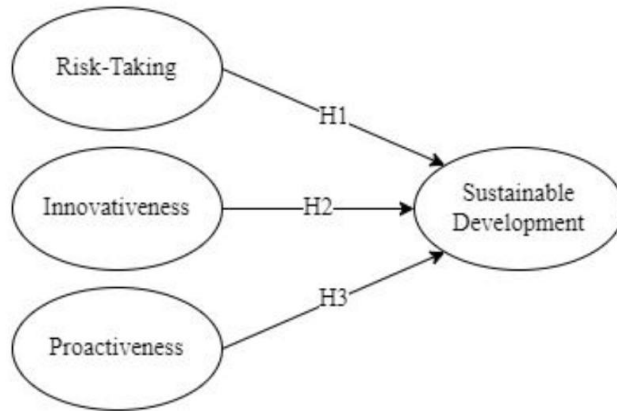


Figure 1. Proposed model and hypotheses.

3. Methods

3.1 Data collection and participants

A cross-sectional design based on quantitative data is an appropriate method to examine the impact of entrepreneurship on the sustainable development of the consulting industry in Saudi Arabia. It includes collecting data through a questionnaire distributed to the study sample simultaneously questionnaire was distributed via e-mail from April 25, 2023, to June 3, 2023. The limits of the research comprised an obstacle to applying the comprehensive survey, thus the samples were applied.

Organizational factors that influence how well companies perform are the focus of this study. Considering this, the purposive sample was best for gathering data from managers at the senior and middle levels of consulting companies working in the Saudi market. Hence, 220 managers at active companies in Jeddah received the survey. With a response rate of 85.9%, 189 responses were received. Initial evaluation revealed that it contains 12 responses that deviate from the standards of statistical analysis that were eliminated from the study sample. Therefore, the responses that were considered in the research 177 were those that reflected 80.4% of the overall validity of the total sample.

The demographic characteristics of the sample revealed that it includes 120 (67.8%) males and 57 (32.2%) females. The predominant age group of respondents 69.0% was "41-50", followed by 22.6% for "31-40", then 5.6% for "51 and older", and finally 2.8% for "30 and younger". Moreover, 49.7% of the respondents had a master's degree, followed by 33.9% with a bachelor's degree, and 16.4% with a PhD. Regarding job experience, the results showed that 44.1% of the respondents have experience within the category "11-15", followed by 31.1% within the category "more than 15", then 22.0% within the category "5-10", and finally 2.8% within the category "less than 5".

3.2 Measures

The present research utilized a self-administered questionnaire that was created and disseminated using the Google Forms platform. The majority of the questionnaire's components were derived from English references by investigation of the related literature. However, it was converted to Arabic to suit the official language used in Saudi Arabia. With the assistance of reverse translation specialists, it was then translated back into English for use in the research. A cover letter describing the research's goals and the researchers' obligation to data confidentiality was included in the questionnaire. Additionally, it included three parts devoted to gathering data. The first section was for demographic data, i.e., gender, age group, qualification, and job experience. The remaining sections were for study variables, where the respondents were asked to rate their items using a five-point Likert scale, from a minimum (1) for strongly disagree to a maximum (5) for strongly agree.

Entrepreneurship was the research's exogenous variable since its items were borrowed from Sabahi and Parast (2020). The questions for this variable were divided among three first-order constructs and were put in the second section of the questionnaire. Four items were used to assess risk-taking, e.g., the company's ability to predict economic shifts and devise effective coping mechanisms. Four items were used to gauge innovativeness, e.g., the company's adoption of a strategy to motivate and reward innovative workers. Four items were used to gauge proactiveness, e.g., the company's use of resources to seize opportunities before rivals.

Sustainable development served as the research's endogenous variable since its items were in harmony with Peng et al. (2023). The third section of the questionnaire was devoted to this variable's items, which were allocated among three first-order constructs. Four items were used to gauge the economic sustainability, e.g., the company's efforts to cut back on the materials it uses to provide clients with services. Four items were used to gauge social sustainability, e.g., whether the company takes its social duty seriously. Four items were used to gauge environmental sustainability, e.g., the company's involvement in encouraging the use of recycled materials.

3.3 Analytical process

To determine how entrepreneurship and sustainable development are related, the analytical descriptive approach was adopted. While the analytical aspect is intended to infer the cause-and-effect relationships between the variables, the descriptive aspect is utilized to ascertain the parametric features and the level of research variables across the target population (Sileyew, 2019; Ong and Puteh, 2017; Lo et al., 2020). Accordingly, descriptive indicators including the mean, standard deviation, and correlation were extracted using the SPSS software. The AMOS software that uses structural equation modeling was implemented to extract the impact coefficients as well as the indications of the measurement model's validity and reliability.

4. Results

Measurement model

Two models are evaluated within the framework of the structural equation modeling approach. The measurement model assesses the validity and reliability of the used instrument, whilst the structural model is utilized to ascertain the relationship between the research latent constructs following the extraction of the goodness fit indicators (Hair et al., 2020). Consequently, the findings of Table 1 reflect the extracted values to evaluate the validity and reliability of the constructs of entrepreneurship and sustainable development.

Table 1. Measurement model evaluation

Constructs	Items	Loadings	AVE	MSV	$\sqrt{\text{AVE}}$	α	ω
Risk-Taking	RT1	0.773	0.555	0.411	0.745	0.831	0.837
	RT2	0.687					
	RT3	0.781					
	RT4	0.734					
Innovativeness	IN1	0.804	0.604	0.286	0.777	0.858	0.861
	IN2	0.729					
	IN3	0.780					
	IN4	0.794					
Proactiveness	PR1	0.764	0.610	0.278	0.781	0.861	0.863
	PR2	0.775					
	PR3	0.807					
	PR4	0.776					
Economic Dimension	EC1	0.772	0.536	0.286	0.732	0.821	0.824
	EC2	0.700					
	EC3	0.713					
	EC4	0.740					
Social Dimension	SO1	0.728	0.561	0.415	0.749	0.835	0.838
	SO2	0.784					
	SO3	0.738					
	SO4	0.746					
Environmental Dimension	EN1	0.792	0.609	0.197	0.781	0.862	0.862
	EN2	0.774					
	EN3	0.770					
	EN4	0.786					

Item loadings and the extracted average variance (AVE) were used for assessing the constructs' convergent validity. The results in Table 2 revealed that the loadings of the items on the latent constructs varied between (0.687-0.807), which was more than the minimal criterion of 0.50 (Dash and Paul, 2021). Furthermore, for latent constructs, the AVE values were greater than 0.50, which reflects the acceptable lower bound (Afthanorhan et al., 2020). Hence, the convergent validity indices were at acceptable levels.

The maximum shared variance (MSV) was used to calculate discriminate validity. Simultaneously, the square root of AVE is compared to the correlation coefficients between the latent constructs. According to Table 2, all AVE values exceeded MSV for the same construct, and the square roots of AVE values were significantly greater than all correlation coefficients between the research's latent constructs. These findings supported the accomplishment of discriminant validity (Radomir and Moisescu, 2020).

The measuring model's reliability was evaluated using internal consistency and composite reliability statistics. Internal consistency was measured using Cronbach's alpha coefficient (α), with results ranging from (0.821-0.862). Furthermore, McDonald's omega coefficient (ω) was utilized to calculate composite reliability, with values ranging from (0.824-0.863). According to Goodboy and Martin (2020), values of internal consistency and composite reliability more than the lower criterion of 0.70 indicate that the measurement model's reliability has been attained.

4.1 Descriptive statistics

The descriptive outcomes were utilized to assess the degree of entrepreneurship and sustainable development adoption in Saudi Arabia's consulting industry. The mean was applied to determine the relative importance levels and standard deviation to illustrate the spread map of the responses. Furthermore, the Pearson correlation matrix is implemented to ensure that the independent constructs do not involve multicollinearity (Keller, 2022). Table 2 contains descriptive statistics about the current research.

Table 2. Mean, standard deviation, and correlation.

Variables	M	SD	1	2	3	4	5	6
1. Risk-taking	3.75	0.655	1					
2. Innovativeness	3.70	0.717	0.339	1				
3. Proactiveness	3.65	0.726	0.347	0.341	1			
4. Economic	3.59	0.647	0.364	0.450	0.448	1		
5. Social	3.71	0.661	0.536	0.431	0.362	0.277	1	
6. Environmental	3.53	0.720	0.345	0.377	0.383	0.233	0.213	1

Descriptive statistics indicated that the dimensions of entrepreneurship ranged between high and moderate relative importance levels. Risk-taking (M= 3.75, SD= 0.655) ranked first and innovativeness (M= 3.70, SD= 0.717) ranked second, both had a high relative importance level. However, proactiveness (M= 3.65, SD= 0.726) was ranked last with a moderate relative importance level. The dimensions of sustainable development were mostly at a moderate relative importance level, except social sustainability (M= 3.71, SD= 0.661) which was ranked first with a high relative importance level. Economic sustainability (M= 3.59, SD= 0.647) was in the second rank and environmental sustainability (M= 3.53, SD= 0.720) was in the third rank and both were of moderate relative importance level.

Besides, the results of Table 2 confirmed that the relationship between entrepreneurship and sustainable development of the consulting industry in Saudi Arabia was moderately positive. Pearson's correlation coefficients between the dimensions of

entrepreneurship and the dimensions of sustainable development ranged between 0.345 and 0.536. On the other hand, the correlation coefficients between the dimensions of entrepreneurship were within the range of (0.339-0.347), which indicates that they were appropriately related and free from the problem of multicollinearity, as they were less than the upper threshold of 0.80 (Shrestha, 2020).

4.2 Structural model

The extracted parameters from the structural model are utilized to analyse the relationship among the research's constructs using the applied model that is compatible with the used theoretical model (Collier, 2020; Zhang, 2022). In this research, the goodness of fit indicators can be used to ensure that the relationship's results between the constructs of entrepreneurship and sustainable development are reliable and generalizable, as illustrated in Figure 2.

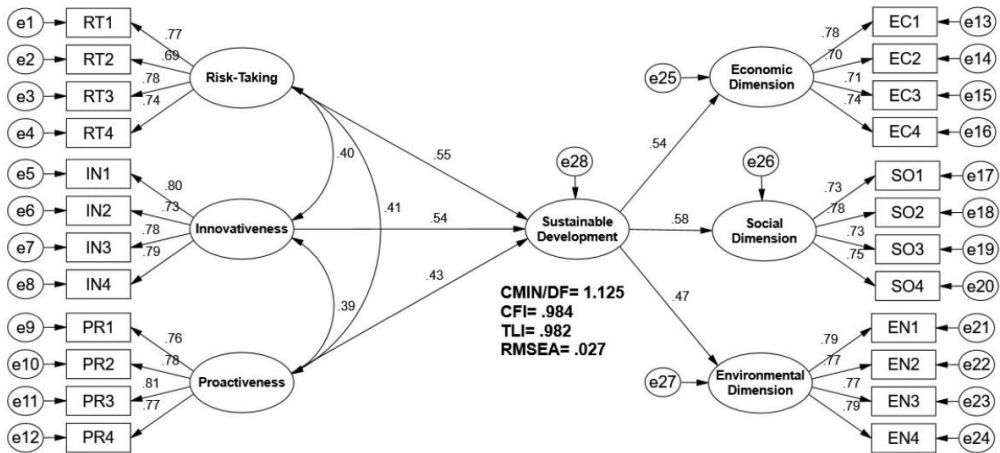


Figure 2. Structural model used in this research.

According to the results of Figure 2, the chi-squared to degrees of freedom (CMIN/DF) was 1.125, indicating that it is an appropriate value since it is far from the highest bound of 3 (Goual and Yousof, 2020). The comparative fit index (CFI) and the Tucker-Lewis Index (TLI) had values of 0.984 and 0.982 respectively, which are therefore greater than the required minimum of 0.90 (Montoya and Edwards, 2021). Moreover, the root mean square error of approximation (RMSEA) was 0.027, which means that it is less than the threshold of 0.08 allowed for this index (Ong and Puteh, 2017). Based on these indicators, the structural model used to measure the impact of entrepreneurship dimensions on the sustainable development of the consulting industry in Saudi Arabia had good validity and could be relied upon on the standardized and unstandardized impact coefficients listed in Table 3.

Table 3. Structural model coefficients

Hypothesis path	B	S.E	β	t	p
Risk-taking \rightarrow Sustainable development	0.227	0.056	0.547	4.954	0.000
Innovativeness \rightarrow Sustainable development	0.323	0.067	0.539	4.844	0.000
Proactiveness \rightarrow Sustainable development	0.244	0.058	0.426	4.178	0.000

Depending on the probability values (p) of the tests, the results of Table 3 confirmed that all hypotheses were supported. The impact of risk-taking ($\beta = 0.547$, $t = 4.954$, $p = 0.000$) on sustainable development was the largest among the dimensions of entrepreneurship, followed by innovativeness ($\beta = 0.539$, $t = 4.844$, $p = 0.000$) in the second rank, and then proactiveness ($\beta = 0.426$, $t = 4.178$, $p = 0.000$) in the third and last rank.

5. Discussion

The study intended to investigate the impact of entrepreneurship on the sustained development of the consulting industry in Saudi Arabia. The demographic statistics revealed that most responders were male. The outcome is congruent with current beliefs and culture, as well as future goals targeted at activating women's roles in Saudi society. Managers at the target companies who represented the study sample were young adults with advanced degrees. Hence, it is possible to infer that the consultancy industry in Saudi Arabia strives to minimize youth unemployment by offering respectable work possibilities based on investment in knowledge capacities and constant stimulation to grow Saudi society's human capital. However, most research survey participants had prior employment experience. That conclusion is consistent with the nature of the target industry, which requires those in charge to have an academic degree as well as professional experience to deliver the most effective solutions to the challenges that need to solve.

According to the descriptive statistics of the research variables, the degree of entrepreneurship in the consulting industry in Saudi Arabia was high. Risk-taking and innovativeness were both high, whereas proactiveness was moderate. As a result, it is possible to deduce that the participating companies develop their strategies based on accurate and dependable forecast models to identify disruptions in the local and regional economies. Additionally, companies take advantage of investment possibilities with the same likelihood of success and failure by forming partnerships to mitigate the risks associated with the high degree of risk during the start-up stage. This is like what Kim (2020) verified concerning organizations' capacity to initiate initiatives in high-risk contexts. In terms of Saudi Arabia consulting companies' proactive behaviour, the findings indicated that these companies monitor local and regional markets to discover prospective opportunities by assessing competitiveness characteristics before entering new markets. These findings support Philip et al.'s (2022) research on the importance of proactiveness in supporting entrepreneurship in emerging economies.

The level of sustainable development in the Saudi Arabia consultancy industry was moderate. The economic and environmental dimensions were moderate, whereas the social dimension was high. As a result, it is possible to assume that the companies have the orientation to fulfil their social commitments by implementing corporate social responsibility plans. Furthermore, these businesses prioritize creating a socially responsible

work environment through fair wage standards and secure workplaces with low employee turnover. This is consistent with 2018 et al. (2018) who assert that the social components of sustainable development are the first step in achieving the goals at the other environmental and economic levels. Companies strive to support the national economy and contribute to the resolution of economic issues such as unemployment rates and the return on financial assets. This conclusion is consistent with Chang and Cheng (2019), who underlined the relevance of long-term and comprehensive economic growth in improving future generations' capacity to satisfy their requirements. The Saudi economy, which is mostly reliant on investment in oil production, creates environmental pollution, and so ranks worst in terms of environmental sustainability. However, consulting companies in Saudi Arabia have demonstrated a growing interest in lowering harmful emissions and protecting biodiversity by supporting recycling operations in the recommended economic models they present to their customers.

The findings also revealed that entrepreneurship has a beneficial impact on the sustainable development of the consulting industry in Saudi Arabia. Accordingly, achieving the broad vision of Saudi Arabia in terms of achieving sustainable development objectives relies on companies' ability to develop work systems and economic models that involve improving creativity and dealing with the risks associated with introducing these models in developing economies, which include high levels of rejection risk. This conclusion was shared by Abou-Moghli and Dandis (2021), who demonstrated the relevance of entrepreneurship in sustainable development through a meta-analysis of emerging economies. Furthermore, spreading the entrepreneurial culture throughout the various sectors of the Saudi Arabia economy assures efficiency and effectiveness in investing depleted resources and reduces detrimental environmental impacts, which in turn improves the achievement of social goals as customers become more aware of the need for companies to adopt their social responsibilities. Thus, these findings corroborated Zhang et al.'s (2021) conclusion on the capacity of entrepreneurship to minimize harmful emissions while also improving a company's social standing.

Nevertheless, even though the conclusion includes the positive evidence of the relations between entrepreneurship and sustainable development, it still fails to consider the role of the firm-level features, including the size of a company, the form of its ownership, the degree of digitalization, and the possibility of innovation, that could contribute to the sustainability of this association. This homogeneous interpretation ignores variation within the organizations that may provide more information on the occurrence of entrepreneurial practices in various organizational settings. Such differentiation would be valuable both in managerial practice and policy specificity since it would acknowledge that sustainability-focused entrepreneurship can be imbalanced even among firms based on their structural and technological capabilities. Besides, the closer connection with these firm-level processes, larger socio-economic systems, and theoretical models of sustainable entrepreneurship would enhance the analytical consistency of the research and its scholarly need among a broader audience.

6. Implications and further research

According to the positive impact of entrepreneurship on the sustainable development of Saudi Arabia's consulting industry, a variety of recommendations may be made to decision-makers. First, extra resources should be allocated to research and development to develop new models that could assist in the proactive capture of investment opportunities. These operations contribute to the company's long-term sustainability by increasing investment in renewable sources of energy, such as wind and solar energy, to fulfil the company's energy needs. Second, explore innovative ideas in order to provide value to the economy and gain a competitive advantage in new markets. This strategy may be used to promote the concepts of justice and equal opportunity while recruiting fresh talent and improving community trust in the company's sustainable actions. Third, apply a culture of information dissemination across departments and sectors to boost the likelihood of attaining strategic goals efficiently and effectively. disseminating information is critical in encouraging employees to limit the use of raw resources in organizational operations and replace them with recycled materials, as well as to reduce energy consumption in order to achieve a clean environment.

While entrepreneurship could have a wide positive impact on the sustainable development of the Saudi consulting industry, there are several limitations that must be recognized. First, Saudi Arabia has a distinct cultural, social, and economic background that could have an impact on entrepreneurship and sustainability results. Other nations' or regions' research studies may not adequately account for these cultural and environmental factors. Therefore, caution should be exercised when generalizing the findings of research undertaken in diverse contexts to the Saudi consulting industry. Second, longitudinal studies are required to track the long-term performance and sustainability results of entrepreneurial endeavors in the consulting industry. However, these studies may confront difficulties in keeping long-term contact with entrepreneurs, assuring data integrity and consistency, and accounting for changes in the business environment. These difficulties might restrict the breadth and dependability of study findings. Longitudinal designs are therefore the way forward to research in the future in order to monitor changes as they happen over time and the sustainability of the effect of entrepreneurship on sustainability. To add depth and generalizability to the analysis, extending the analysis to comparative regional or cross-industry views would be beneficial to Saudi Arabia. Moreover, incorporating qualitative data on the part of employees, clients and other stakeholders might provide a more multi-faceted insight into the process of transformation of the entrepreneurial initiatives into the durable results. This triangulation would improve practical and policy relevance of the frameworks of sustainable entrepreneurship as well, offering decision-makers with evidence that is nuanced to design strategy sensitive to the context.

Moreover, it might be difficult to demonstrate a causal link between entrepreneurship and sustainable development in the consulting sector. Many external factors, such as economic conditions, government regulations, and market dynamics, might have an impact on both entrepreneurship and the consequences of sustainable development. Isolating the precise influence of entrepreneurship on sustainability is quite difficult, and advanced study designs and statistical methodologies may be required.

Finally, entrepreneurial research studies frequently rely on voluntary involvement, which might contribute to self-selection bias. Entrepreneurs who decide to engage in the study may exhibit different traits, motives, and degrees of success than those who do not. This bias may impair the generalizability of study findings and restrict comprehension by a wider audience of consulting sector entrepreneurs.

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