



Interconnected or Disconnected? A Review of Sustainability, Resilience, and Sustainable Business Model Constructs in the Academic Business Literature

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Received: 25 July 2023 / Accepted: 12 December 2023
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Abstract

The global climate change and resource depletion crisis require rethinking business models that drive the production and consumption of goods and services. This requires transdisciplinary and systemic reconfiguration and a critical evaluation of traditional economic, business, and management constructs. This research provides a systematic literature review of how the constructs of sustainability, resilience, and sustainable business models have been defined and applied in the economic, business, and management academic literature from 1990 until 2022. The key contributions of this paper are (1) a review of how sustainability, resilience, and sustainable business models have been defined in the literature, (2) an identification of the interfaces and lack thereof between these constructs, and (3) an outline of the gaps and limitations and need for further research to address the knowledge gaps.

Keywords Sustainability · Resilience · Sustainable business models · Ecological · Economic systems

Introduction

Climate emergency, resource depletion, and growing social inequalities are playing themselves out in systemic ways, exceeding national boundaries. If planetary integrity (Rockström et al., 2009) is to be safeguarded, it requires urgency in the transition to more sustainable economies. Historic economic models and siloed state policies have led to global market failures, exploitation of the commons, and lack of accountability for social and environmental externalities. The private sector, its business models, and methods of production and consumption play a significant role in the current unsustainable state. The private sector has control over significant

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resources and capabilities, resulting in them being key stakeholders in the transition to sustainable business practices (Porter & Kramer, 2011).

Geissdoerfer et al. (2018) outline that advances toward achieving sustainability are increasingly incremental, with companies finding it difficult to meet their stated sustainability targets. The transition that needs to take place in the private sector is at a business model level where incentives and revenue mechanisms are aligned with sustainable outcomes (Geissdoerfer et al., 2018). Reflecting true costs in incentives, prices, and revenue is crucial for successful sustainability transitions and requires revisiting by all sectors.

The transdisciplinary field of ecological economics has challenged mainstream economics' growth paradigm, indicator development, and non-accountability for externalities. Costanza (1991) defines ecological economics as questioning the growth paradigm of conventional economics and critiquing the allocation of resources by markets. Ecological economics constructs can aid sustainability transitions, especially when applied to the private sector (Gowdy & Erickson, 2005; Raworth, 2017). Considering human activity as integrated with ecological systems rather than separate from them (Costanza, 1991) is important when transitioning the private sector.

This paper systematically reviews how sustainability, resilience, and sustainable business models are defined in the economic, business, and management literature from 1990 to 2022, focusing on top-ranked journals. This period was chosen as it coincided with the private sector's interest in sustainability following the 1987 Brundtland Commission on Sustainable Development (Berquist, 2017). The contributions of this paper are the following:

- The identification of how sustainability, resilience, and sustainable business models are defined in economic business and management academic literature
- Identifying the interfaces or lack thereof between the concepts of sustainability, resilience, and sustainable business models
- Proposing further research to address the limitations around the definitional and implementation gaps

The paper is structured into six sections. The “**Methodology**” section outlines the review method. The “**Underlying Theoretical Concepts**” section addresses theoretical concepts. The “**Results**” section reports results and themes. The “**Discussion**” section contains the discussion, the “**Limitations of the Research and Recommendations for Further Research**” section outlines limitations, and the “**Conclusion**” section is the conclusion.

Methodology

The research for this paper was undertaken as a systematic literature review. A key component of a systematic review is the identification and outlining of the research questions (Edmondson & McManus, 2007). The overarching research question for this paper was “How have the concepts of resilience, sustainability, and sustainable business models been addressed in top academic business journals from 1990 until 2022?”.

Linked to the overarching research question, the following objectives were identified for this systematic review:

- (A) To identify the differences and similarities in the definitions of sustainability, resilience, and sustainable business models in the business literature
- (B) To explore the interfaces between sustainability, resilience, and sustainable business models in the academic business literature
- (C) To outline the limitations in the literature and identify opportunities for further research

Data Collection Method

For this systematic review, the eligibility criteria were set around academic business journal articles from the 1990s to 2022. The rationale for the choice is that the research sets out to explore the concepts of sustainability, resilience, and sustainable business models in the context of business.

The top-ranked journals in the business, economics, and management category within Google Scholar, Web of Science, Scopus, and ABS Journal ranking were triangulated. According to this triangulation, the following 13 journals listed in Table 1 feature in the top 20 of the four databases used for this study.

To search for relevant articles in the 13 journals from 1990–2022, ATLAS.ti software was used, and keywords based on the research questions were searched for. Table 2 lists the specific keywords for each question that were searched within the journals.

To assess the validity of the results received from the search, the following criteria were used at each stage of the data extraction process:

- (i) The article addresses the research questions.

Table 1 Top 13 identified journals in the business, economics, and management category

Publication
<i>American Economic Review</i>
<i>Quarterly Journal of Economics</i>
<i>Journal of Economic Perspectives</i>
<i>Tourism Management</i>
<i>Journal of Political Economy</i>
<i>Journal of Management</i>
<i>The Journal of Finance</i>
<i>Academy of Management Journal</i>
<i>Journal of International Business Studies</i>
<i>International Journal of Project Management</i>
<i>Journal of Financial Economics</i>
<i>Strategic Management Journal</i>
<i>Academy of Management Annals</i>

Source: author

Table 2 Keywords for systematic review

Keywords
Sustainability
Resilience
“Sustainable Business Models”
“Sustainable Value”

Source: author

- (ii) The article falls within the date range.
- (iii) The article is found within the 20 identified journals.
- (iv) Full text of the article is available.

The key validity criterion that was used was if it addressed the research questions.

To filter articles, the titles were first assessed for relevancy, and the relevant ones were exported to Mendeley. After an abstract analysis based on the validity criteria mentioned earlier, the articles were further narrowed down by a full-text examination to arrive at the final selection for the review.

Figure 1 provides a schematic overview of the process.

Data Analysis Method

A thematic synthesis approach was used to analyze the final population of articles. An inductive approach was used for the identification of analytical themes and key messages from the final dataset (Thomas & Harden, 2008). This approach involved three stages:

- (i) Coding of data
- (ii) Grouping of codes into descriptive themes
- (iii) Development of analytic themes and interpretation of results about the research questions

ATLAS.ti and VOSviewer software were used to analyze keywords and themes in the final selection of 79 articles. A group of 29 code words was developed and searched for within the articles. The code words were chosen based on their occurrence in ATLAS.ti and their relevance to the research objectives. The co-occurrence of words was used to analyze themes across different journals. Table 3 displays the 29 code words analyzed in the articles.

Underlying Theoretical Concepts

The link between environmental degradation, climate change, and economic growth, particularly the growth brought on by successive industrial revolutions, has been mapped by historians. Bergquist (2017) notes that the growth of modern capitalism has been successful due to the fossil fuel era, with the past two centuries coinciding with the fastest growth of environmental degradation. Before these inventions,

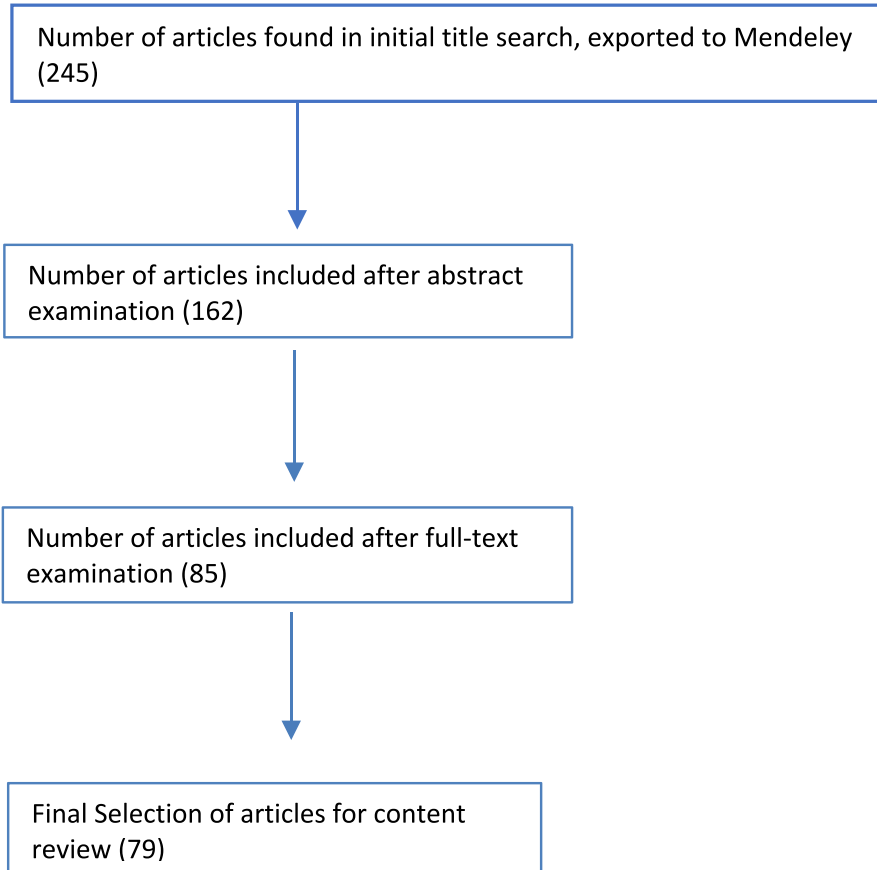


Fig. 1 Review approach

the abilities of economies and businesses to grow were constrained by the energy regime and human ability to do work (Bergquist, 2017). Meadows et al. (1972) found that human activity depleted resources faster than they could be restored, suggesting that a continuation of this trajectory would lead to global environmental and economic collapse. These sentiments were expressed in 1972 and are arguably more pertinent today.

The Brundtland Report (1987) was the first to suggest that the private sector could not exploit natural resources limitlessly (Bergquist, 2017). Post the 1987 Brundtland Commission, a turn to sustainable development discourses by the private sector is evident in the literature. However, questions relating to the measurement or evaluation of sustainability claims became a concern (Jones, 2017). Scholars have questioned the occurrence of potential greenwashing by businesses (particularly multinationals) in sustainability reporting (Jones, 2017). This was especially evident in the 1990s when large businesses purchased visionary green firms, for brand association purposes (Greer & Bruno, 1996).

Table 3 List of code words searched for

Code words	
Assets	Business model
Costs	Ecological
Economic	Efficiency
Environment	Environmental
Growth	Innovation
Legislation	Management
Opportunities	Performance
Policy	Profit
Regulation	Resilience
Risk	Shareholders
Social	Society
Stakeholders	Strategy
Sustainability	Sustainable
Technology	Threats
Value	

Source: author

Hoffman and Bansal (2012) produced a schematic overview of the different waves of corporate environmentalism from the period 1960–2010. They identify three main waves: firstly, regulatory compliance (1960–1980); secondly, strategic environmentalism (1980–2000); and, thirdly, sustainability (2000–). They argue that the third wave of sustainability occurred when businesses acknowledged the significance of environmental and social concerns in the global economy. This coincided with linking sustainability to brand reputation and potentially creating intangible asset value within companies (Bergquist, 2017). The current phase of corporate environmentalism is environmental, social, and governance (ESG) reporting, which has gained momentum since the mid-2000s.

The work of Whiteman et al. (2013) indicates that global ecological conditions are worsening despite an apparent increase in sustainability and greening efforts. This implies that there is an unknown element regarding the extent to which corporate greening contributes to ecological sustainability (Whiteman et al., 2013). The business literature has not focused heavily on this aspect; however, writings in geography and development studies have heavily critiqued the impact that corporate greening has had (Scoones, 2016; Park et al., 2008). According to Whiteman et al. (2013), describing sustainability as a journey without boundaries in corporate reports delays necessary changes. Corporate and integrated reporting often lack connections to broader ecosystems or systems thinking and are separated from core business functions.

The similarities and differences between sustainability and resilience have been explored by a few scholars. Derissen et al. (2011) define sustainability as focusing on intra- and inter-generational justice, while resilience is viewed as a descriptive concept that defines the dynamic properties of ecological-economic systems. They

note that often resilience is seen as a necessary precondition for sustainability. This is framed in the context of one not being able to have sustainable economic activities if the underlying ecosystems are not resilient (Derissen et al., 2011). Resilience is often associated only with climate adaptation, but Holling's (1973) original work defines it as a system's ability to maintain its function and structure despite changes. Folke (2006) expands on Holling's definition of resilience, describing it as interdisciplinary and covering systems that are intertemporal and spatial. He also applies this to social systems, noting that social resilience is defined as not just responding to once-off crises but involves continuous learning, anticipating, and adjusting.

Béné (2013) notes that resilience measures are often developed from a bottom-up approach based on system characteristics, risking endogeneity where indexes are created from specific indicators to assess intervention impact. He, therefore, suggests a methodology for measuring resilience in terms of the costs that must be paid to pass through a shock. He identifies three categories of economic costs:

- The ex-ante investments made as preparedness process (anticipation costs)
- The costs of destruction following the impact of the shock (for example, a climate event)
- The ex-post costs of recovery, including the replacement costs of what has been destroyed but also the various costs associated with change/adaptation or transformation

The issue of costs in relation to resilience is a useful approach, particularly in the business context and in the context of developing potential new indicators.

Bocken et al. (2019) define sustainable business model innovation as creating value by addressing environmental and social needs. At the heart of sustainable business models is the need for businesses to redefine value in their value proposition, value creation, and value capture processes. This redefining of value must incorporate a system thinking approach in the measurement attached to value (Bocken et al., 2019). Sustainable business models modify the business model concept by incorporating sustainability aspects into the value processes of a firm (Geissdoerfer et al., 2018). Achieving the theoretical outline in practice has proven difficult due to the lack of clarity around business model definitions and multiple sustainability definitions (Bocken et al., 2019).

Osterwalder et al.'s (2005) definition of business models focuses on a business model being a company's logic of earning money. This highlights the value that is at the heart of traditional business models in effect money or profit. This is an important point as Gorissen et al. (2016) note that current business model innovation trajectories focus on optimizing business-as-usual practices thereby perpetuating the status quo. The reinforcing of a linear business model is achieved by traditional business model research largely focusing on the generation and delivery of economic value and value for the customer, which reinforces neoliberal paradigms (Gorissen et al., 2016). Rashid et al. (2013) state that innovation within business models is required to develop sustainable solutions through the alignment of incentives and revenue mechanisms. Geissdoerfer et al. (2018) argue that innovations made in redefining business models can produce sustainable returns and create

greater resilience and is a needed innovation. There is a research gap in understanding the tools required for firms to transition from conventional business models to sustainable ones (Geissdoerfer et al., 2018).

Results

The results section will present the descriptive and thematic analysis of the journal articles.

Descriptive Analysis

This section provides information on the following:

- The number of articles found per keyword searched across the final 13 selected journals
- The investigating authors and their geographic locations
- The date ranges of the articles and the methodologies used.

Table 4 shows the final number of articles found per keyword searched for each of the 13 journals in the final database. The search fields included the title, abstract, keywords, and article text. The data shows that only 8 of the 13 journals contained articles relating to the keywords searched.

Figure 2 shows a map of the number of authors per country.

Table 5 shows a further breakdown of the authors per country and per journal, showing that the *Journal for Tourism Management* has the highest diversity of countries in terms of authorship, followed by the *Journal of Finance Economics*.

The date ranges of the articles across the final selection of journals show that 70% of the articles were written between the period of 2010 and 2021 as depicted in Fig. 3.

Figure 4 shows the different methodologies used per journal, indicating that the quantitative empirical methodology was the most used across the journals particularly in the *Journal of Strategic Management*. There were few uses of case study methodologies with the next highest methodological category used being qualitative exploratory. The quantitative methodology being the most common method used is to be expected due to this study focusing on journals taken from the business, economics, and management category.

Thematic Analysis

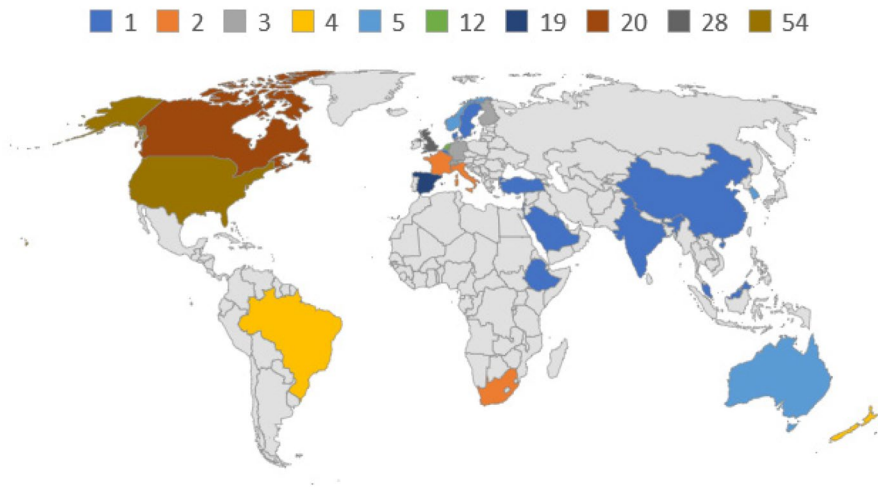
The thematic analysis describes the key findings from reading and coding the final selection of articles. Table 6 shows the data taken from ATLAS.ti of the top 3 highest co-occurring words for the entire sample of articles, as well as per individual

Table 4 Articles found per keyword searched

Journal	Keywords					Total number of articles
	‘‘Sustainability’’	‘‘Resilience’’	‘‘Sustainable Business Models’’	‘‘Ecological Economics’’	‘‘Sustainable Value’’	
<i>American Economic Review</i>	2	0	0	0	1	3
<i>Quarterly Journal of Economics</i>	0	0	0	0	0	0
<i>Journal of Economic Perspectives</i>	0	0	0	0	0	0
<i>Tourism Management</i>	10	2	0	7	0	20
<i>Journal of Political Economy</i>	0	0	0	0	0	0
<i>Journal of Management</i>	10	2	0	0	0	12
<i>The Journal of Finance</i>	0	0	0	0	0	0
<i>Academy of Management Journal</i>	6	1	0	1	0	8
<i>Journal of International Business Studies</i>	4	0	0	2	0	6
<i>International Journal of Project Management</i>	6	1	0	1	0	8
<i>Journal of Financial Economics</i>	6	0	0	0	0	6
<i>Strategic Management Journal</i>	6	3	0	0	7	16
<i>Academy of Management Annals</i>	0	0	0	0	0	0
TOTAL	50	9	0	12	8	79

Source: author

Number of Authors per Country



Source: Author

Fig. 2 Number of authors per country

journals. What is evident from this table is that the predominant concepts co-discussed in relation to sustainability and resilience were environmental and performance, followed by social and performance.

Only 3 of the 8 journals contained definitions for all three concepts of sustainability, resilience, and business models, with only 2 journals containing articles that make interlinkages between the 3 concepts. The reference to business models occurred but not to sustainable business models. The concepts of resilience and business models on their own also did not appear frequently across the different journals (Table 7).

The next section examines the following themes: sustainability, resilience, and business models. Using ATLAS.ti, diagrams were generated showing the strength of the relationships of the concepts to each other. The thicker the lines, the stronger the relationship between the concepts.

Sustainability Thematic Analysis

Analyzing the co-occurring words about sustainability shows that it was not strongly related to the topics of business models or resilience. It also shows that the concept of sustainability was more strongly associated with environmental concepts than with social and economic (Fig. 5).

Table 8 shows the key themes about sustainability across the 8 journals.

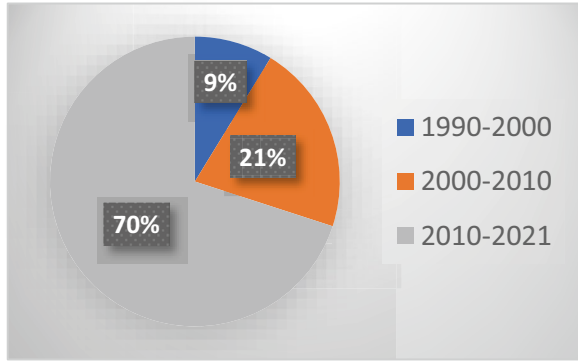
Table 5 Number of authors per country/journal

	<i>Academy of Management Journal</i>	<i>American Economic Review</i>	<i>Int Journal of Project Management</i>	<i>Journal of Finance Economics</i>	<i>Journal of Int Business Studies</i>	<i>Journal of Management</i>	<i>Strategic Management Journal</i>	<i>Tourism Management</i>	<i>Total</i>
USA	6	5		3	8	13	15	4	54
UK	1		6	1	2		2	16	28
Canada	4	1		2	2		10	1	20
Spain	1					4	4	10	19
Netherlands			6	1	2	2	1		12
Norway			4					1	5
Australia						1		4	5
South Korea								5	5
Brazil			4						4
Singapore				2		2			4
New Zealand						3		1	4
Finland			1			2			3
Germany				2				1	3
Switzerland				1				2	3
South Africa			2						2
France							2		2
Italy				1			1		2
Sweden		1							1
Malaysia			1						1
China				1					1
Denmark				1					1
Belgium					1				1
Scotland						1			1
Saudi Arabia						1			1

Table 5 (continued)

	<i>Academy of Management Journal</i>	<i>American Economic Review</i>	<i>Int Journal of Project Management</i>	<i>Journal of Finance Economics</i>	<i>Journal of Int Business Studies</i>	<i>Journal of Management</i>	<i>Strategic Management Journal</i>	<i>Tourism Management</i>	<i>Total</i>
India								1	1
Ethiopia								1	1
Turkey								1	1
Israel							1		1
No. of countries represented	4	3	7	10	5	9	8	13	

Source: author



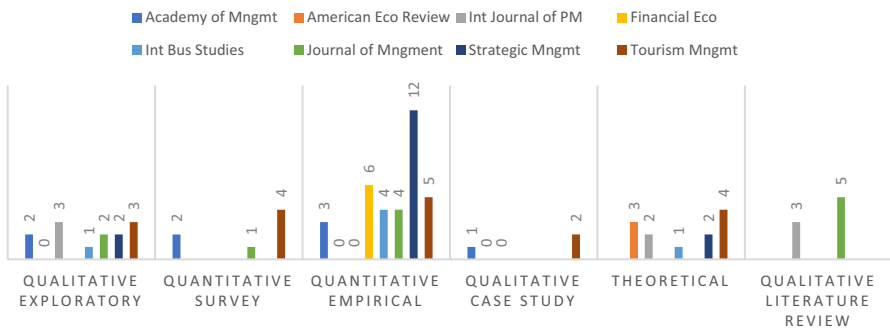
Source: Author

Fig. 3 Date ranges of articles

Resilience Thematic Analysis

Although the term resilience did not feature often across the 8 journals, when it did appear, it was not at all linked to business models and not too strongly to sustainability: performance or profit. There is a strong link to the terms ecological, social, and risk. However, these terms do not seem to be linked to the thinking around business models or influencing a business’s ability to perform or make profits. This is shown in Fig. 6.

Table 9 represents the key themes in relation to resilience across the 8 journals.



Source: Author

Fig. 4 Methodologies used per journal

Table 6 Highest-ranking co-occurring words

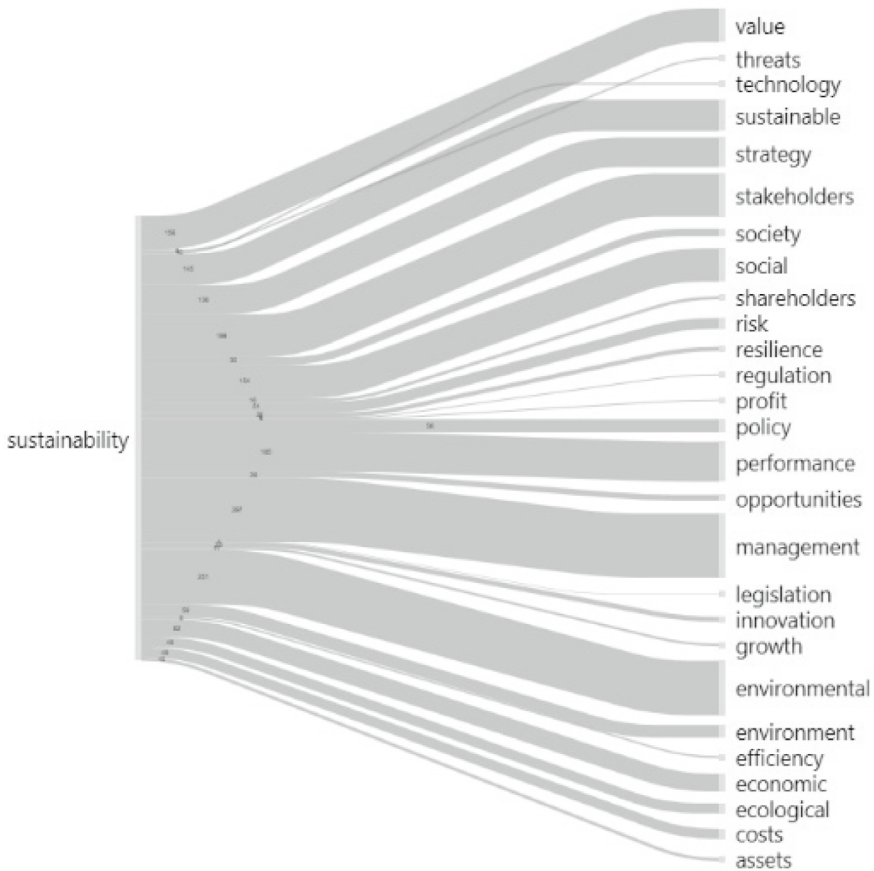
Journal	Highest-ranking co-occurring words		
	1st	2nd	3rd
Across all journals	Environmental & performance	Social & performance	Environmental & social
<i>American Economic Review</i>	Policy & environmental	Environment & regulation	Environmental & costs
<i>Tourism Management</i>	Innovation & business model	Performance & environmental	Social & economic
<i>Journal of Management</i>	Environmental & performance	Environmental & sustainability	Social & performance
<i>Academy of Management Journal</i>	Environmental & strategy	Environmental & management	Environmental & performance
<i>Journal of International Business Studies</i>	Performance & social	Environment & social	Social & stakeholders
<i>International Journal of Project Management</i>	Sustainability & management	Management & value	Management & risks
<i>Journal of Financial Economics</i>	Environmental & social	Performance & social	Shareholder & value
<i>Strategic Management Journal</i>	Stakeholder & value	Economic & value	Shareholder & value

Source: author

Table 7 Journal definitions of sustainability, resilience, and business models

Journal	Contains sustainability definitions	Contains definitions around resilience	Contains business model definitions	Links made between sustainability; resilience and business models
<i>American Economic Review</i>	Yes	No	No	No
<i>Tourism Management</i>	Yes	Yes	Yes	Yes
<i>Journal of Management</i>	Yes	Yes	Yes	No
<i>Academy of Management Journal</i>	Yes	No	No	No
<i>Journal of International Business Studies</i>	No	Yes	No	No
<i>International Journal of Project Management</i>	Yes	Yes	No	No
<i>Journal of Financial Economics</i>	No	No	No	No
<i>Strategic Management Journal</i>	Yes	Yes	Yes	Yes

Source: author



Source: Author

Fig. 5 Sustainability diagram

Business Model Thematic Analysis

The term sustainable business model did not feature in any of the journals; however, when examining the term business models, it showed that it is strongly associated with innovation and value but shows weak linkages to sustainability and resilience, as shown in Fig. 7.

Table 10 represents the key themes relating to business models across the 8 journals.

Table 8 Sustainability definitional contributions

McKercher (1993), Labuschagne and Brent (2005)	The inherent vagueness of sustainability is its greatest downfall. Rather than it being used as a catalyst for change, it is entrenching past and existing behaviors when it comes to environmental and development conflicts. It becomes difficult to implement due to the complexities in its definitions
Sharma and Henriques (2005), Christmann (2000), de Villiers et al. (2011), Gilley et al. (2000), Aguilera et al. (2021)	Focus on the environmental pillar of sustainability with it being equated to eco-efficient strategies for reducing operating costs by reducing wastes, materials, and energy. Environmental issues are largely addressed from a cost reduction perspective, this is further compounded by external pressures from shareholders for profit improvement and short-term return horizons
Schillebeeckx et al. (2020), Sharma (2017), Ioannou and Serafeim (2012)	Environmental performance is a response to a threat or an opportunity. This response is placed on a continuum of conformance to regulation to voluntary action. Invariably firms respond to regulation first. Classification of corporate posturing regarding natural environment as ranging from reactive to proactive. This is supported by theories such as stakeholder theory and theories of external influence which argue that firms respond to external pressures to improve their value creation ability. The theme of competitiveness and profitability driving environmental responses is also supported by referencing work on investor decisions being increasingly influenced by climate risk and ecological actions
Alberto (1998), Etzion (2007), Sharma (2017), Kim and Davis (2016), Bansal and Roth (2000)	Companies that view environmental issues positively as opportunities for business development rather than as threats will have more progressive stances on environmental issues. Resource-based view, which acknowledges the importance of intangible concepts such as knowledge, corporate culture, and reputation, emphasizes that this theory base addresses the fit between what a firm can do and what it can do. Environmental issues need to be incorporated into corporate identity to make it harder to disown versus environmental reporting merely becoming a ritualistic practice. At present, the latter seems to dominate in firms
Flammer and Bansal (2017), Ortiz-de-mandojana and Bansal (2016)	Focus on the concept of periods, noting that the trade-off between short and long term has not been given the critical attention it requires in business sustainability research. Yet intertemporal equity is key to the achievement of sustainability. This specifically refers to short-term financial pursuits by businesses not compromising the prosperity of future generations. They also note that sustainability in business is often operationalized as the triple bottom line, shifting the focus back to short-term efficiencies compared to long-term prosperity

Table 8 (continued)

Sharma and Henriques (2005)	Discuss the concept of ecosystem stewardship. That is, firms taking responsibility for environmental and social impacts of their operations on the carrying capacity of ecosystems and local communities. This is one of few definitions or concepts discussed that incorporate social and environmental issues and included the idea of a threshold or carrying capacity
Bansal (2005), Michael and Paul, (1997), Bansal and Roth (2000), Gilbert Silvius et al., (2017)	Places emphasis on the importance of institutional theory. This is because institutional theory focuses on the social context within which firms operate in. The institutionalized norms in these societies can threaten a firm's legitimacy, resources, and survival if they do not conform to what is deemed acceptable. Institutional theory states that individual values and beliefs shape a firm's dedication to sustainable development, and such beliefs can become norms and institutionalized via regulations. External stakeholders can play a key role in placing pressure on companies to align with the ethical values of societies they operate in
Stavins (2011)	The critical role of economics and markets and the lack of pricing attached to environmental resources have led to the exploitation of the commons and excessive pollution. Need to look to the market and pricing for solutions

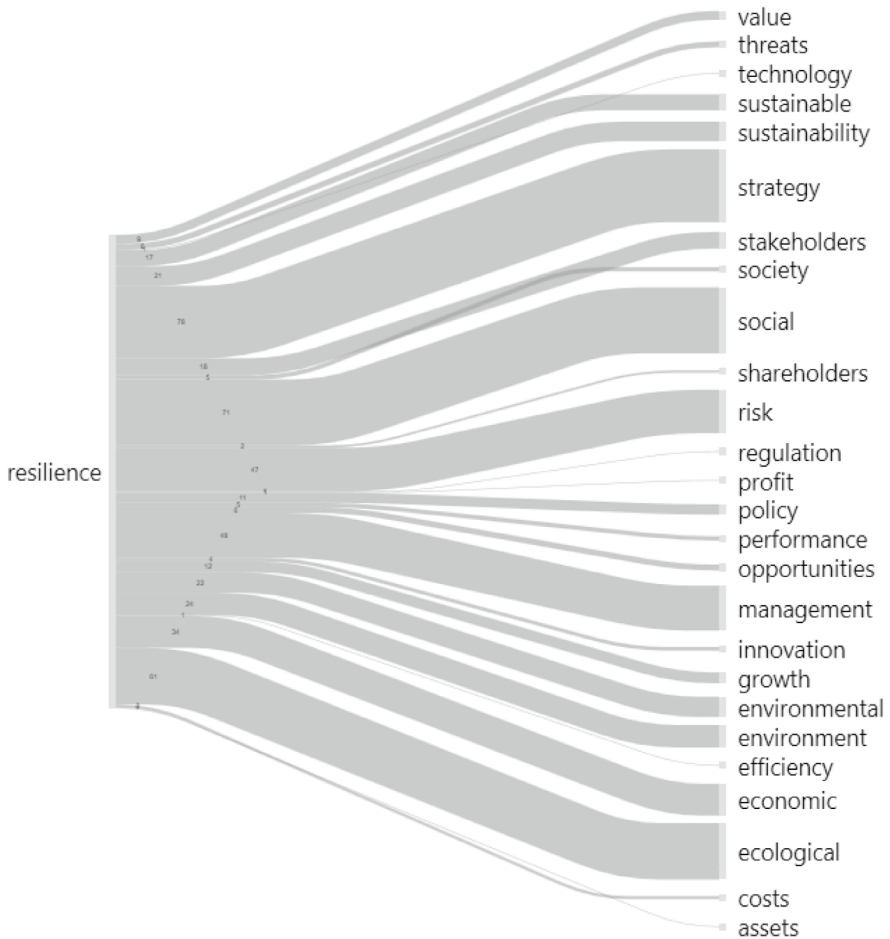
Source: author

Discussion

One of the first findings of this paper is that of the top 13 triangulated journals which formed the sample size for the analysis, only 8 had articles relating to the above-mentioned topic. Only 3 of the 8 journals contained definitions for all 3 concepts of sustainability, resilience, and business models, with only 2 journals containing articles that make interlinkages between the 3 concepts. This shows a real narrowing of the field, with very few articles written on the interlinkages between these 3 concepts. This paper found that the constructs of sustainability, resilience, and sustainable business models are more disconnected than interconnected in the sample of academic literature for this review.

In the articles that did address sustainability, resilience and business model constructs a lack of clear and operationalizable definitions for these constructs in a business context which was noted. Referring to the work of Jones (2017), Park et al. (2008), Scoones (2016), and Whiteman et al. (2013) on corporate greening, the jargon in the field could be shielding firms from increased pressures to implement more meaningful measures.

In the final selection of journals, 70% of the articles were written from 2010–2021, suggesting a growing emphasis on sustainability and resilience in



Source: Author

Fig. 6 Resilience diagram

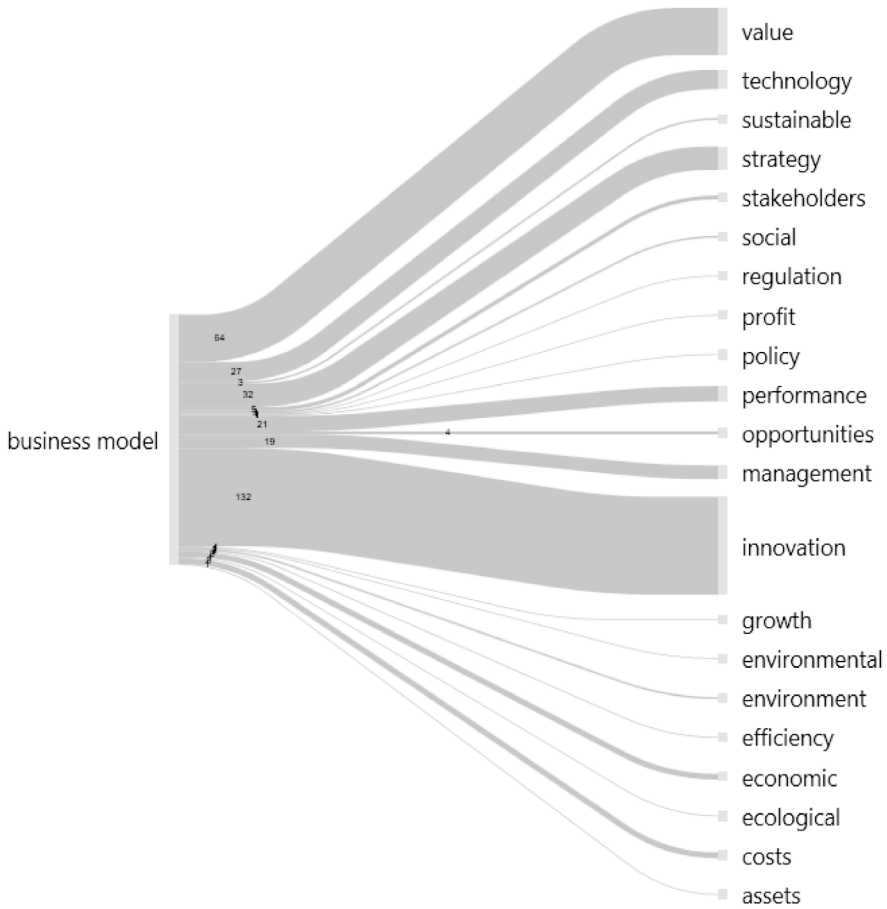
recent years. This trend is expected due to the mounting scientific evidence of climate change and social inequalities, as well as the urgency to shift toward more sustainable production and consumption practices. Legislative and reporting pressures worldwide regarding sustainability and climate change may also be contributing to this focus.

The authors of the articles analyzed in this study were predominantly from North America and the UK, potentially skewing the analysis toward a developed world perspective. This lack of representation from developing countries may reveal a bias toward authors from developed countries in top business, economic, and management journals. Kraemer et al.'s (2020) work highlights the exclusionary nature of academic knowledge creation and suggests that flawed tools for research evaluation and excellence from the Global North may be imported by the Global South.

Table 9 Resilience definitional contributions

Ioannou and Serafeim (2012), Ortiz-de-mandojana and Bansal (2016)	Refer to organizational resilience as a system's latent ability to endure, despite adversity and to recover and maintain its existing structure after a shock. The properties of stability and flexibility are essential to achieving resilient systems. This combination of flexibility and stability allows firms to bounce back as they are good at anticipating, absorbing, and adjusting to changes
Ioannou and Serafeim (2012), Sajko et al. (2020)	Focus on the importance of the role of corporate social responsibility (CSR) in creating stability and flexibility through strengthening the relationships between firms and their stakeholders which assist in absorbing shocks. It also allows for engaging with diverse points of view in stakeholder engagement. This assists in firms having broader viewpoints and thereby flexibility to adjust to external change
Gilley et al. (2000)	Resilience capacity is a measure of an organization's ability to interpret unfamiliar situations and mobilize resources to confront these events. It is a learned capacity over time and one that is entrenched in developing deliberately selected routines
Ortiz-de-mandojana and Bansal (2016), Ruiz-Ballesteros (2011)	Organizations can only be resilient in resilient socio-ecological systems. They make the following key points: <ul style="list-style-type: none"> - For firms to become resilient they need to sometimes take short-term financial losses in a trade-off for longer-term benefits - Resilience results in long-term survival and contributes to a firm's sustainability by assisting firms with inter- and intra-dynamic system operational capabilities - Risk and resilience although interlinked are different as risk assumes hazards or shocks are identifiable and quantifiable, whereas resilience deals with overcoming the unexpected - Managing risk is about keeping the status quo intact, whereas resilience is about adaptation to change
Choi et al. (2021)	Notes five principles of resilience that allow socio-ecological systems to manage their components <ul style="list-style-type: none"> - Diversity (many solutions to a disturbance) - Connectivity of the elements of socio-ecological systems (inter- and intra-habitat networks) - Stakeholder learning (interpreting and understanding reality in different ways) - Stakeholder participation (particularly in management and governance processes) - Multiplicity in governance

Source: author



Source: Author

Fig. 7 Business model diagram

This could be problematic in the context of sustainable development issues, as the impacts of climate change in the Global South may be more severe and challenging.

Resilience definitions not tied to sustainability or business models varied in the articles analyzed. Some linked resilience directly to risk mitigation, while others distinguished between risk and resilience as dealing with identifiable and quantifiable hazards versus overcoming the unexpected. Managing risk is focused on keeping the status quo, whereas resilience is about adaptation to change. Resilience was also associated with the ability to return to a previous state after a shock, emphasizing the concepts of stability and flexibility. Additionally, articles noted the importance of corporate social responsibility and strong stakeholder relations in building firm resilience.

The concept of human activity being embedded in ecological systems was absent from journal articles, except for two. Sharma and Henriques (2005) discussed ecosystem stewardship and the responsibility of firms to consider the environmental

Table 10 Business model definitional contributions

Zott et al. (2011)	<p>Although there has been a significant increase in research on business models, an accepted language around the topic has not been developed. This makes it difficult to examine the topic of business models through different lenses. There is also a lack of consensus in the literature as to what constitutes a business model. Some of the definitions showcased by Zott et al. (2011) are the following:</p> <p>“The business model depicts the content, structure, and governance of transactions designed to create value through the exploitation of business opportunities.”</p> <p>“The business model is the heuristic logic that connects technical potential with the realization of economic value.”</p> <p>“Business models are stories that explain how enterprises work. A good business model answers Peter Drucker’s age-old questions: Who is the customer? And what does the customer value? It also answers the fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?”</p> <p>“A business model articulates the logic, the data and other evidence that support a value proposition for the customer, and a viable structure of revenues and costs for the enterprise delivering that value.”</p> <p>“The method by which firms build and use its resources to offer its customer better value and to make money in doing so.”</p>
Green and Sergeeva (2019), Abidin and Pasquire (2007)	Focus on the value component of business models. Highlight the difference between hard (optimization, efficiency, and cost reduction) and soft (learning, sense-making, and consensus-building) value management
Font et al. (2021)	Business models need to include the notion of sustainable value rather than just the traditional value that has been created and captured. In this instance, sustainable value is defined as a value proposition that benefits multiple stakeholders
Lieberman and Balasubramanian (2018)	Theories such as resource-based view of firms, stakeholder theory, and value-based strategy all focus on value creation and capture but without clearly defining what value is. When value is defined, it is often done so as either the total economic value created by a firm within a specific interval of time or as the change in this value over longer periods. Lieberman and Balasubramanian (2018) refer to this as static and dynamic value creation. According to them, the notion of dynamic value (value over a longer period) is underdeveloped and not captured in strategic management
Garcia-castro and Aguilera (2015)	Value is a critical concept in strategic management research. A differentiation needs to be made between shareholder value creation (firm’s owners) and total value created by the firm and its stakeholders (total economic value). Related to this, Lieberman and Balasubramanian (2018) note that profit growth (or shareholder value) is critical to managers and shareholders; however, this does not translate into economic gain if it comes at the expense of other stakeholder returns. This principle can have a positive contribution to the sustainability and resilience debate by defining stakeholder interests outside of the firm. In this regard, the environment is often not viewed as a stakeholder of interest or representation. Stakeholders are traditionally defined as any group or individual who creates and captures economic value in their interaction with the firm

Source: author

and social impacts of their operations on the carrying capacities of ecosystems and local communities. Similarly, Ruiz-Ballesteros (2011) emphasized the importance of socio-ecological systems and argued that sustainable development can only occur in resilient socio-ecological systems. He highlighted that resilience is a relational capacity, referring to the entire socio-ecological system rather than its parts.

Constant change, maintenance of stability and the capacity to remain in the face of unexpected transformation: these are the paradoxical principles required to understand the whole living system on our planet, individual or collective, from a single cell to an entire culture. The key to successfully managing processes of change to achieve sustainability resides in resilience, which prevents dissolution in the surrounding development (Ruiz-Ballesteros, 2011).

These were the only two authors that referred to systems thinking and the notion of thresholds and the carrying capacity of systems.

The lack of embeddedness in ecological, economic, and social systems was also revealed in the definitions surrounding sustainability. In most of the articles, sustainability is discussed about environmental issues and in particular linking these to firm performance. It was evident that these environmental issues were viewed as being external to the firm and something that required a response due to coming legislation. The ability of businesses to think both short-term and long-term was also questioned. It was noted that environmental issues are most often addressed from a cost-saving and efficiency perspective, with it being distilled to the triple bottom line concept which reinforces short-term focus. The inter-generational equity principle of sustainability or the social and economic aspects of the definition did not receive as much attention as the environmental pressures. This is often a criticism that is made of the current ESG reporting frameworks. Some of the articles also proposed the use of the market to fix its problems. This contrasts Raworth (2017) who argues that historical economic thinking and policies related to markets have led to market failures resulting in climate change and sustainability problems.

Sustainable business models were not discussed in any of the journals. Instead, business models were typically discussed in the conventional sense of creating value and generating profit, with little attention given to sustainability and resilience. Zott et al.'s (2011) review on business model literature revealed a focus on value creation. This value is defined as revenue generation or profit margins. There were no linkages made to the broader notions of how value could be defined differently in the context of sustainability and resilience. Zott et al. (2011) note that the four potential sources of value creation in a business model are novelty, lock-in, complementarities, and efficiency. This highlights a very narrow view of how value is defined in the business model context. The focus on novelty is linked to business model innovation, which is linked to financial performance. The rationale for innovation within the business model context remains purely financial performance-driven.

Value is often narrowly defined as economic gain, through producing new products or reducing costs. Bansal (2005) cites Conner (1991) and Porter (1985) to argue that value is created by producing new products or improving production efficiency. The persistence of this narrow view of value may be due to incomplete conceptualization and measurement of stakeholder value appropriation (Garcia-castro

& Aguilera, 2015). Lieberman and Balasubramanian (2018) state that prioritizing profit growth and shareholder value does not always result in an economic gain if it harms other stakeholders. While this principle can contribute positively to sustainability and resilience by considering stakeholder interests beyond the firm, the environment is often not seen as a stakeholder.

Lieberman and Balasubramanian (2018) distinguish static and dynamic value creation, noting that current business models do not capture dynamic value over longer periods. This is relevant to sustainability and resilience, which require value to be defined over longer time horizons. The lack of any mention of sustainable business models or sustainable value indicates that all the work that has been done on sustainable business models by the likes of Geissdoerfer et al. (2018), Osterwalder et al. (2005), and Bocken et al. (2019) has taken place outside the economics, business, and management field.

Limitations of the Research and Recommendations for Further Research

The first potential limitation of this paper is the use of secondary data. The review will only be as reliable as the underlying literature, and the selection of the top 13 business, economics, and management journals may introduce biases and context-specific views. This bias, together with potential publication bias, was considered when undertaking the analysis. Another limitation is the subjective nature of identifying analytical themes. Lastly, the underlying studies may have been conducted in a specific context that could influence the identification and discussion of the themes.

Further research could involve comparing business literature on sustainability and resilience with journals from other disciplines. Case studies could also be conducted to identify successful firms that have achieved ecological and social embeddedness and determine the factors that led to their successes. Additionally, there is a need to understand how to transition to sustainable business models in practice, as this has not yet been explored in theory or practice in the business, economics, and management discipline.

Conclusion

The role that traditional economic, business, and management constructs have played in creating market failures, which have led to the current global climate change and resource depletion crisis, can no longer be ignored. This paper provides a comprehensive review of what has been written on the constructs of resilience, sustainability, and sustainable business models in the academic economic, business, and management literature from the 1990s onwards. It has revealed four key findings: (1) rather than interconnectedness there is a sustainability, resilience, and sustainable business model disconnect in this literature, (2) the notion of sustainable business models and sustainable value has yet to be addressed by this discipline, (3) concepts of sustainability and resilience are still seen as external to organizations rather than firms seeing themselves as embedded in bigger socio-ecological systems, and (4) top economic, business, and management journals are

dominated by authors from the Global North, which may result in biases toward situational and world views when discussing sustainability and resilience concepts. The above four findings suggest that we still have a way to go in changing traditional thought on sustainability, resilience, and sustainable business models in economics, business, and management literature.

Funding Open access funding provided by University of Johannesburg.

Data Availability The author confirms that the data supporting the findings of this study are available within the article and the list of the articles reviewed are contained in the reference list of the article.

Declarations

Ethical Standards The necessary ethical approvals for the collection of secondary data were received from the University of Johannesburg.

Competing Interests The author declares no competing interests.

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