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Navigating dynamic market challenges to enhancing sustainable entrepreneurship in SMEs through opportunities and disadvantages

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Abstract

The advancement of SMEs is crucial for a global trend in every nation since they are pivotal in enhancing the national economy and creating additional opportunities, particularly in the Sustainable Development Goals (SDGs) setting. This study aims to establish a framework regarding “the direct influence of market opportunities and challenges on sustainable entrepreneurship.” We developed a new model and descriptive steps on the basis of the variables of the study. To accomplish the research’s objective, we applied a quantitative research method to examine the influence of market opportunities and disadvantages on sustainable entrepreneurship. This research was implemented and evaluated in the business sector for numerous SMEs in South Iraqi cities, using a questionnaire as a data collection method, with a sample size of 432 general managers and marketing managers employed in SMEs. The analysis utilized the AMOS 26 software to test the study’s hypotheses. The findings indicated a direct positive effect on the market challenges and prospects for sustainable entrepreneurship. This study indicates a focus on mitigating market disadvantages and enhancing opportunities for SMEs through establishing essential guidelines and regulations that can mitigate market disadvantages and transform them into substantial opportunities that enhance sustainable entrepreneurship in SMEs.

Keywords: Sustainable Development Goals (SDGs), Opportunities, Disadvantages, Sustainable entrepreneurship

JEL Classification: L1, L26, Q01, M21

Introduction

Entrepreneurship is extensively acclaimed as a catalyst for economic resilience and positive societal change (Salamzadeh et al., 2022). Its significance has spurred extensive research in recent years, with scholars emphasizing its role in promoting social progress, innovation, and economic development (Gu & Wang, 2022; Landström, 2020). Over time, entrepreneurship concepts have progressed, encompassing theories of the

entrepreneurial process, the influence of institutions, and the psychological and cognitive aspects of entrepreneurial behavior. Other domains include corporate, social, and sustainable entrepreneurship, reflecting the broadening of its scope (Terán-Yépez et al., 2020).

Sustainable entrepreneurship, in particular, has emerged as a field that integrates traditional entrepreneurial approaches with environmental and social considerations. It aligns with the framework of the triple bottom line (TBL), which evaluates ventures based on their environmental, social, and economic impacts (Fischer et al., 2020; Muñoz & Cohen, 2018). This growing focus on sustainability was accelerated by the United Nations' 2030 Development Agenda, which called for enhanced institutional support for sustainable entrepreneurial initiatives, fostering and promoting cross-sectoral global collaboration (Anand et al., 2021; Schaltegger et al., 2018). Although the sustainable entrepreneurship concept is fairly nascent, having emerged fewer than 20 years ago, there exists an ongoing discussion regarding its meaning, conceptual boundaries, as well as the internal and external factors that influence it (Anand et al., 2021; Crawford et al., 2022).

Moreover, one prominent perspective within the field is that the orientation of sustainable entrepreneurship serves as a dynamic competence. This allows companies to embrace various strategic approaches that encourage an entrepreneurial spirit and incorporate sustainable practices into their models of business (Criado-Gomis et al., 2018). In particular, SMEs are essential in advancing sustainable entrepreneurship. By adopting a sustainable mindset, SMEs can seize market opportunities and address disadvantages, thereby enhancing their capacity to create and innovate services and products that promote environmental and social sustainability (Kraus et al., 2023). Moreover, the innovation processes of SMEs are being revolutionized by digitalization, impacting their sustainability efforts in diverse ways (Radicić & Petković, 2023).

Despite the potential for sustainable entrepreneurship to drive environmental and social progress, significant challenges remain. Market disadvantages, such as limited knowledge and barriers to adopting environmentally responsible practices, often hinder the effectiveness of SMEs in implementing sustainable solutions (Dean & McMullen, 2007). For instance, entrepreneurs in Iraq face unique challenges due to the country's ongoing reconstruction efforts and the associated social, economic, and environmental issues (Ağca & Mozumdar, 2008; Bagheri et al., 2022). The deteriorated infrastructure, weak regulatory frameworks, and market inefficiencies exacerbate these problems, making it difficult for Iraqi SMEs to thrive sustainably.

The central question of this research is whether there is a direct link between market opportunities and disadvantages and sustainable entrepreneurship in SMEs. The current study aims to explore the power of these market factors on sustainable entrepreneurship, specifically in the context of Iraq. By filling in this void, the research strives to provide practical guidelines to help Iraqi SMEs navigate market disadvantages and foster sustainable practices that benefit both society and the environment. Additionally, the research contributes to the theoretical understanding of sustainable entrepreneurship, particularly in developing economies, where many remains to be explored regarding the interplay between entrepreneurship and sustainability (Dean & McMullen, 2007). Ultimately, this investigation aims to cultivate an integrated conceptual framework highlighting

the reciprocal relationships between market opportunities, disadvantages, and sustainable entrepreneurship. Such a framework will help to protect Iraq's environment from harmful practices while simultaneously supporting the growth of SMEs through socially responsible investment and innovation.

The subsequent section of this investigation is organized in this way. "[Literature review and theoretical concepts](#)" section elucidates a literature review and theoretical concepts to facilitate the research's development. The material and method employed in the study are explained in "[Research method](#)" section and the results and discussion are presented in "[Results and discussion](#)" section. Following that, "Conclusion" section delineates the final considerations, which encompass the future research agenda and limitations.

Literature review and theoretical concepts

Neoclassical economics, originating from Walras, Jevons, and Menger, contends that making the most of utility, principally profits is at the center of all activities of economics. The theory provides foreseeable curves of supply for consumer goods and curves of demand for factors of production, simulating rational economic activities with an inherent tendency to gravitate toward steady-state equilibrium. Critics argue that neoclassical economics ignores the presence of transaction costs, bounded rationality, uncertainty, and the short-term dynamics of markets. Additionally, it overlooks social attachments, i.e., practices, traditions, norms, and culture.

Keynes (1921) and Knight (1921) assert that investment activity is fundamentally uncertain, with the probabilities of various outcomes often being largely indeterminate. Entrepreneurs who understand and take advantage of these uncertainties stand to gain entrepreneurial rents since the market compensates them for taking on the risks and opportunity costs of starting a new business. Entrepreneurial rents refer to supernormal profits generated by companies that implement new resource combinations to create innovations in products or processes. Neoclassical economics, however, faces criticism and has limitations in its capacity to descriptively or normatively address the presence and utilization of entrepreneurial opportunities. Academics propose that by questioning and easing the foundational assumptions of neoclassical economics, we can gain important insights into economic activity and entrepreneurial opportunities. Emerging entrepreneurial opportunities can, if effectively utilized, address degradation, promote market equilibrium, and generate entrepreneurial rents.

The market opportunities and disadvantages

Emerging economies often feature underdeveloped markets, where heightened risk levels create several disadvantages (Aymen et al., 2019; Chang et al., 2012). Key actors in the advertising industry must address these market disadvantages to shift global trade towards sustainability (Arnold, 2002), which aligns with one of the primary assumptions of neoclassical economics. Although companies do not utilize their resources with absolute perfection, they are typically closer to achieving optimal efficiency. However, substantial evidence indicates that both consumers and companies only utilize a portion of the available efficiency. As a result, markets function below the ideal efficiency levels. To address this, entrepreneurs must focus on producing recyclable materials, thereby tackling one of the primary determinants of market inefficiency, which is a lack of corporate

efficiency (Hawken et al., 1999; Williams et al., 2021). In addition, external factors significantly influence companies' operations and are considered one of the key market disadvantages. These factors can be either positive or negative. Laasch (2018) and Toman and Withagen (2000) point out that, despite negative external pressures pushing global markets down unsustainable trajectories, entrepreneurs who find and develop new prospects for renewable energy sources can mitigate these negative consequences. This, in turn, helps markets transition towards sustainability, enhancing the business ventures' success (Cohen & Winn, 2007; Eneizan et al., 2019).

Moreover, incorrect pricing is a crucial contributor to market inefficiencies, as overvaluing non-recyclable resources compared to recyclable ones exacerbates unsustainable market practices (Kurz & Salvadori, 1997). Another significant disadvantage is the lack of information necessary to make sound strategic decisions. This lack of information diminishes market opportunities, limiting entrepreneurs' ability to identify and capitalize on prospects for sustainable projects (Al-Abrrow et al., 2019; Gu & Wang, 2022; Venkataraman, 1997). To make global trade more sustainable, it is critical to deal with these market disadvantages by increasing company efficiency, considering external factors, rectifying pricing policies, and improving access to information. Transforming these challenges into opportunities can drive sustainable entrepreneurship and promote a more sustainable global market; see Fig. 1.

Sustainable entrepreneurship

Sustainable business management is a scientific field that pursues figuring out how possibilities for introducing, creating, and exploiting future services and goods are uncovered, with an emphasis on ecology and supporting humanity and its inhabitants in the search for future product prospects, services, and processes to accomplish societal and economic gains (Bagheri et al., 2022; Shepherd & Patzelt, 2011). Previous studies also demonstrate that it is a procedure of discovering, evaluating, and utilizing environmental and economic opportunities existing within the market (Dean & McMullen, 2007). Sustainable entrepreneurship is, thus, recognized as a form of social change, with entrepreneurs acting as stimuli for environmental-related social transformation (de Bruin, 2016). The transition to corporate sustainability, on the other hand, poses significant challenges for global companies, particularly in light of pervasive issues such as poverty and global terrorism. The transformation towards sustainability also presents significant ethical challenges, indicating that traditional methods or simplistic solutions are inadequate. These pertain to multifaceted systems where linkages of cause and effect are either unpredictable or unidentified, especially due to the absence of a stopping rule for problematic issues, complicating the identification of solutions (Blok et al., 2015).

On the other hand, it possesses the potential to be a "major force in the overall transformation towards a more sustainable business model by providing community solutions", according to other experts. As a result, their enterprises and objectives originate from an aspiration to address particular environmental challenges or transform their industries into products and practices. The alternative is more environmentally friendly (O'Neill & Gibbs, 2016). As such, business sustainability has become extremely important in the culture. Since corporations respond to stakeholder expectations through sustainability, corporate responsibility can be considered

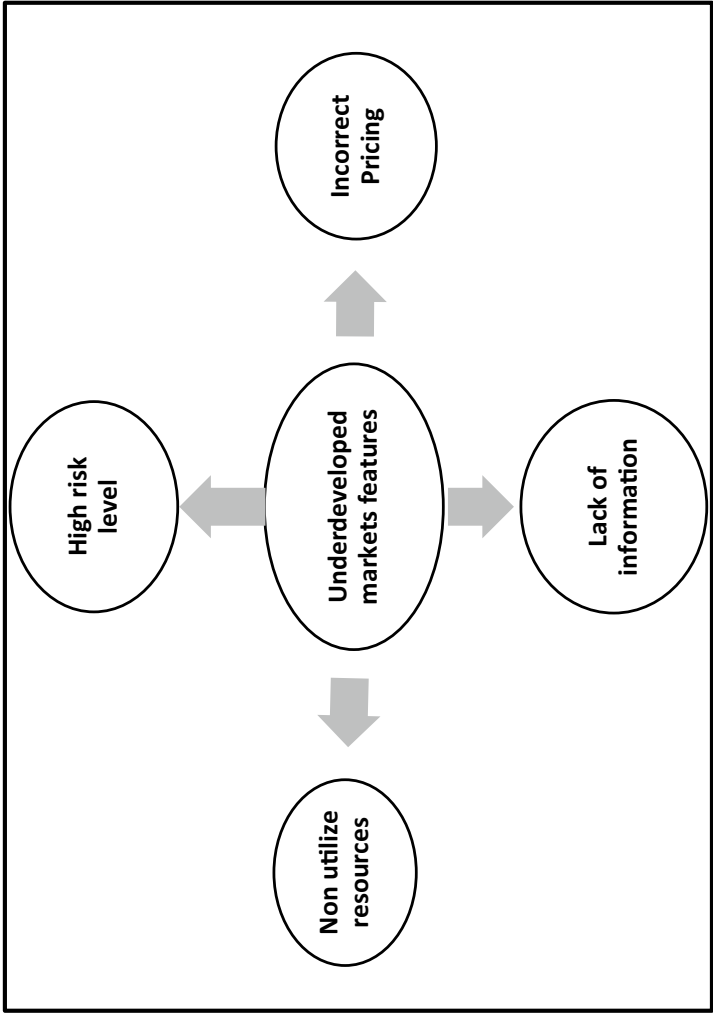


Fig. 1 Underdeveloped markets features (authors work)

an approach to sustainability, as corporations today integrate sustainability programs into their business plans (Blok et al., 2015).

At its core, sustainable entrepreneurship is about producing sustainable innovations that are market-oriented and provide benefits to most of society (Schaltegger & Wagner, 2011). Sustainable entrepreneurs frequently address the neglected needs of individuals who are materially affected or impacted by the company's operational activities. Hence, the sustainable entrepreneurship concept is a fusion of the concepts of entrepreneurship and sustainability. It is a market-driven innovation that entails the making of products that are socially or environmentally beneficial. Consequently, it demonstrates the capability to generate ecologically responsible creativity, leading to long-term development via integration and management in business, both human and natural resources (Riyadh, 2020; Spence et al., 2011).

Recent studies have examined entrepreneurship as a means to tackle issues associated with the degradation of the environment, covering rising global temperatures, gas emissions, water pollution, unsustainable resource extraction, and global warming. Environmental degradation creates business opportunities for entrepreneurs. Entrepreneurship is viewed as a solution to environmental degradation, as it is vital in the development of services, products, and production methods that create profitable opportunities while taking into account the natural environment. Instead, it illuminates how the crisis of the environment opens up possibilities to newcomers. As a result, far from limiting the business scope, the natural disaster allows viable businesspeople to develop earth-friendly products, foundations, and administrations, thus propelling the transition to a green economy (Gu & Wang, 2022; Johnsen et al., 2018).

Furthermore, also known as sustainability, sustainable behavior is a concept that can be used to provide answers to describe environmental and societal concerns by addressing current requirements without jeopardizing future demands (Kuckertz & Wagner, 2010). As an outcome, sustainability has gotten much attention in latest years as a holistic approach to reducing environmental effects while improving the manufacturing industry's economic performance (Yuan et al., 2012). Previous research has found that seven basic competencies, including first, diversity efficiency. Second, systems thinking competence. Third, strategic work efficiency. Fourth, long-term thinking competence. Fifth, standard efficiency. Sixth, personal competence, Seventh, aid entrepreneurship sustainability. These abilities are critical to long-term entrepreneurship (Ploum et al., 2018).

However, the following presumptions form the basis of the investigation's hypothesis:

Sustainable entrepreneurship is restricted by fundamental factors such as market opportunities and disadvantages (Cohen & Winn, 2007). Market disadvantages significantly limit entrepreneurial sustainability in an era when environmental concerns are at an all-time high (Shepherd & Patzelt, 2011).

If handled and integrated as an important and necessary aspect of entrepreneurship, market disadvantages and opportunities must contribute to and improve enterprises' desire to engage in sustainable behavior (Dean & McMullen, 2007). However, since businesses are aware that events' results, whether positive or poor, have a direct

effect on their performance, market disadvantages and opportunities are a crucial component in driving sustainable entrepreneurship; expanding market prospects also aids in adopting more sustainable business practices. This strengthens the research hypothesis:

H1: The market opportunities and disadvantages have an immediate and significant impact on SMEs' sustainable entrepreneurship.

Research method

A quantitative methodology was adopted in this explanatory study to inspect the association between SME entrepreneurs' market opportunities and disadvantages in relation to sustainable entrepreneurship. A questionnaire-based approach was used for collecting data, consisting of 27 items that addressed the main variables. The study employed a Likert scale content 5-point, with Table 1 outlining the key research variables and their procedural definitions. The focus on SMEs is crucial because they significantly contribute to national economies, representing up to 40 percent of GDP in emerging markets. In Iraq, SMEs constitute the majority of businesses and are vital income sources, as reported by the World Bank. Surveys were administered to top and middle management personnel of SMEs located in Basra, Karbala, and Najaf.

The sample was drawn from SMEs in Iraq, defined as enterprises with 21–100 employees and with exports or sales exceeding 20 million Iraqi dinars (IQD) (Emad et al., 2014). The knowledge of the firm's environment, performance, and social customer relationship management (CRM) of CEOs, SME owner-managers, and marketing managers was the basis for their classification as essential respondents in this study (Ahmad et al., 2018). Data were acquired from two distinct sources, marketing managers and SME owner-managers (or CEOs), in order to reduce common method bias. The surveys were self-administered, with senior human resources personnel in each organization

Table 1 Items included in each construct

Variable/dimension	Practical definition	Approved scale
Disadvantages and market opportunities	There are numerous hazards present in this market that impede the implementation of initiatives due to the absence of commercial opportunities	(Garnsey et al., 2011)
Sustainable entrepreneurship	By integrating social, environmental, and economic aspects, sustainable entrepreneurship adheres to the triple bottom line (TBL) theory. Running a business that satisfies current demands while protecting the capacity of future generations to satiate their own is known as sustainable entrepreneurship. In order to create new goods, services, and processes that will benefit society and the economy, sustainable entrepreneurship places a strong emphasis on protecting the environment and enhancing life	(Fischer et al., 2020; Muñoz & Cohen, 2018; Ploum et al., 2018)

Table 2 Sample size

Sector	Distributed questionnaires
Food and restaurants	243
Oil services	41
Packaged industry	38
Travel and tourism	29
Medical centers	44
Training services	61
Raw materials and agriculture	86
Minimarkets	108
Total	650

Table 3 Validity

Study variables	Results
Disadvantages and market opportunities	0.629
Sustainable entrepreneurship	0.754

first granting permission before distribution. The questionnaire, a pre-stamped envelope, and a cover letter specifying the study's objectives, guaranteeing confidentiality, and asking that respondents return the completed survey via the pre-stamped envelope were all included in the survey packets. Owner-managers and marketing managers were both asked to complete the questionnaire. Out of 650 distributed questionnaires, 432 responses were collected. Table 2 summarizes the distributed forms.

The data collection tool's validity and reliability are demonstrated, as items with a correlation of less than 0.40 were excluded, while those with a correlation higher than 0.40 were maintained. The study employed nine items to assess market disadvantages and opportunities. Table 3 indicates that no items were omitted, as all items exhibited correlations higher than 0.40. Consequently, the final questionnaire comprised 9 items. There were 17 items in the variable of sustainable entrepreneurship, and it became evident that there were no omitted items because the correlation of all the items was more than 0.40, as displayed in Table 3. As a result, the final questionnaire contained 27 items. Table 3 reveals the specifications of the data-gathering tool's final internal validity (Table 4).

The validity of convergence is determined by the degree to which the various indicators of a scale align and converge, suggesting that the scale's items or dimensions are designed to evaluate the same framework. The standard saturations of each scale item are considered significant when their values exceed (± 1.96) at a significance level of 0.05 (Hair et al., 2010).

This investigation also utilized several established measures of stability and robust credibility. We developed all research instruments using the Likert five-point scale, which is statistically suitable and acceptable for behavioral studies due to its value exceeding 0.7 (Table 5).

Table 6 presents the statistics results alongside the Pearson correlation coefficient. The findings revealed that the arithmetic mean exceeded the hypothetical mean,

Table 4 Validity values

Measurement	Standard deviation	T-values	Measurement errors	Contrast extracted
Disadvantages and market opportunities		27.23	0.04	0.743
Q-1	0.741	22.42	0.04	
Q-2	0.682	31.46	0.04	
Q-3	0.681	23.52	0.04	
Q-4	0.839	33.61	0.04	
Q-5	0.732	17.76	0.04	
Q-6	0.756	21.83	0.04	
Q-7	0.785	27.43	0.04	
Q-8	0.637	25.95	0.04	
Q-9	0.726	34.61	0.04	
Sustainable entrepreneurship		20.24	0.04	0.752
Q-10	0.645	13.12	0.02	
Q-11	0.763	26.76	0.02	
Q-12	0.767	31.59	0.02	
Q-13	0.691	28.45	0.02	
Q-14	0.746	22.11	0.02	
Q-15	0.592	30.86	0.02	
Q-16	0.818	31.63	0.02	
Q-17	0.628	31.26	0.02	
Q-18	0.651	30.15	0.02	
Q-19	0.727	32.23	0.02	
Q-20	0.876	24.57	0.02	
Q-21	0.734	25.74	0.02	
Q-22	0.653	23.96	0.02	
Q-23	0.726	29.38	0.02	
Q-24	0.732	27.75	0.02	
Q-25	0.841	29.92	0.02	
Q-26	0.710	23.70	0.02	
Q-27	0.731	22.87	0.02	

Table 5 Reliability

Research variables	Alpha-Cronbach
Disadvantages and market opportunities	0.79
Sustainable entrepreneurship	0.84

Table 6 Correlation coefficients

Research variables	Mean	SD	Disadvantages and market opportunities	Sustainable entrepreneurship
Disadvantages and market opportunities	3.16	0.92	1	
Sustainable entrepreneurship	3.20	0.89	0.681**	1

** Correlation is significant at the 0.01 level

suggesting that working individuals recognize the crucial influence of market disadvantages on sustainable entrepreneurship. Additionally, the standard deviation highlighted variability in the respondents' opinions, while all correlations between variables were found to be significant at the 0.05 level.

The table indicates a linear correlation among the research variables, demonstrating a positive relationship between disadvantages and opportunities for market and sustainable business. This primarily reinforces the hypothesis, as the correlation coefficients indicate a significant relationship between the variables involved.

The team utilized AMOS 26 to examine the hypothesis via path analysis through the (CR) critical ratio is incorporated within the path analysis framework. At a significance level of 0.05, the critical ratio (CR) result must exceed ± 1.96 for the hypothesis to be accepted. Table 7 presents the connections between the various research variables.

The outcomes shown in Table 7 provide evidence for the research hypothesis. The market's disadvantages and opportunities positively influenced sustainable entrepreneurship, with an impact size measured at 0.319. As a result, the primary hypothesis (H1) was confirmed.

Results and discussion

The results of the study indicate a direct, positive, and substantial correlation between long-term entrepreneurship and market opportunities and disadvantages. Market disadvantages hinder opportunity creation, contributing to unsustainable corporate behavior. This results in application gaps regarding the emergence of entrepreneurial opportunities, especially as market disadvantages heighten the urgency to establish corporate greening initiatives. Consequently, these disadvantages negatively impact company performance by limiting practices of waste management and restricting access to energy and resources for production.

Four distinct groups categorize market disadvantages: ineffective enterprises, external causes, lacked information coordination, and flawed pricing mechanisms. The interplay of these factors leads to environmental degradation, yet it also opens avenues for the advancement of groundbreaking technologies and inventive business models. Entrepreneurs establish purposeful goals shaped by their beliefs, values, and motivations, which in turn influence their organizations' interests (Bagheri et al., 2022; Ta'Amnha et al.,

Table 7 Hypothesis tests

	Effect	Estimate	C.R	Results
Disadvantages and market opportunities → Sustainable entrepreneurship	Direct	0.319	5.901*	Accepted
Disadvantages and market opportunities → Efficiency of strategic work	Direct	0.313	4.532*	Accepted
Disadvantages and market opportunities → Diversity efficiency	Direct	0.521	5.865*	Accepted
Disadvantages and market opportunities → Systems thinking competence	Direct	0.241	7.754*	Accepted
Disadvantages and market opportunities → Standard proficiency	Direct	0.523	2.042*	Accepted
Disadvantages and market opportunities → Efficiency of thinking after term	Direct	0.120	8.731*	Accepted
Disadvantages and market opportunities → Personal competence	Direct	0.204	3.705*	Accepted

* Significance level at 0.05 (C.R. > 1.96)

2024). Their role in translating intentions into the creation of sustainable value is critical. Sustainable entrepreneurial decision-making results from business executives' consideration of the economic, social, and environmental consequences of their operations, both in the present and the future (Muñoz & Cohen, 2018). In addition, Gu and Wang (2022) describe sustainable entrepreneurship as an expansion of traditional entrepreneurship that integrates economic, ecological, and societal dimensions. Through a sustainable entrepreneurial mindset, organizational performance and business concerns align with social well-being and environmental protection. Schaltegger and Wagner (2011) emphasize that a desire to address societal and environmental challenges through successful business practices drives sustainable entrepreneurship, with the aim of achieving sustainable development through entrepreneurial activities. As we achieve sustainable development goals, we incrementally evolve organizational development from small contributions to larger initiatives.

Public policy is crucial in facilitating sustainable entrepreneurship by enabling entrepreneurs to convert their innovative potential into actionable strategies. Entrepreneurs skilled in this area adapt economic priorities to address environmental issues, fostering individual and organizational sustainability (Dean & McMullen, 2007). A sustainable entrepreneurial approach involves balancing profit and growth with minimal environmental harm in production and consumption while maximizing societal benefits (Fischer et al., 2020). Bertello et al. (2022) delineate competitive advantages, financial sustainability, as well as legitimacy as critical factors for new initiatives' survival and growth within the entrepreneurial ecosystem. Facilitators such as network capabilities, agility, long-term focus, and institutional entrepreneurship harmonize social, economic, and environmental objectives. Opportunities for innovation frequently emerge from market inefficiencies, such as ecological decline. By rectifying these deficiencies, entrepreneurs can mitigate environmental impacts and advance sustainability. Entrepreneurs can attain earnings while enhancing social and environmental situations both locally and globally through sustainable entrepreneurship models. Nevertheless, the results suggest that market disadvantages constrain innovations with significant social benefits, ultimately diminishing stakeholder satisfaction. This lack of satisfaction hinders the establishment of stable institutional structures that support sustainable innovations, as organizational legitimacy is compromised.

Sustainable entrepreneurs differ from traditional enterprises by operating under distinct values and principles, motivated by a commitment to environmental conservation and the generation of social values. They integrate eco-friendly values into their businesses, aligning their unique values and lifestyles with their identities (York et al., 2016). This behavior is a hallmark of successful entrepreneurship (Fu et al., 2019; Johnson & Schaltegger, 2020; Kuratko, 2016). Various factors, such as personal attributes, risk tolerance, and external conditions like access to capital, technology, and talent, influence the actions of modern entrepreneurs (Gregori & Holzmann, 2020; Terán-Yépez et al., 2020; Williams et al., 2021). Gregori and Holzmann (2020) suggest that entrepreneurs utilize digital tools to formulate value propositions that integrate environmental, social, and financial considerations, making sustainable practices more accessible and viable. These technologies enhance stakeholder connectivity and facilitate efficient lifestyles, raising educational value and awareness (Holzmann & Gregori, 2023).

Entrepreneurs face numerous risks and uncertainties during their innovation processes, including financial, technological, organizational, and operational risks (Williams et al., 2021). Additionally, the proactive strategies of entrepreneurs may introduce additional hazards. Nonetheless, sustainable entrepreneurs utilize ethical integrity, empathy, and visionary thinking to direct their enthusiasm for environmental and social causes (Arru, 2020; Masciarelli & Leonelli, 2020). They lead with a long-term commitment to making a positive influence and a global perspective by combining adaptability, resilience, and creativity (Sarma et al., 2024).

The findings also highlight that skills, knowledge, and attitudes associated with the management of sustainable development are vital in numerous professional pathways. However, market inefficiencies result in an underestimate of the competencies necessary for long-term entrepreneurship. The study identifies six critical competencies in building sustainable enterprises. Additionally, a positive correlation between market disadvantages and opportunities, as well as various aspects of sustainable entrepreneurship, was discovered in the study. Limitations in companies' ability to engage in responsible activities aimed at improving socio-ecological systems, products, and processes reduce motivation to identify and capitalize on opportunities for sustainable entrepreneurship.

Conclusion

The research concludes that market disadvantages exert a direct, positive, and substantial relationship with long-term entrepreneurship. These disadvantages not only hinder the creation of opportunities but also contribute to unsustainable corporate behavior by limiting waste management and access to critical resources. However, they also present opportunities for radical innovations and new business models aimed at addressing environmental degradation. Sustainable entrepreneurship, driven by values and ethical considerations, emerges as a response to these market failures. Entrepreneurs can align profit goals with environmental and social benefits, but market inefficiencies and lack of institutional support hinder the full realization of sustainable innovations.

SMEs in the southern region of Iraq must meticulously examine the market to understand the advancements and risks that surround them. This is due to the rapid alterations, particularly in the climate in Iraq, that compromise their operations and, as a result, adversely affect society. The exploration test cites Basra, Karbala, and Najaf. The primary objective of the examination is to evaluate the ability of organizations to develop robust capabilities for managing market changes, which will enable them to give response faster to unanticipated or temporary alterations within the market. In addition, the focus is on manageable advancement, which is able to be effectively and securely protected and successively provide easy access to assets. The set of beliefs that private sector businesses hold regarding their commitment to a collection of accepted social and ethical principles is substantiated by their honest communication with regulatory authorities on sustainability issues, their collaboration in resolving crises, and the development of a list of principles that can serve as a guide. In order to institutionalize sustainability in the tactics, plans, operations, and strategies of the research sample, it is imperative to incorporate sustainability standards into business and to acquire the concept of sustainability, which is of great significance to these companies. The focus should be on the development of the requisite regulations and instructions to mitigate market

disadvantages, thereby transforming them into significant opportunities that provide contribution to sustainable entrepreneurship growth.

The objective of this study is to enhance the prevailing body of literature by investigating the role of market imperfections in the generation of opportunities, unifying entrepreneurship, the natural environment, and organizations, and by providing a theoretical definition of sustainable entrepreneurship. The research concentrates on corporate greening initiative development and its influence on company performance, emphasizing the necessity of innovation that transcends incremental advancements. The research endeavors to advance theory and practice by highlighting the entrepreneurial innovations' role in dealing with market imperfections in the environment, which results in more sustainable markets and entrepreneurial rents from identifying and exploiting market imperfections in the natural environment. This is a significant step towards moving towards sustainable markets. Market disadvantages, such as lack of institutional support and resource constraints, can impede the creation of opportunities for businesses but also stimulate radical innovations. This research challenges traditional views that see market imperfections solely as obstacles, proposing that they can also catalyze innovations addressing environmental and social issues.

Implication for theory: the research challenges traditional views that see market imperfections solely as obstacles, proposing that market failures can influence the emergence of novel business models. Implication for practice: policymakers and entrepreneurs in regions with market inefficiencies (like Iraq) should focus on transforming these disadvantages into innovation opportunities. Governments could create support mechanisms to encourage sustainable entrepreneurship that aligns profit with social and environmental goals. SMEs must integrate ethical and social values into their daily operations to establish sustainability at the strategic level. In addition, institutional and regulatory support for innovation is essential in converting market imperfections into innovation opportunities. Policymakers should prioritize the creation of regulations and incentives that reduce market disadvantages and support sustainable practices. Entrepreneurs should advocate for institutional reforms that enable better access to resources and promote innovation aimed at tackling environmental challenges. Moreover, entrepreneurial innovations and market imperfections bridge the gap between entrepreneurship and environmental sustainability, contributing to the emerging literature on entrepreneurial rents generated through sustainable practices. Entrepreneurs should focus on identifying unmet needs and gaps in markets caused by imperfections and using innovative approaches to meet these needs in environmentally sustainable ways. Furthermore, context-specific focus for emerging markets is crucial, as regional dynamics significantly influence the development of sustainable entrepreneurship practices. Entrepreneurs and SMEs in regions like Iraq should develop adaptive capabilities to better anticipate and respond to market shifts.

The study's limitation stems from a lack of complex and advanced statistical analysis of these relationships, such as effect sizing and sensitivity analysis. These analyses could offer a better understanding of the dynamics involved, as the current research model requires at least two additional variables to perform sensitivity analysis. In future research, we may add more variables and conduct effect sizing and sensitivity analysis. The authors recommend utilizing a variety of research objects and increasing the sample

size to include more SMEs from other cities in northern Iraq. Furthermore, the authors recommend incorporating additional variables that enhance the previous research model, such as SEG and green innovations, in improving outcomes and reaping benefits.

Author contributions

Study conception and design: Salsabila Aisyah Alfaiza and Hazlinda binti Hassan; data collection: Hosam Alden Riyadh and Baligh Ali Hasan Beshir; analysis and interpretation of results: Tuqa Abdalnafie Taha.; draft manuscript preparation: Mohammed Ghanim Ahmed.

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Availability of data and materials

The data are in the hands of the principal researcher, and we can provide it to editors when needed.

Declarations

Competing interests

The authors declare that they do not have any competing interests.

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References

- Ağca, Ş., & Mozumdar, A. (2008). The impact of capital market imperfections on investment–cash flow sensitivity. *Journal of Banking & Finance*, 32(2), 207–216. <https://doi.org/10.1016/j.jbankfin.2007.02.013>
- Ahmad, S. Z., Ahmad, N., & Abu Bakar, A. R. (2018). Reflections of entrepreneurs of small and medium-sized enterprises concerning the adoption of social media and its impact on performance outcomes: Evidence from the UAE. *Telecommunications and Informatics*, 35(1), 6–17. <https://doi.org/10.1016/j.tele.2017.09.006>
- Al-Abrow, H., Alnoor, A., & Abbas, S. (2019). The effect of organizational resilience and CEO's narcissism on project success: Organizational risk as mediating variable. *Organization Management Journal*, 16(1), 1–13.
- Anand, A., Argade, P., Barkemeyer, R., & Salignac, F. (2021). Trends and patterns in sustainable entrepreneurship research: A bibliometric review and research agenda. *Journal of Business Venturing*, 36(3), 106092. <https://doi.org/10.1016/j.jbusvent.2021.106092>
- Arnold, L. G. (2002). Financial market imperfections, labour market imperfections and business cycles. *Scandinavian Journal of Economics*, 104(1), 105–124.
- Arru, B. (2020). An integrative model for understanding the sustainable entrepreneurs' behavioural intentions: An empirical study of the Italian context. *Environment, Development and Sustainability*, 22(4), 3519–3576. <https://doi.org/10.1007/s10668-019-00356-x>
- Aymen, R. A., Alhamzah, A., & Bilal, E. (2019). A multi-level study of influence knowledge management small and medium enterprises. *Polish Journal of Management Studies*, 19(1), 21–31. <https://doi.org/10.17512/pjms.2019.19.1.02>
- Bagheri, A., Newman, A., & Eva, N. (2022). Entrepreneurial leadership of CEOs and employees' innovative behavior in high-technology new ventures. *Journal of Small Business Management*, 60(4), 805–827. <https://doi.org/10.1080/00472778.2020.1737094>
- Bertello, A., Battisti, E., De Bernardi, P., & Bresciani, S. (2022). An integrative framework of knowledge-intensive and sustainable entrepreneurship in entrepreneurial ecosystems. *Journal of Business Research*, 142, 683–693. <https://doi.org/10.1016/j.jbusres.2021.12.054>
- Blok, V., Gremmen, B., & Wesselink, R. (2015). Dealing with the wicked problem of sustainability: The role of individual virtuous competence. *Business and Professional Ethics Journal*, 34(3), 297–327. <https://doi.org/10.5840/bpej202621737>
- Chang, J., Chen, J., & Shieh, J. (2012). Consumption externalities, market imperfections and optimal taxation. *International Journal of Economic Theory*, 8(4), 345–359. <https://doi.org/10.1111/j.1742-7363.2012.00197.x>
- Cohen, B., & Winn, M. I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, 22(1), 29–49.
- Crawford, G. C., Skorodzyevskiy, V., Frid, C. J., Nelson, T. E., Booyavi, Z., Hechavarria, D. M., Li, H., Reynolds, P. D., & Teymourian, E. (2022). Advancing entrepreneurship theory through replication: A case study on contemporary methodological challenges, future best practices, and an entreaty for communality. *Entrepreneurship Theory and Practice*, 46(3), 779–799. <https://doi.org/10.1177/10422587211057422>
- Criado-Gomis, A., Iniesta-Bonillo, M. Á., & Cervera-Tauet, A. (2018). Sustainable entrepreneurial orientation within an intrapreneurial context: Effects on business performance. *International Entrepreneurship and Management Journal*, 14(2), 295–308. <https://doi.org/10.1007/s11365-018-0503-x>
- de Bruin, A. (2016). Towards a framework for understanding transitional green entrepreneurship. *Small Enterprise Research*, 23(1), 10–21. <https://doi.org/10.1080/13215906.2016.1188715>
- Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, 22(1), 50–76. <https://doi.org/10.1016/j.jbusvent.2005.09.003>

- Emad, H., Karim, A.-T., & Suhail, A.-A. (2014). The relationship between government policy and financial performance: A study on the SMEs in Iraq. *China-USA Business Review*, 13(4), 290–295. <https://doi.org/10.17265/1537-1514/2014.04.005>
- Eneizan, B., Mohammed, A. G., Alnoor, A., Alabboodi, A. S., & Enaizan, O. (2019). Customer acceptance of mobile marketing in Jordan: An extended UTAUT2 model with trust and risk factors. *International Journal of Engineering Business Management*, 11, 1–10. <https://doi.org/10.1177/1847979019889484>
- Fischer, D., Brettel, M., & Mauer, R. (2020). The three dimensions of sustainability: A delicate balancing act for entrepreneurs made more complex by stakeholder expectations. *Journal of Business Ethics*, 163(1), 87–106. <https://doi.org/10.1007/s10551-018-4012-1>
- Fu, H., Okumus, F., Wu, K., & Köseoglu, M. A. (2019). The entrepreneurship research in hospitality and tourism. *International Journal of Hospitality Management*, 78, 1–12. <https://doi.org/10.1016/j.ijhm.2018.10.005>
- Garnsey, E., Dee, N., & Ford, S. (2011). Market failure, market dynamics and entrepreneurial innovation by environmental ventures. In *Handbook of research on energy entrepreneurship*. Edward Elgar Publishing. <https://doi.org/10.4337/9780857931221.00007>
- Gregori, P., & Holzmann, P. (2020). Digital sustainable entrepreneurship: A business model perspective on embedding digital technologies for social and environmental value creation. *Journal of Cleaner Production*, 272, 122817. <https://doi.org/10.1016/j.jclepro.2020.122817>
- Gu, W., & Wang, J. (2022). Research on index construction of sustainable entrepreneurship and its impact on economic growth. *Journal of Business Research*, 142, 266–276. <https://doi.org/10.1016/j.jbusres.2021.12.060>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson Prentice Hall.
- Hawken, P., Lovins, A., & Lovins, L. H. (1999). *Natural capitalism: creating the next industrial revolution*. Little, Brown and Company.
- Holzmann, P., & Gregori, P. (2023). The promise of digital technologies for sustainable entrepreneurship: A systematic literature review and research agenda. *International Journal of Information Management*, 68, 102593. <https://doi.org/10.1016/j.jinfomgt.2022.102593>
- Johnsen, C. G., Olaison, L., & Sørensen, B. M. (2018). Put your style at stake: A new use of sustainable entrepreneurship. *Organization Studies*, 39(2–3), 397–415. <https://doi.org/10.1177/0170840617717551>
- Johnson, M. P., & Schaltegger, S. (2020). Entrepreneurship for sustainable development: A review and multilevel causal mechanism framework. *Entrepreneurship Theory and Practice*, 44(6), 1141–1173. <https://doi.org/10.1177/1042258719885368>
- Keynes, J. M. (1921). *A treatise on probability*. Macmillan.
- Knight, F. H. (1921). *Risk, uncertainty and profit*. Houghton Mifflin.
- Kraus, S., Vonmetz, K., Bullini Orlandi, L., Zardini, A., & Rossignoli, C. (2023). Digital entrepreneurship: The role of entrepreneurial orientation and digitalization for disruptive innovation. *Technological Forecasting and Social Change*, 193, 122638. <https://doi.org/10.1016/j.techfore.2023.122638>
- Kuckertz, A., & Wagner, M. (2010). The influence of sustainability orientation on entrepreneurial intentions — Investigating the role of business experience. *Journal of Business Venturing*, 25(5), 524–539. <https://doi.org/10.1016/j.jbusvent.2009.09.001>
- Kuratko, D. F. (2016). *Theory, process, and practice*. Cengage learning.
- Kurz, H., & Salvadori, N. (1997). Exhaustible resources in a dynamic input-output model with classical features. *Economic Systems Research*, 9(3), 235–251.
- Laasch, O. (2018). Beyond the purely commercial business model: Organizational value logics and the heterogeneity of sustainability business models. *Long Range Planning*, 51(1), 158–183. <https://doi.org/10.1016/j.lrp.2017.09.002>
- Landström, H. (2020). The Evolution of Entrepreneurship as a Scholarly Field. *Foundations and Trends® in Entrepreneurship*, 16(2), 65–243. <https://doi.org/10.1561/03000000083>
- Masciarelli, F., & Leonelli, S. (2020). Who are sustainable entrepreneurs? In *Sustainable entrepreneurship: How entrepreneurs create value from sustainable opportunities* (pp. 51–83). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-80043-147-820201005>
- Muñoz, P., & Cohen, B. (2018). Entrepreneurial narratives in sustainable venturing: beyond people, profit, and planet. *Journal of Small Business Management*, 56, 154–176. <https://doi.org/10.1111/jsbm.12395>
- O'Neill, K., & Gibbs, D. (2016). Rethinking green entrepreneurship – Fluid narratives of the green economy. *Environment and Planning A: Economy and Space*, 48(9), 1727–1749. <https://doi.org/10.1177/0308518X16650453>
- Ploum, L., Blok, V., Lans, T., & Omta, O. (2018). Toward a validated competence framework for sustainable entrepreneurship. *Organization & Environment*, 31(2), 113–132. <https://doi.org/10.1177/1086026617697039>
- Radicić, D., & Petković, S. (2023). Impact of digitalization on technological innovations in small and medium-sized enterprises (SMEs). *Technological Forecasting and Social Change*, 191, 122474. <https://doi.org/10.1016/j.techfore.2023.122474>
- Riyadh, H. A. (2020). The ugly behind the beauty of corporate social responsibility: A general conceptual perspective. *Journal of Research on the Lepidoptera*, 51(1), 750–758. <https://doi.org/10.36872/LEPI/V51I1/301069>
- Salamzadeh, A., Marković, M. R., & Salamzadeh, Y. (2022). The economic resilience-entrepreneurship nexus. *Journal of Entrepreneurship and Business Resilience*, 5(1), 7–12.
- Sarma, S., Attaran, S., & Attaran, M. (2024). Sustainable entrepreneurship: Factors influencing opportunity recognition and exploitation. *The International Journal of Entrepreneurship and Innovation*, 25(1), 56–69. <https://doi.org/10.1177/1465750322109300>
- Schaltegger, S., Beckmann, M., & Hockerts, K. (2018). Collaborative entrepreneurship for sustainability. Creating solutions in light of the UN sustainable development goals. *International Journal of Entrepreneurial Venturing*, 10(2), 131. <https://doi.org/10.1504/IJEV.2018.092709>
- Schaltegger, S., & Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: Categories and interactions. *Business Strategy and the Environment*, 20(4), 222–237. <https://doi.org/10.1002/bse.682>

- Shepherd, D. A., & Patzelt, H. (2011). The new field of sustainable entrepreneurship: Studying entrepreneurial action linking "what is to be sustained" with "what is to be developed." *Entrepreneurship Theory and Practice*, 35(1), 137–163. <https://doi.org/10.1111/j.1540-6520.2010.00426.x>
- Spence, M., Ben Boubaker Gherib, J., & Ondoua Biwolé, V. (2011). Sustainable entrepreneurship: is entrepreneurial will enough? A north-south comparison. *Journal of Business Ethics*, 99(3), 335–367. <https://doi.org/10.1007/s10551-010-0656-1>
- Ta'Amnha, M. A., Al-Qudah, S., Asad, M., Magableh, I. K., & Riyadh, H. A. (2024). Moderating role of technological turbulence between green product innovation, green process innovation and performance of SMEs. *Discover Sustainability*, 5(1), 324. <https://doi.org/10.1007/s43621-024-00522-w>
- Terán-Yépez, E., Marín-Carrillo, G. M., del Casado-Belmonte, M. P., & de las Capobianco-Uriarte, M. (2020). Sustainable entrepreneurship: Review of its evolution and new trends. *Journal of Cleaner Production*, 252, 119742. <https://doi.org/10.1016/j.jclepro.2019.119742>
- Toman, M., & Withagen, C. (2000). Accumulative pollution, clean technology, Q and policy design. *Resource and Energy Economics*, 22(4), 367.
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research: an edit's perspective. In *Advances in entrepreneurship, firm emergence, and growth*. Greenwich: JAI Press.
- Williams, A. M., Rodriguez Sanchez, I., & Škokić, V. (2021). Innovation, risk, and uncertainty: A study of tourism entrepreneurs. *Journal of Travel Research*, 60(2), 293–311. <https://doi.org/10.1177/00472875198960>
- York, J. G., O'Neil, I., & Sarasvathy, S. D. (2016). Exploring environmental entrepreneurship: Identity coupling, venture goals, and stakeholder incentives. *Journal of Management Studies*, 53(5), 695–737.
- Yuan, C., Zhai, Q., & Dornfeld, D. (2012). A three dimensional system approach for environmentally sustainable manufacturing. *CIRP Annals*, 61(1), 39–42. <https://doi.org/10.1016/j.cirp.2012.03.105>

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